GUIDELINES
FOR
INDIAN GOVERNMENT WEBSITES

(Version 2.0)

An Integral Part of
Central Secretariat Manual of Office Procedure

Prepared By :
National Informatics Centre (NIC),
Ministry of Electronics & Information Technology (MeitY),
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Adopted By :
Department of Administrative Reforms and Public Grievances (DARPG),
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Government of India.

सत्यमेव जयते

Guidelines

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Indian Government Websites

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राज्य मंत्री (स्वतंत्र प्रभार)
उत्तर पूर्वी क्षेत्र विकास मंत्रालय,
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परमाणु उर्जा विभाग तथा अंतरिक्ष विभाग,
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MESSAGE

It is indeed a pleasure to learn that the Department of Administrative Reforms and Public Grievances (DARPG), in association with the National Informatics Centre (NIC), has formulated the revised version of Guidelines for Indian Government Websites (GIGW).

2.   With the advent of Digital India Program and focus on multimodal delivery of citizen services, there was an urgent need to align the guidelines with the latest technology and trends. I am confident that this revised and updated version of guidelines will bring further uniformity in the quality of content and will enhance the overall usability and accessibility of Indian Government Websites. These guidelines would also help in the incorporation of state of the art technologies in delivery of information and services, and reinforce Government's commitment to enhance the level of citizen interaction through application of internet and mobile technologies.

3.   The inclusion of these "Guidelines for Indian Government Websites" in the Central Secretariat Manual of Office Procedure (CSMOP) would augment the Manual and enable it to prescribe the procedures for management of government presence in the web space.

4.   The timeframe for transition to the revised version has been decided as six months. It is hoped that Government Departments should be able to smoothly adopt GIGW Version 2 that comes into effect from 1st February 2019. All websites/ mobile apps launched after this date must comply with the revised version of Guidelines. Till that time websites can obtain certification as per GIGW Ver 1. Already certified websites and applications may continue till the expiry of their certification.

5.   I hope that with the support of all of you, GIGW (Version 2) will fulfil its objective of improving the quality of government websites, applications and mobile apps.

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PREFACE

Over the years, the contribution of digital technologies towards the growth of economy and empowerment of citizens has increased. Today, these technologies are being used by everyone in their day-to-day activities and help citizens avail different services from their homes. Different government bodies have established their web presence through different websites and mobile apps. These websites and apps offer information and services to one and all. However, varied nomenclatures, different layout standards, navigation strategies as well as different technologies have defeated the very purpose of these websites.

National Portal of India, a mission mode project, provides single window access to information & services offered by different entities of the Indian government at all levels. National Portal of India has a vision to promote engaging digital initiatives. This portal was set up as a single point access to government information and services and it aggregates the content from more than 8000 websites of Indian Government. With the goal of improving the inherent quality of government websites, a Content Advisory Committee was constituted to look into the means to enhance the intrinsic quality of Government Websites. On the basis of the advice of this committee, NIC formulated the first version of 'Guidelines for India Government Websites' in 2009, which were adopted by Department of Administrative Reforms and Public Grievances (DARPG). This was also included in Central Secretariat Manual of Office Procedure.

With the advent of Digital India Program and focus on multimodal delivery of citizen services, there has been a need to align these guidelines with the latest technology and trends. Based on this, DARPG, in association with the National Informatics Centre (NIC), has formulated the revised version of Guidelines for Indian Government Websites (GIGW). The new version of the guidelines are an outcome of feedback and consultations with industry, society, government departments and diligent reference to evolving standards set by International bodies like W3C. Additionally, guidelines pertaining to mobile apps have also been included in the new version. The revision makes these guidelines easier to adopt, and at the same time being comprehensive, and help to include latest enhancements in technology.

It is expected that with the support and cooperation of all of the stakeholders these guidelines will go a long way in improving the quality of Indian government web space.

Guidelines Development Process

National Informatics Centre has developed these Guidelines as an initiative under the National Portal of India Project. Development of these guidelines involved an extensive consultation process involving representatives from National Informatics Centre and various other Indian Government Departments, at the Centre and State levels. Established and recognised Guidelines of other countries as well as International bodies like ISO and W3C have also been referred to, while drafting these guidelines. First version of the guideline was released in 2009.

The revised version of the guidelines has been prepared after an elaborate process of review and consultation by the review committee as indicated below:

Revised By

Ms. Nandita Chaudhri	Deputy Director General, NIC
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INTRODUCTION

1.1
Background

India's digital penetration has increased tremendously in past few years. Internet on mobile phones, websites and mobile apps are becoming widely used media for delivery of services across the country. Realising this, the Indian Government has also laid emphasis on delivery of services through various online channels. As of today, there are more than 8000 Government websites in India and hundreds of official mobile apps. A close look at these websites and apps reveal that most of the important government entities have already established their presence on the internet.

However, these websites and apps follow different Technology Standards, Design Layouts, Navigation Architecture, or, in simple terms, different look and feel as well as functionality. This invariably requires a common citizen to familiarize himself/herself with the functionality of each individual website which results in a lot of inconvenience, thus defeating the very purpose of these websites and apps.

The need for standardisation and uniformity in websites and apps belonging to the government cannot be stressed enough in today's scenario. These standards and guidelines make the Indian Government websites Usable, User-Centric and Universally Accessible. Additionally, they bring uniformity in the quality of content and help in the incorporation of state of the art technologies in the delivery of information and services, and reinforce government's commitment to enhance the level of citizen interaction through application of internet and mobile technologies. The first version of GIGW was launched in 2009. This version was successfully adopted by many government websites. However, keeping in view the significant advances in technology and usage trends, a revised version of the guidelines has been formulated to maintain relevance with the dynamic times and to ensure that the benefits reach all citizens of the country. The new version of the guidelines are an outcome of feedback and consultations with industry, society, government departments and diligent reference to evolving standards set by International bodies like W3C. It is suggested that the Indian Government website and apps adhere to the common minimum standards which have been derived, in the form of guidelines discussed in this document, as prerequisites to fulfill its primary objective of being a citizen centric source of information & service delivery.
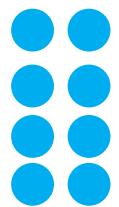
1.2
Scope & Objective

This document recommends policies and guidelines for Indian Government websites and Portals, at any organisational level and belonging to both Central Government as well as State/UT Governments (including District Administrations to Village Panchayats) for making Indian Government websites citizen centric and visitor friendly. Compliance to these guidelines will ensure a high degree of consistency and uniformity in the content coverage and presentation and further promote excellence in Indian Government Web space.

These guidelines address common policy issues and practical challenges that Government Departments face during development and management of their websites. The guidelines aim to assist the Departments in ensuring that their website conform to a consistently high standard. This is expected to enhance the trust level of the citizens while accessing Government information and availing services online.

1.3
Definitions & Conventions

Visitors:
Throughout this document, the broad term 'visitors' encompasses all those who visit and use the Indian Government websites for their needs with regards to government information and services.

Departments:
All Government entities owning a website, including Ministries, Departments, Administrations, Organisations, Corporations *et.al.* shall be commonly addressed as 'Departments' or 'Entities' in this document for the purpose of simplicity.

1.4
Compliance to Guidelines

These Guidelines have been framed with an objective to make the Indian Government Websites conform to the essential prerequisites of UUU trilogy i.e. Usable, User-Centric and Universally Accessible. They also form the basis for obtaining Website Quality Certification from STQC (Standardisation Testing Quality Certification), an organisation of Ministry of Electronics & Information Technology, Government of India.

These Guidelines are based on International Standards including ISO 23026, W3C's Web Content Accessibility Guidelines (WCAG 2.0) Rights of Persons with Disabilities Act 2016 as well as Information Technology Act of India. Further, the long standing
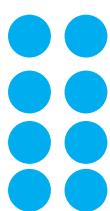
experience of the authors in design, development and management of Government Websites as well as their knowledge of the ground realities and challenges faced by the Government Departments in developing and managing their websites have helped significantly in drafting these Guidelines.

These guidelines are being circulated amongst all Indian Government Departments at all levels (Central, State, District). These should be followed and implemented on priority so that the overall aim of making all Indian Government websites citizen focused and visitor friendly may be realised.

1.5

How to use these Guidelines

Departments are expected to read, understand and implement these guidelines on all of their web-based initiatives. In other words, all the websites set up and owned by the Departments must comply with these guidelines. It is advised that even Intranet applications of the Departments, which are mostly browser based, should follow these guidelines. The Departments may draw their short term and long term timelines, depending upon their specific requirements, for compliance with these guidelines.

1.6

Mandatory, Advisory and Voluntary

Guidelines are divided into three categories *viz.* mandatory, advisory and voluntary. Explanation and requirement of each of these categories is given as follows:

- **Mandatory**: The usage of the term 'MUST' signifies requirements which can be objectively assessed and which the Departments are supposed to mandatorily comply with. It is anticipated that there will be no exceptions for a Department not complying with these. In the case of any Department, these guidelines shall apply to all the WebPages/websites under the ownership of that Department. The websites will be checked against these guidelines when audits for compliance are undertaken or for the purpose of quality certification. It is the responsibility of each Department to address and bring into compliance, any non-compliant issues found in any website under their ownership.

- **Advisory**: The usage of the term 'should' refers to recommended practices or advisories that are considered highly important and desirable but for their wide scope and a degree of subjectivity these guidelines would have otherwise qualified to be mandatory. Departments are, however, expected to comply with these advisories.

- **Voluntary**: The usage of the term 'may' refers to voluntary practice, which can be
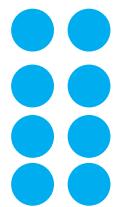
adopted by a Department, if deemed suitable. These have been drawn from good practices and conventions that have proved successful and can help a Department achieve high quality benchmarks for their web endeavours.

1.7
Guideline Website

A website, http://web.guidelines.gov.in, has been set up where the user can avail the guidelines online. Resources pertaining to the techniques and best practices for compliance to the guidelines are provided here. Reference to tools for testing and validation have been provided. The website also lists the sites recently made compliant. Visitors can give suggestions and feedback through the website.

1.8
Accessibility

Web accessibility means that people with disabilities can also perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web. It encompasses all disabilities that affect access to the Web, including visual, auditory, physical, speech, cognitive, and neurological disabilities.

Thus the impact of persons with disabilities is radically changed on the Web because the Web removes barriers to communication and interaction that many people face in the physical world. When websites, web technologies, or web tools are badly designed, they can create barriers that exclude people from using the web.

The Website and apps should be designed and developed in such way that they are accessible by all people, whatever may be their hardware, software, language, culture, location, or physical or mental ability.

Legal Provisions

The United Nations General Assembly adopted its Convention on the Rights of Persons with Disabilities on the 13th day of December, 2006. India is a signatory to the Convention and has ratified the Convention on the 1st day of October, 2007. To implement the Convention India has enacted the Rights of Persons With Disabilities Act, 2016 on 27th December, 2016.

With regard to ICT one of the important provisions in the act is that all contents available in audio, print and electronic media must be in accessible format.

International Guidelines and Standards (WCAG)

Web Content Accessibility Guidelines (WCAG) covers a wide range of recommendations for making Web content accessible. Following these guidelines will make content accessible to
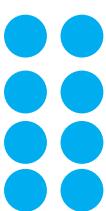
persons with disabilities. Further Web accessibility also benefits people without disabilities as a key principle of Web accessibility is designing Websites that are flexible to meet different user needs, preferences, and situations. This flexibility benefits people without disabilities in various situations such as slow Internet connection, presence of "temporary disabilities" such as a broken arm and people with changing abilities due to aging.

The WCAG are organized around the four principles, which lay the foundation necessary for anyone to access and use Web content. These require the web content to be;

1. **Perceivable**: users must be able to perceive the information being presented i.e. it can't be invisible to all of their senses.
2. **Operable**: users must be able to operate the interface and the interface cannot require interaction that a user cannot perform.
3. **Understandable**: users must be able to understand the information as well as the operation of the user interface.
4. **Robust**: users must be able to access the content as technologies advance.

Under each principle there is a list of guidelines. There are 12 guideline that address these principles. The guidelines provide the basic goals that authors should work toward in order to make content accessible to persons with disabilities. These guidelines are not objectively testable however, under each guideline, there are Success Criteria that describe specifically what must be achieved in order to conform to this standard. Each Success Criterion is written as a statement that will be either true or false when specific Web content is tested against it. The Success Criteria are written to be technology neutral.

GIGAW and Accessibility

One of the major focus areas of the Guidelines is web accessibility. With respect to accessibility focus is on the following:
1. Addressing the needs of the persons with disabilities.
2. Ensuring that the sites are accessible with equal ease to all users on all the major browsers and across all platforms and bandwidths i.e. universally accessible.

GIGAW aims to ensure that people with disabilities can perceive, understand, navigate, interact and contribute through Web. GIGAW has been developed in accordance with W3C's Web Content Accessibility Guidelines 2.0 which are internationally accepted standards on accessibility. GIGAW ensures compliance with level AA of WCAG 2.0. The guidelines relating to web accessibility can be found under the following sections:
- **Chapter 2** (Indian Government Identity) - *guidelines 2.1.6.*
- **Chapter 5** (Quality of content) - *guidelines 5.3.7, 5.4.2, 5.6.1, 5.6.3, 5.6.4.*
- **Chapter 6** (Design) - *guidelines 6.2.1, 6.4.5, 6.5.1, 6.5.4, 6.6.1, 6.6.3, 6.7.2, 6.7.3, 6.8.2, 6.8.8, 6.9.1, 6.10.1.*
- **Chapter 7** (Development) - *guidelines 7.5(a) to 7.5(j), 7.5(m) to 7.5(q).*
- **Chapter 11** (Mobile App Guidelines) - *most of the guidelines under section 11.4.*
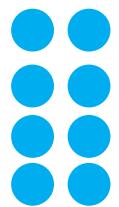
The above mentioned sections have been categorized as 'MUST' meaning thereby that inclusion of these in a website is a mandatory for ensuring compliance to GIGAW. The reference to the corresponding WCAG 2.0 guideline is also provided.

Compliance to these guidelines will make the websites accessible to persons with various disabilities like low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities and combinations of these which may otherwise hinder access to the web. Compliance with these guidelines ensures that any disabled person using a assistive technology can easily navigate the website. Compliance matrix lists all the accessibility guidelines in a separate section along with the reference numbers.

Detailed information on the WCAG guidelines and the techniques for compliance can be found at the W3C website. Developers must visit the website to get information on the various success criteria related with each of the guidelines.

1.9
Feedback & Suggestions

Feedback and Suggestions on the guidelines are solicited/invited/appreciated. We will try to include as many suggestions/feedback as possible in the future versions. It will help in enhancing/refining the guidelines further thus making them more comprehensive and relevant.

Feedback, Suggestions, Clarifications and Queries on this document may be sent at:

Address for Correspondence	National Informatics Centre, A-Block, CGO Complex, Lodhi Road, New Delhi – 110003 **Email**: webguidelines@nic.in **Website**: http://web.guidelines.gov.in

Chapter 02 | GOVERNMENT OF INDIA IDENTIFIERS

Government of India Identifiers

2.1
Indian Government Identity

Visitors to a Government website are very particular about ensuring the veracity and authenticity of the official status of the website before trusting its contents. Hence, it is important to convey in some way to the visitors that Indian Government officially sponsors and owns the information and services being provided in the concerned website. All websites and Portals belonging to the Indian Government Domain at any hierarchical level (Apex Offices, Constitutional Bodies, Ministries, Departments, Organisations, States/UTs, District Administrations, and Village Panchayats et al) must prominently display a strong Identity and ownership of Indian Government. The above objective can be achieved through the following:

2.1.1 State Emblem of India MUST be displayed on the Homepage of the websites of Central Government Ministries/Departments. The usage of State Emblem of India on an Indian Government website must comply with the directives as per the 'State Emblem of India (Prohibition of improper use) Act, 2005'. Further, the State Governments should also display their Emblems (or the State Emblem of India in case the State has adopted it as its official Emblem) as per the Code provided in the above Act. Public Sector organisations and autonomous bodies should display their official logo on the Homepage of the website to reinforce their identity. These logo images must be accompanied by proper alternate text so that the screen reader uses may be informed of the same.

2.1.2 The Homepage and all important entry pages of the website MUST display the ownership information, either in the header or footer.

2.1.3 The lineage of the Department should also be indicated at the bottom of the Homepage and all important entry pages of the website. For instance, at the bottom of the Homepage, the footer may state the lineage information, in the following manner:

> a. 'This Website belongs to Department of Heavy Industries, Ministry of Heavy Industries and Public Enterprises, Government of India' (**for a Central Government Department**).
>
> b. 'This Website belongs to Department of Industries, State Government of Himachal Pradesh, India' (**for a State Government Department**).
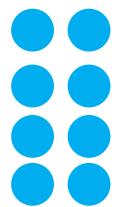
> c.   'This is the official Website of Gas Authority of India Limited (GAIL), a Public Sector Undertaking of the Government of India under the Ministry of Petroleum and Natural Gas'
> **(for a Public Sector Undertaking)**.
>
> d.   'This is the official Website of the District Administration of Thanjavur, State Government of Tamil Nadu (India)'
> **(for a District of India)**.

2.1.4   All subsequent pages of the website should also display the ownership information in a summarised form. Further, the search engines often index individual pages of a website and therefore, it is important that each webpage belonging to a site displays the relevant ownership information.

2.1.5   In case of those websites which belong to Inter-Departmental initiatives involving multiple Government Departments which are difficult to list on the Homepage, the Government ownership should still be reflected clearly at the bottom of the page with detailed information provided in the 'About the Portal/Website' section.

2.1.6   The page title (the title specified by HTML <title> tag which appears on the top bar of the browser) MUST describe the topic and purpose of the page. Page title should be complete with the name of the country included, for instance, instead of the title being just Ministry of Health and Family Welfare, it should state, Ministry of Health & Family Welfare, Government of India. Alternatively, in case of a State Government Department, it should state 'Department of Health, Government of Karnataka, India'. This will not only facilitate an easy and unambiguous identification of the website but would also help in a more relevant and visible presence in the search engine results. Further, it is important since the screen readers used by the visually impaired users first read the title of the page and in case the title is not explanatory enough, it may confuse or mislead them. *(Ref. WCAG 2.4.2)*

2.2

The URL or the Web Address of any Government website is also a strong indicator of its authenticity and status as being official. In today's era with a large proliferation of websites, which resemble Government websites and fraudulently claim to provide reliable Government information and services, the role of a designated Government domain name assumes a lot of significance.
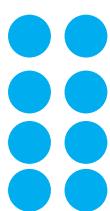
2.2.1 Hence, in compliance to the Government's Domain Name Policy, all Indian Government websites MUST use 'gov.in' or 'nic.in' domain exclusively allotted and restricted to Government websites. The military institutions and organisations in India may also use 'mil.in' domain in place of or in addition to the gov.in/.nic.in domain. Educational Institutions, and Research and Academic Institutions, which are otherwise eligible for registration under 'gov.in' may use 'edu.in', 'res.in' or 'ac.in' domains. The above naming policy applies to all Government websites irrespective of where they are hosted.

2.2.2 Those Departments and Government entities that are using and have been publicising a domain name other than the above should take appropriate early action to register official government domain names.

2.2.3 The Domain Name Conventions, as specified at registry.gov.in/domiannamingcon.php should be followed while registering a 'gov.in' Domain Name. A summary of the domain name conventions is given below:

Domain Naming Conventions:

- Domains can contain the English-language letters '**a**' through '**z**', and the digits 0 through 9.

- Departments can also use hyphens, but hyphens cannot begin or end a domain name. Also, two hyphens together are usually not permitted, and hyphens cannot appear in both the third and fourth positions.

- Spaces and special characters (such as !, $, &, _ and so on) are not permitted.

- The minimum length is 3 characters, and the maximum length is 63 characters (excluding extension ". gov.in").

- Domain names are not case-sensitive. (i.e. you may use a mix of upper or lower case letters).

Restrictions on the composition of domain names under .IN:

- Generic names are not allowed (e.g. shipping.gov.in is not allowed).

- For domains under gov.in, the domain must be derived from the name of the organisation name/entity. (e.g. Central Vigilance Commission can opt for a domain cvc.gov.in but NOT xyz.gov.in or vigilance.gov.in).

- One and Two letter domain names are not allowed for registration (e.g. ab.gov.in).
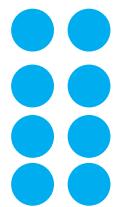
- The generic second level domain names (SLDs) of .in should not be used as third level names. (e.g. mil.gov.in and org.gov.in are not allowed as mil and org are generic second level names under .in).

Source: **http://registry.gov.in**

Obtaining a GOV.IN Domain for your website

National Informatics Centre (NIC) is the exclusive Registrar for GOV.IN domain names. The use of GOV.IN Domain is restricted to the constituents of Indian Government at various levels, right from Central, State/UT, District and Sub-District to block, village etc.

For detailed information and step-by-step procedure on how to register a .GOV.IN Domain, one may visit **http://registry.gov.in**.

gov.in
Domain Registration Services, India.

WHOIS

This website provides Information & Services with respect to GOV.IN Domain. The use of GOV.IN Domain is restricted to the constituents of Indian Government at various levels right from Central, State/UT, District & Sub-District. National Informatics Centre (NIC) is the exclusive Registrar for GOV.IN domain names.

▸ FAQ   ▸ Support   ▸ Sign In   ▸ Sign Up

"GOV.IN Domain Registration and Renewal service is completely free at present. Please be aware that we are not sending any payment email for Registration or Renewal of domain name."
"Public Sector Undertakings/Organizations would now not be given the domain "gov.in"."

Announcements

Domain Name Information
- ▸ .IN Domain Policy
- ▸ Domain Dispute Resolution Policy
- ▸ Domain Naming Conventions
- ▸ Renewal and Cancellation Policy
- ▸ OM For Website Hosting

Domain Name Registration
- ▸ Check Availability
- ▸ Registration Guidelines
- ▸ Registration Process
- ▸ Register your Domain
- ▸ Authorization Letter Format
- ▸ List of Nodal Officers

Domain Name Management
- ▸ Check Domain Status
- ▸ Modify Sign-In Details
- ▸ Modify Domain Details
- ▸ Renew Domain Name
- ▸ Cancel Domain Name
- ▸ Help Document

india.gov.in
The national portal of India

This web site is designed, developed & hosted by National Informatics Centre (NIC), Ministry of Electronics & Information Technology, Government of India
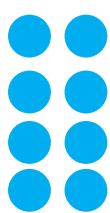
2.3
Link with the National Portal

india.gov.in; The National Portal of India is a single window source for access to all information and services being provided by the various constituents of the Indian Government to its citizens and other stakeholders. The Portal is an aggregator of all Indian Government websites belonging to different entities of the Government. The Portal has been designed, developed and hosted by National Informatics Centre (NIC), the premier ICT organisation of the Government with a nationwide presence.

india.gov.in has a unified interface and seamless access to a wide variety of services for citizens from all walks of life and from varied demography. This official Portal for the Government of India acts as a gateway to a plethora of information and services provided electronically by the different departments of Indian Government. It acts as an escort to the visitors and guides them through varied web sites of Indian Government constituents and also presents a lot of value added information like their association/status in terms of sectors, ministries, departments etc. in a unique and unified manner.

There are exclusive sections catering to the different information needs of citizens A variety of services being provided by the government across sectors and States/UTs can also be accessed from the Portal. The Portal also provides comprehensive information & access to Government News, Press Releases, Documents, Policies, Forms and Tender Notifications etc. The content of the Portal is also available in Hindi. Further, the content can be personalised for each viewer based on his/her demographic profile and area of interest.

2.3.1   Since the National Portal is the official single entry Portal of the Indian Government, all Indian Government websites MUST provide a prominent link to the National Portal from the Homepage and other important pages of citizen's interest.

2.3.2   The hyperlinked pages belonging to the National Portal MUST load into a newly opened browser window of the user. This will also help visitors find information or service they could not get on that particular website. It is quite common that citizens are not aware which information or service is provided by which Department.

How to link to the National Portal

As per linking Policy of the National Portal, no prior permission is required to link 'india.gov.in' from any Indian Government website. However, the Department providing a link to The National Portal is required to inform the National Portal Secretariat about the various sections of the National Portal that they have linked to, so that they can be informed of any changes, updations/additions therein. Also, it is not permitted that the National Portal Pages be loaded into frames on any site. These must be loaded into a new browser window.

Special Banners in different sizes and colour schemes for providing a link to the National Portal have been given at:
http://india.gov.in/linktous.php.

Instructions on how to provide a link have also been given. The Government websites/ Portals may choose any banner from the ones provided, depending upon their site design and place the same on their Homepage.

Chapter 03 | BUILDING CONFIDENCE
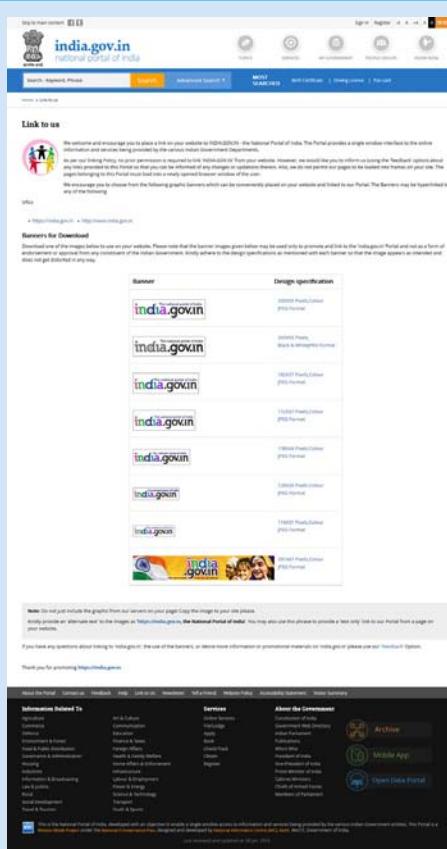
3.1 CONTENT COPYRIGHT

3.2 CONTENT HYPERLINKING

3.3 TERMS & CONDITIONS

3.4 PRIVACY POLICY

BUILDING CONFIDENCE

3.1
Content Copyright

Copyright is a form of protection provided to the owners of "original works of authorship" in any form or media. It is implied that the original information put up on the website by a Government Department is by default a copyright of the owner Department and may be copied, reproduced, republished, uploaded, posted, transmitted, or distributed only if the copyright policy of the concerned Department allows so.

3.1.1 Hence, the information, material and documents made available on an Indian Government website MUST be backed up with proper copyright policy explaining the terms and conditions of their usage and reference by others. The copyright policy of a Department could be liberal, moderate or conservative depending upon their preferences based on the kind of information available on their website. However, since it is a duty of a Government Department to provide all the information in the public domain freely to the citizens, the Departments should aim to have a liberal copyright policy.

3.1.2 In cases where the document is in public domain and there is no restriction on its reproduction, the copyright statement may be worded as follows:

Sample: Copyright Statement
"Material featured on this site may be reproduced free of charge in any format or media without requiring specific permission. This is subject to the material being reproduced accurately and not being used in a derogatory manner or in a misleading context. Where the material is being published or issued to others, the source must be prominently acknowledged. However, the permission to reproduce this material does not extend to any material on this site, which is explicitly identified as being the copyright of a third party. Authorisation to reproduce such material must be obtained from the copyright holders concerned."

3.1.3 In cases where the nature of information/document calls for a restriction on its reproduction, the copyright statement may be worded as follows:
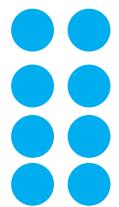
> **Sample of alternate Copyright Statement**
>
> "Material on this site is subject to copyright protection unless otherwise indicated. The material may be downloaded without requiring specific prior permission. Any other proposed use of the material is subject to the approval of *(name of Department)*. Application for obtaining permission should be made to *(email address of the concerned Department)*."

3.1.4 The Departments should also be sensitive towards publishing any information having a third party copyright. The Government Departments MUST follow proper procedures to obtain the permission, prior to publishing such information on their websites.

3.1.5 If any published Government Document/Report is being reproduced on any website, whether as excerpts or in full, the source of the same i.e. Full Title of the Report/Document along with the name of the concerned Department and year of publication MUST be provided.

3.2
Content Hyperlinking

3.2.1 Since Government websites often receive queries and requests from owners of other websites who might want to provide a hyperlink to their web pages, every Indian Government website MUST have a comprehensive and clear-cut hyper linking policy defined and spelt out for those who wish to hyperlink content from any of its sections. The basic hyper linking practices and rules should ideally be common across the websites of a State/Ministry.

3.2.2 The hyperlinking policy enumerating the criteria and guidelines with respect to hyperlinks with other sites may be made available under the common heading of 'Hyperlinking Policy' and displayed at a common point on the Homepage of all sites under the ownership of a State/Ministry.

3.2.3 In case the concerned Department has no objection to anyone providing a hyperlink to their website, the policy statement may be worded as:

> **Sample Hyperlinking Policy**
>
> "We do not object to you linking directly to the information that is hosted on our site and no prior permission is required for the same. However, we would like you to inform us about any links provided to our site so that you can be informed of any changes or updations therein. Also, we do not permit our pages to be loaded into frames on your site. Our Department's pages must load into a newly opened browser window of the user".

3.2.4 In case Prior permission is required by anyone who wishes to provide a link to a Government website, the policy statement may be worded as follows:

> **Sample of alternate Hyperlinking Policy**
>
> "Prior permission is required before hyperlinks are directed from any website to this site. Permission for the same, stating the nature of the content on the pages from where the link has to be given and the exact language of the Hyperlink should be obtained by sending a request at *(Email address of the Department)*".

3.2.5 Many a times, cross linkages between different websites can cause ambiguity in the mind of the visitors about the owner of a particular portion of content and whom to be contacted in case of any query. Also, many a times, there could be a difference in the security domains of two linked websites. Hence, it is important to notify the visitors when they are leaving a particular website through a hyperlink and entering another one. Clear indications MUST be given when leaving the Government website for an external website.

> **Sample of indication of leaving the Government Website**
>
> "This link shall take you to a page outside the *(website URL)*. For any query regarding the contents of the linked page, please contact the webmaster of the concerned website".

3.2.6 To create a visual distinction for links that lead offsite, Cascading Style Sheets (CSS) controls or some such similar mechanism should be used. In case the link takes the user to another website of the same Department/Ministry/State, a seamless transition should be used through appropriate CSS controls.

3.2.7 Third party content should only be linked when consideration about the copyright, terms of use, permissions, content authenticity and other legal and ethical aspects of the concerned content have been taken into account.
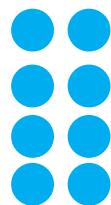
3.2.8 The overall quality of a website's content is also dependent, among other things on the authenticity and relevance of the 'linked' information it provides. This fact is all the more significant in the context of a Government website since there is a lot of credibility attached with an official website. Therefore, all Indian Government websites should make sure that the external hyperlinks, wherever present on the site, MUST be verified and checked on a regular basis to ensure that the information being provided 'through' them is up-to-date, accurate and relevant.

3.2.9 Further, it MUST be ensured that 'broken links' or those leading to 'Page Not Found' errors are checked on a regular basis and are rectified or removed from the site immediately upon discovery. A number of technology tools are available for convenient discovery of broken links.

3.3
Terms & Conditions

3.3.1 With the increased proliferation of Internet, more and more citizens are accessing information from Government websites. Clearly defined Terms & Conditions including well-worded disclaimers regarding the usage of websites MUST be present on every Indian Government website.
Terms & Conditions shall address the following aspects:

- Ownership Details
- Usage Policy of Content
- Legal Aspects
- Responsibility towards hyperlinked Sites

3.3.2 Since it is the responsibility of all Indian Government Departments to uphold and maintain the trust imposed in them by the visitors to the sites, the Government websites should not outrightly 'disclaim' the content of another Government website. Instead, a politely worded statement clearly indicating the ownership of the particular piece of content and the relevant details for further queries and information may be provided. Once all Indian Government websites follow standard content practices, the visitors should be able to move from one Government website to another in a manner as seamless as possible.

3.3.3 The Terms & Conditions should also clarify whether the information available on the website may be construed as a statement of law to be used for any legal purposes or not. It should also be mentioned that in case of any legal dispute arising out of the content on the Government website, the matter shall be heard in a court of law within the jurisdiction of the State where the concerned owner

Department of the website/portal is located.

3.3.4 In case the content is sourced/linked from a non-government website at the other end; the Terms & Conditions should clearly state this fact and disclaim the responsibility for its accuracy and currency.

3.3.5 In case the website involves any e-payment features where electronic transactions are involved, appropriate disclaimers, worded in consultation with the involved agencies (bank, payment gateway service provider etc.) and the legal cell of the Department should be placed on the site.

Sample Statement for Terms & Conditions

This website is designed, developed and maintained by *(Name of Department)*, Government of India.

Though all efforts have been made to ensure the accuracy and currency of the content on this website, the same should not be construed as a statement of law or used for any legal purposes. In case of any ambiguity or doubts, users are advised to verify/check with the Department(s) and/or other source(s), and to obtain appropriate professional advice.

Under no circumstances will this Department be liable for any expense, loss or damage including, without limitation, indirect or consequential loss or damage, or any expense, loss or damage whatsoever arising from use, or loss of use, of data, arising out of or in connection with the use of this website.

These terms and conditions shall be governed by and construed in accordance with the Indian Laws. Any dispute arising under these terms and conditions shall be subject to the jurisdiction of the courts of India.

The information posted on this website could include hypertext links or pointers to information created and maintained by non-Government/private organisations. *(Name of Department)* is providing these links and pointers solely for your information and convenience. When you select a link to an outside website, you are leaving the *(Name of Department)* website and are subject to the privacy and security policies of the owners/sponsors of the outside website.

(Name of Department), does not guarantee the availability of such linked pages at all times.
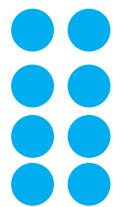
(Name of Department), cannot authorise the use of copyrighted materials contained in linked websites. Users are advised to request such authorisation from the owner of the linked website.

(Name of Department), does not guarantee that linked websites comply with Indian Government Web Guidelines.

3.4
Privacy Policy

3.4.1   Government websites should follow an extremely cautious approach when it comes to collecting personal details/information about the visitors to the sites. Only the information which is absolutely necessary should be solicited.

3.4.2   In case a Department solicits or collects personal information from visitors through their websites, it MUST incorporate a prominently displayed Privacy Statement clearly stating the purpose for which information is being collected, whether the information shall be disclosed to anyone for any purpose and to whom.

3.4.3   Further, the privacy statement should also clarify whether any cookies shall be transferred onto the visitor's system during the process and what shall be the purpose of the same.

3.4.4   Whenever a Department's website allows e-commerce and collects high risk personal information from its visitors such as credit card or bank details, it should be done through sufficiently secure means to avoid any inconvenience. SSL (Secure Socket Layer) and Digital Certificates are some of the instruments which could be used to achieve this.

It is further informed that the following examples of Privacy Statements are only for reference purpose and Departments are requested to customise them to the requirements of their own websites.
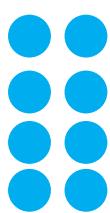
Sample Privacy Statement:

Thanks for visiting website of *(Name of Department)*, and reviewing our privacy policy.

We collect no personal information, like names or addresses, when you visit our website. If you choose to provide that information to us, it is only used to fulfil your request for information.

We do collect some technical information when you visit to make your visit seamless. The section below explains how we handle and collect technical information when you visit our website.

Information collected and stored automatically:

When you browse, read pages, or download information on this website, we automatically gather and store certain technical information about your visit. This information never identifies who you are. The information we collect and store about your visit is listed below:

- The Internet domain of your service provider (e.g. mtnl.net.in) and IP address (an IP address is a number that is automatically assigned to your computer whenever you are surfing the web) from which you access our website.
- The type of browser (such as Firefox, Netscape, or Internet Explorer) and operating system (Windows, Linux) used to access our site.
- The date and time you access/accessed our site.
- The pages/URLs you have visited, and
- If you reached this website from another website, the address of that referring website.

This information is only used to help us make the site more useful for you. With this data, we learn about the number of visitors to our site and the types of technology our visitors use. We never track or record information about individuals and their visits.

Cookies:

When you visit some websites, they may download small pieces of software on your computer/browsing device known as cookies. Some cookies collect personal information to recognise your computer in the future. We only use non-persistent cookies or "per-session cookies".
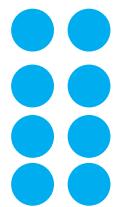
Per-session cookies serve technical purposes, like providing seamless navigation through this website. These cookies do not collect personal information on users and they are deleted as soon as you leave our website. The cookies do not permanently record data and they are not stored on your computer's hard drive. The cookies are stored in memory and are only available during an active browser session. Again, once you close your browser, the cookie disappears.

If you send us personal information:

We do not collect personal information for any purpose other than to respond to you (for example, to respond to your questions or provide subscriptions you have chosen). If you choose to provide us with personal information, like filling out a Contact Us form, with an e-mail address or postal address, we use that information to respond to your message, and to help you get the information you have requested. We only share the information you give us with another Government agency if your question relates to that agency, or as otherwise required by law.

Our website never collects information or creates individual profiles for commercial marketing. While you must provide an email address for a localised response to any incoming questions or comments to us, we recommend that you do NOT include any other personal information.

Site Security:

- For site security purposes and to ensure that this service remains available to all users, this Government computer system employs commercial software programs to monitor network traffic to identify unauthorised attempts to upload or change information, or otherwise cause damage.

- Except for authorised law enforcement investigations, no other attempts are made to identify individual users or their usage habits. Raw data logs are used for no other purposes and are scheduled for regular deletion.

- Unauthorised attempts to upload information or change information on this service are strictly prohibited and may be punishable under the Indian IT Act (2000).
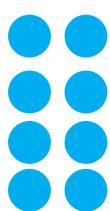
Sample of alternate Privacy Policy Statement (in case a website does not collect any personal data)

As a general rule, this website does not collect Personal Information about you when you visit the site. You can generally visit the site without revealing Personal Information, unless you choose to provide such information.

Site Visit Data:

This website records your visit and logs the following information for statistical purposes - your server's address; the name of the top-level domain from which you access the Internet (for example, .gov, .com, .in, etc.); the type of browser you use; the date and time you access the site; the pages you have accessed and the documents downloaded and the previous Internet address from which you linked directly to the site.

We will not identify users or their browsing activities, except when a law enforcement agency may exercise a warrant to inspect the service provider's logs.

Cookies:

A cookie is a piece of software code that an internet web site sends to your browser when you access information at that site. This site does not use cookies.

Email Management:

Your email address will only be recorded if you choose to send a message. It will only be used for the purpose for which you have provided it and will not be added to a mailing list. Your email address will not be used for any other purpose, and will not be disclosed without your consent.

Collection of Personal Information:

If you are asked for any other Personal Information you will be informed how it will be used if you choose to give it. If at any time you believe the principles referred to in this privacy statement have not been followed, or have any other comments on these principles, please notify the webmaster through the 'Contact Us' page.

Note: The use of the term "Personal Information" in this privacy statement refers to any information from which your identity is apparent or can be reasonably ascertained.

Chapter 04 | Scope of Content

Scope of Content

4.1
Information in Public Domain

The content of a Government website is its soul as the citizens rely heavily upon a Government website to access authentic and up-to-date information. Ideally, an Indian Government website ought to have the following kinds of content:

a. **Primary Content**:

Primary content shall be the original content that is sought by target audience of the website which could be citizens, business community, overseas citizens or other Government Departments or even Government employees. Examples of such content are information about the Department, various Schemes and programmes of the Department, Documents, Forms etc. Besides regulatory content mandated by legislation such as IT act, RTI or even Directives from apex offices shall also form a part of this category e.g. parliament question and answers.

b. **Secondary Content**:

Secondary content is generated from the assortment, packaging of primary content to suit the requirement of different audience, events and occasions. Examples of such content are Advertisements/Banners/Spotlight/Media Gallery/Related sites etc.

c. **Tertiary Content**:

Information about the 'Primary' and 'Secondary' content forms a part of the tertiary content. This includes sections like About the Site, Online Help, Terms and Conditions and Frequently Asked Questions (FAQ).

Departments/Organisations should compile their own list of contents/sub contents which they feel should be in public domain or needed by their intended audience. Information could be free to access by all or part of information (due to concerns of privacy & sensitivity) could be made available only to registered users.

A generic list of content is given at the following pages:
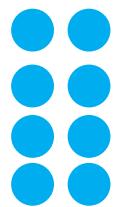
Generic List of Content	
Primary Content	
Long Term Value	**Short Term Value**
About The Ministry/Department/State	News
Programmes & Schemes	Tenders
Documents	Recruitments
Forms	
Services	
Sectoral Profile	
Regional Profile	
Contact Information	
Secondary Content	
Special Interest Group/Audience Specific Views	
Events/Announcements	
Discussion Forum	
Spotlight	
Related Links	
Media Gallery	
Greetings	
Advertisements & Banners	
Tertiary Content	
About The Portal	
Sitemap, Search	
Terms and Conditions	
FAQ	
Feedback (General/Content Specific)	
Help	
Registration	
Content Contributor, Source & Validity	

Guidelines pertaining to compilation of content in some of the common content categories have been given in the following sections.

4.2
Primary Content

Primary Content forms the main focus of any Government website as it comprises of the information for which the citizen has visited the website. Examples are information about the Department, Schemes and Programmes, Contact Information, Forms, Documents, Tenders etc. Broadly, the following sub categories encompass most of the Primary Content that ought to be made available on an Indian Government Website.

4.2.1 About
(**Ministries/Department/State Govt./Organisation/District Administration**)

This essentially refers to the content describing the owner Department of the website and comprises the following information:

- Profile
- Mission/Vision Statement
- History/Background
- Departments/Divisions/Cells
- Role/Functions/Responsibilities/Activities
- Agencies under the Administrative Control
- Organisational Structure
- Who's Who

This content should be reviewed frequently to ensure delivering accurate and updated information. All information concerning the Legislative/Government officials MUST always be kept up to date.

4.2.2 Profile of a Sector/Region

Some websites/portals shall also be required to include a section on the overview of sector(s) they deal with, providing all information concerning the sector present on their website or links to websites of other Government entities working in that sector. This should be made accessible to give a comprehensive view to the visitors.

Similarly some of the portals are required to publish profile of a region e.g. National Portal publishes a profile of India. Similarly, states Portals should publish a profile of the respective States while District websites should publish a profile of their respective district.

Detailing of this segment should be done by each Department and included in their web content policy. Policy must also include the frequency/event of updation as well as officers responsible for updating this content.
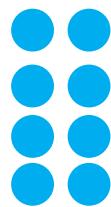
4.2.3 Programmes & Schemes

The Government Departments at the Centre and State have welfare programmes and schemes benefiting the individuals, groups of citizens (e.g. women, persons with disabilities etc.) or community at large running in different regions and sectors across the country. Information about all such schemes of the Centre as well as State Governments is included in this category. These schemes could be Centrally Sponsored, or being run by the State/District Administration itself. It is important to note that these schemes should be directly benefiting the individuals, special interest groups of citizens (e.g. widows, persons with disabilities etc.) or the community at large. Also, information should only be highlighted with regard to those schemes which are currently active and ongoing, and not about schemes which are no longer open/available to the public.

a. The complete official title of the Scheme MUST be reflected and should be self-explanatory. The correct title would lead to an accurate search output for information on that scheme and it would be easy for the users to locate it. Any abbreviation in the title should be expanded.

b. This site should enlist all those who are eligible to receive benefits under the scheme e.g. women, children, persons with disabilities, poor etc. Also, the details of the eligibility criteria for availing those benefits should be clearly mentioned.

c. Information should be given about whether the scheme entails monetary or non-monetary benefits. Also, what are the specific kinds of non-monetary benefits that can be availed e.g. Subsidy, Training, Land Allotment, etc.

d. Procedure to be followed, whom to contact, supporting documents to be carried etc. for availing benefits under the scheme MUST form a part of this content.

e. For schemes that are valid for a particular period of time, the validity of the scheme MUST be mentioned so that the information could accordingly be moved to archives after the expiry date.

4.2.4 Services

A large number of citizen services are being provided by various Ministries, Departments and State/UT Governments. Information about these services as well as the interface to access and use them (if it is available online) should be made available on their websites.

a. It is important to clearly understand what constitutes the term 'services' in this context. All services provided by the Government, whether fully online, partially online or available offline but whose description and details exist online can be called services. For example, if the complete details about how to apply for a birth certificate in a particular State are given along with the facility to download

the requisite application form, it shall be categorised as a Service. However, just information about things like a programme of any Department, or access to some searchable database without any service associated will not constitute a 'Service'.

b. The complete title of the Service MUST be reflected and should be self-explanatory. The correct title would lead to an accurate search output for information on that service and it would be easy for the users to locate it. Any abbreviation in the title should be expanded.

c. The websites should prominently display the most often used/accessed services, so that visitors can locate and access them quickly.

d. The website MUST provide a complete description of what the service is, how is it useful for the citizens, how it can be availed, who is eligible to avail the service, who is to be contacted and during which hours. This is important for the common citizens to understand the significance of the service and the steps to be followed for availing it.

e. If the service is delivered online then it should be developed as a web service so that other websites and portals can access it seamlessly, subject to authorisation of the owner Department. All online services should be made available through the Government Services Portal. *(https://services.india.gov.in)*

4.2.5 Application Forms

Visitors to Government websites want fast, easy service at 24x7 basis. They do not want to wait until an organisation is open for business. They do not want to wait in line to get forms and documents to avail the desired service. Therefore, all application forms existing in the public domain and meant for applying for licenses, certificates, scholarships, grants, services, information, loans, utilities etc. should be published on the concerned Government website for the convenience of citizens.

a. All Forms must be provided in an accessible format. The format along with the file size must be mentioned in the download link. *(Ref. Section 7.4.2)*

b. The title of the form MUST be clearly indicated and should be self-explanatory and devoid of any abbreviations which may render it incomprehensible. The correct title would lead to an accurate search output for information on that Form and it would be easy for the users to locate it. Also, in case the Form is popularly known by a number (e.g. Form 16 for Income Statement or Form 4 for Driving license), the same should also be mentioned along with the title.

c. It should be specified whether the language of the form is English, Hindi or
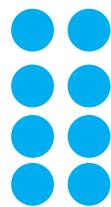
any other Regional language. In case of the latter, the name of the concerned language MUST be mentioned clearly. If the form is bilingual/multilingual, it is important to mention the languages in which it is available.

d. Information assisting the user in filling up the application form should also be provided such as where to submit and supporting documents to attach etc.

4.2.6 Documents/Reports

a. All documents developed/published and issued in the Public Domain by Government Departments, Ministries, State/UT Governments, Public Sector Units and Organisations must be published on the website. The following list gives an idea of the category of Government documents that can be covered under this:

- Five-year Plan documents
- Annual Reports
- Budget Documents
- Guidelines by Government
- Citizen Charters
- Census Documents
- Survey Outcomes/Reports
- Statistical Reports etc.

b. This content should be reviewed regularly to ensure the accuracy and currency of the information.

c. The complete official title and date of the document MUST be mentioned on the website. The correct title would lead to an accurate search output for that document and it would be easy for the users to locate it. For example: 'Policy on Promotion of Tourism in the State of Manipur' is a more appropriate title than just 'Tourism Policy.' Any abbreviation in the title should be expanded and the title should not be formulated on just a document number/date.

d. In case any reference to a document of another Government Department is given, it should be clearly specified as with whom lies the ownership of the document i.e. which is the exact Ministry/Department at the Central or State level which has produced/published/issued the concerned document.

**e.** It should be specified whether the language of the document is English, Hindi or any other Regional language. In case of the latter, the name of the concerned language MUST be mentioned clearly. If the document is bilingual/multilingual, it is important to mention the languages it exists in.

f. It is important that if the document is valid only for a certain time period, the validity MUST be clearly mentioned on the site. In fact, the document should be

removed or moved to the archives after expiry of the validity period.

g. Documents must be made available in an accessible format. *(Ref. Section 7.4.2)*

4.2.7 Circulars/Notifications

There are various Circulars/Notifications that are released from time to time by the Indian Government at the Central or State level. Information about all the Circulars/Notifications of the Centre as well as State Governments should be made available on the respective websites.

a. The official title of the Circular/Notification MUST be mentioned and should be self explanatory. The correct title will also help in accurate search output for information on that circular and thus, it would be easy for the users to locate it.

b. The ownership of the concerned circular should be specified i.e. Ministry/Department and also the level i.e. Centre/State etc.

c. Circulars/Notifications must be made available in an accessible format. *(Ref. Section 7.4.2)*

d. If the Circulars/Notifications are valid only for a certain time period, the validity MUST be clearly mentioned on the site. In fact, the Circulars/Notifications should be removed or moved to the archives after expiry of the validity period.

4.2.8 Tenders

As directed by the Central Vigilance Commission (CVC) all Government and Public Sector Procurement/Tenders/Notifications issued by the Central and State Governments and other public bodies across India for goods, services and works MUST be made available/linked through the websites.

4.2.9 Recruitment

All Indian Government websites MUST provide complete and transparent information about their recruitment policies for the benefit of those who would like to join the Government and serve the nation. In case the recruitment is through some Central or State level examination or recruitment agency such as UPSC, SSC etc. that should be highlighted along with a link to respective pages of those organisations' websites. In either case information about the recruitment should abide by the following guidelines.

a. The title of the recruitment notice MUST be self-explanatory.

b. This site MUST enlist all those who are eligible for a particular recruitment. Also the details of the eligibility criteria should be clearly mentioned.

c. All required application forms should be made available on the website so that
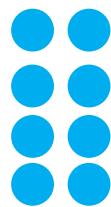
the interested person can download and submit the same.

   d. Procedure to be followed, whom to contact, supporting documents to be carried etc. for the particular recruitment MUST form a part of this content.

   e. All currently open vacancies may be highlighted on the Homepage of the website.

   f. All recruitment notices should also be registered with the National Portal for wider access by target audience.

   g. Information for those recruitment notices in which the last date is over must be either removed or moved into the archives section.

4.2.10 News and Press Releases

News having national importance and significance for the Citizens as well as Government Press Releases issued by Departments and organisations at the Centre and State level should be published on the website of the concerned Department. News and Press Releases should carry the date and should be organised as per the Archival Policy of the website. News and Press releases should be published in RSS format so that associated offices and Departments can also consume them on their websites with due permission or based on their access policy.

4.2.11 Contact Information on Government Websites

Citizens may like to contact any Government Department or entity to ask questions, get information, seek clarifications or sort out problems. Therefore it is essential that Government websites provide them with the means to do that.

   a. All Indian Government websites MUST have a 'Contact Us' page, linked from the Homepage and all relevant places in the website.

   b. The 'Contact Us' page should be categorised according to the various divisions handling different kind of queries; e.g. grievance redressal, file status, procedural details etc.

   c. The contact details for the Important functionaries in the Department MUST have the telephone numbers/fax numbers, postal address as well as email address along with the timings specified for personal/public dealing (if applicable). The content policy of the department should enlist the functionaries whose details are to be given on the contact us or who's who/directory page.

   d. There should be a clear-cut policy for redressal (correction) of inaccurate information found on the website. The contact details of the Web Information Manager, who is overall responsible for the content on the website, should be provided.
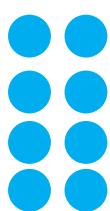
4.2.12 Presence on the National Portal

Mechanism should be in place to ensure that metadata for all important information and Services, have been provided to the National Portal.

4.3

Secondary content is generated from the assortment and packaging of primary content to suit the requirement of different audience, events and occasions. Examples of such content are advertisements/banners/spotlight/media gallery/related sites.

4.3.1 Special Interest Group Corner

In case of an event or on special occasions, Government departments may introduce a section for a particular target group e.g. during result time a special section for students may be put up or the Department of Social Welfare may open a section for senior citizens on its website. It must be noted that the original content that is sourced from various sections of the website to make up this section should remain intact so that it may be referred to, once the section has been removed.

4.3.2 Events and Announcements

Government websites should have a section to cover various Events & Announcements such as:

- Announcements having International/National/State level importance.
- Announcements related to important upcoming Government events being organised by a Ministry/Department/State/UT.
- Announcements related to schemes/grants/scholarships/fellowships etc.
- Warnings of Natural disasters/Epidemics etc.
- Calls for relief funds during disasters. Other help from citizens or civic agencies.
- Display of important helpline numbers in case of crisis.

Guidelines relating to events and announcements are as follows:

a. Announcement must be taken off/archived once it loses its relevance or after the expiry of the time period attached to the event or happening.

b. All important announcements should also be published on the National
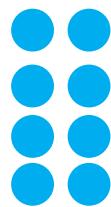
Portal for wider access.

c. Announcements should be worded in simple English/Regional language depending on whom they are meant for.

4.3.3   Discussion Forums & Chat Rooms

Discussion forums are becoming an increasingly popular tool for sharing viewpoints and information. Discussion Forums could be initiated by a Department on any relevant topic of public interest and can prove quite useful in obtaining opinions and viewpoints of the citizens on issues important for policy making. Departments should use MyGov platform to conduct discussions. While initiating an online discussion forum through any platform, the following should be kept in mind:

a. The purpose and objective of the Discussion Forum should be clearly defined. Preferably, an initiating document or background paper explaining the topic of the forum may be provided on the site.

b. Clear-cut Terms and Conditions for posting content in the Discussion Forum should be indicated. Policy related to content that must not be posted in the discussion forum (see box) should be defined.

c. The discussion forums on a Government website should be moderated so that there is some control to avoid publishing unwanted content on the website. All the inputs submitted by the users may be reviewed by the moderator for context and appropriateness of the language or a provision for marking the post as spam may be provided to the users of the forum.

d. The discussion forum should be open for a limited period of time and the validity of the same should be prominently indicated on the site. However, rather than closing the forum abruptly, it is advised that a summary of the inputs received as well as an Action Taken Report, if possible, should be provided on the website so that the visitors are assured that their inputs are being seriously considered and valued by the Department.

Chat Rooms

Chat rooms on a website could be used by citizens to exchange their viewpoints on some common topic amongst each other as well as by the Departments to facilitate an online conversation between a senior functionary and citizens. Like Discussion Forums, Chat rooms should also follow a Policy related to content that must not be posted by the users (see box). It is desirable that the participants of an online chat through a Government Department's website be registered before they are allowed to login and post their messages. Permanent
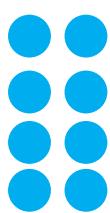
chat rooms should be monitored frequently. In case of temporary or special occasion chat sessions with a senior functionary, it is advised that questions be submitted to the interviewee, before being published in the chat room.

Online Discussion Forum: Usage Policy

A Usage Policy should be established and published alongside all online discussion forums and chat rooms on a Government website. This policy should be prominently displayed to any new user who should be made to pass through a page with this information before being able to input data. The usage policy should clearly specify that the following is forbidden:

- Insulting, threatening or provoking language.
- Inciting hatred on the basis of race, religion, gender, nationality or sexuality or other personal characteristics.
- Swearing, using hate-speech or making obscene or vulgar comments.
- Libel, condoning illegal activity, contempt of court and breach of copyright.
- Spamming, i.e. adding the same comment repeatedly.
- Impersonating or falsely claiming to represent a person or organisation.
- Posting in a language other than the language of the website.
- Invading people's privacy or Posting off-topic comments.

4.3.4 Related links

For every content topic in different modules of the website, a section should be provided for 'Related Links' to the concerned information.

a. Each content topic covered in the website may have some Related Links to other Government websites which provide further details on the topic.

b. For every Related Link, the complete URL of the Homepage/Concerned webpage should be provided correctly along with the complete title of the Website which shall appear on the screen.

c. The validity and accuracy of the URL should be checked on a regular basis to make sure that the information is relevant and the linked address is correct.

Only Government websites/webpages should be provided as 'Related Links' for further information since there is no control over the veracity and availability of information on private websites.
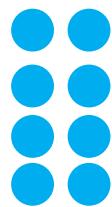
4.3.5   Spotlight

The website may have a section called 'Spotlight' which focuses on a certain issue of importance and highlights it. The guidelines with regard to this section are:

a. Every Spotlight topic should be chosen keeping in mind the relevance and significance of the topic in today's context. It should be ensured that the chosen topic is of significance and should interest a diverse group of audience.

b. The content for the Spotlight Section should have the following essential elements:

   • Brief introductory text to appear on the Homepage of the website.

   • Detailed text on the topic in the Main Page of the Spotlight section. This content should comprise key highlights of the topic and the facts ought to be sourced from authentic and official sources related to the topic.

   • Address of the Webpage/Websites which have detailed information on the topic addressed in the Spotlight.

   • Graphical Banner highlighting the Spotlight topic and linked to the webpage providing further details.

c. Once the new Spotlight is launched, the older one should be shifted/moved to the Archives section along with the date for future reference.

4.4
Tertiary Content

Information about the 'primary' and 'secondary' content forms a part of the tertiary content. The guidelines for this type of content are given as follows:

4.4.1   About the site - this section should contain information about Department responsible for the contents as well as the maintenance of the site, purpose behind the development of the site, when was it launched, where is it hosted etc.

4.4.2   Navigation Aids Sections such as Help, Site Map, and Search (described in detail in the latter sections).

4.4.3   Terms and Conditions with respect to the usage of content on the site. This includes policies on Copyright, Privacy, Legal Implications etc. as well as Content Disclaimers. This has been explained in detail in the previous chapter.
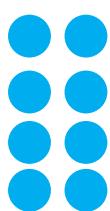
4.4.4 'Frequently Asked Questions' or **FAQs**

Although the content developers of websites make (and should make) all possible efforts to ensure that the content answers all possible and anticipated information needs of the citizens, it is sometimes not possible to address these completely. Visitors still have questions because either they couldn't find what they were looking for or it is presented in such a manner that it is difficult for them to comprehend or understand. In such a case, a detailed list of answers to common questions can prove highly useful to the website audience. Also, it has been proven by usability studies that information presented in a 'question-answer' form is much easier for people to understand than lengthy write-ups.

Hence, Government websites, particularly the ones having frequent interaction with citizen for various services/schemes should have a 'Frequently Asked Questions' section linked from the Homepage and all other relevant places in the site.

The web information managers can compile the list of commonly asked queries and their answers through the following sources:

- Emails, phone calls and letters from the public.
- Survey conducted amongst the public.
- Input from people who answer phones and mail in the organisation.
- Review of website usage statistics and top search terms/items.

4.4.5 User Feedback

A commonly used method of receiving the feedback from the visitors of the site is through feedback forms or guest books. Feedback forms, with pre-decided fields, to be filled in by the visitors, enable a much more structured way of receiving feedback and hence make it easy to categorise or analyse the same. Forms are also quite useful for receiving grievances/complaints from the users in a structured and formatted manner. The information collected through feedback forms can also be used as a means of knowing the usage pattern of the website and can be used in the enhancement of future versions of the website.

    a. All feedback MUST be collected through online forms for reasons explained above.

    b. All feedback forms should be prominently displayed on the website.

    c. Departments MUST respond to the feedback explaining how it shall be processed.

    d. Departments should also make it clear on the response screen whether
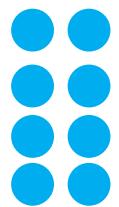
citizens should expect a reply on their feedback If 'yes' then in how many days.

4.4.6   Help

A special section labeled 'Help' on the website MUST be created, which allows and guides for a pleasant experience while browsing the website. This category includes the kind of content which allows for an easy and convenient navigation for the visitor to the website (e.g. online help, how to open files of certain formats, how to access audio/video on the portal, kinds of plug-ins required etc.). Further, the content which clarifies the purpose of the website as well as its policies for the visitors should also be included in this category. Help should be linked from all pages of the website and should be displayed in a consistent location across the website.

4.4.7   Downloads

a.   Information about downloadable material

Downloading material from the Internet can be an expensive and time-consuming exercise. Therefore, Government websites MUST provide Information that will help visitors determine whether they want to access downloadable material. This information would concern the following:

- Self explanatory title of the document/file.

- Download and use instructions (install, open, view).

- File format and file size.

b.   Size of downloads to be minimised

The total size of the file should be kept to a minimum to ensure acceptable download times for all users, especially those that do not have high-speed, reliable Internet connections.

c.   Virus Free Downloads

Prior to making downloadable material available for visitors, Government websites should check for viruses and clear them.

4.5
Minimum Content

The homepage of a website is the primary entry page to the entire content of the website. It is important that the visitors to the site get to access the most important content
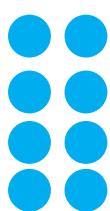
elements from the Homepage itself.

4.5.1 Government websites MUST ensure the availability of the following minimum content elements on the Homepage. This is applicable not just to the websites of Departments but also to any Indian Government website, be it on a specific Project, Task Force, Committee or Service etc.

Minimum Content on the homepage of a Department

- Department Name (alternatively, the name of the Project, Service etc. as applicable).

- State emblem of India/Logo (as applicable).

- About the Department (including its main activities and functions).

- Link to all the major modules/sections of the site.

- Link to all the citizen services offered by the Department.

- Link to the 'Contact Us' page of the website.

- Link to the "Feedback" page.

- Link to National Portal.

- Search/Site Map.

- Terms and Conditions of Use.

4.5.2 **Minimum Content on Subsequent Pages**

Apart from the Homepage, the subsequent pages of the website MUST have the following minimum information, in addition to the main content.

- Self explanatory title of the page.
- Link to the Homepage.
- Link to the parent section/top module of the individual page.
- Ownership (name of the Department owning the website).
- Link to the "Contact Us" page.

4.6
Information meant for Internal Use

Government websites contain information and services for the public. Therefore, it has to be strictly noted that Indian Government websites should not be used to convey information specific to the Department's employees. Information meant for the internal consumption of the employees should be disseminated through Intranets. This is required,
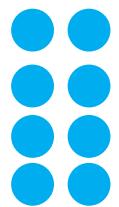
as the information intended for employees can confuse the common public visiting the website.

- All information meant for internal consumption and not in public domain, presently existing on any Indian Government website should be moved to an Intranet secured through proper authentication.

In case it is not possible for the Department to develop an Intranet, the information meant for internal use may be isolated and explicitly labelled (e.g. 'for employees' or 'for internal use'), to make it clear to the public that it is not intended for them.

4.7

Information to Avoid

4.7.1 Commercial banner advertisements should be avoided on Government websites. Banner advertisements that promote and link to other Government agencies as well as social messages are permissible.

4.7.2 Any information in text, visual or any other media which may offend/harm the National sentiments, religious communities as well as security and integrity of the Country MUST be avoided on the websites and content must be authenticated as per the content moderation and approval policy.

4.7.3 Government Information which is confidential or only for restricted use should be avoided on a website meant for the common public.

Chapter 05 | QUALITY OF CONTENT

Quality of Content

5.1
Citizen Orientation

The crucial element of an effective presence of Government on the Web is the way its content is written and packaged. Indian Government websites should be oriented towards their prospective audience. Intended audience to the Government website could be Citizens, Businesses, Government Departments as well as Government employees. Following are the guidelines towards the same:

5.1.1 The content should be selected keeping the audience in mind, not from the Government's perspective. Apart from the selection of the content, equal emphasis should be given to the way it is written and presented on the web. Content aimed at the common public should be written in such a way that people from diverse professional, educational and demographic backgrounds can easily comprehend the same.

5.1.2 Homepage of the website should be designed carefully and effectively to provide a good interface for the citizen. Homepages should ideally not feature details of individuals and office bearers of the Department. Those details may be appropriate on the "About Us" or "Who's who" page.

5.1.3 In order to gauge the content requirements of the citizens, who are the prime target audience of any Government website, Government Departments may use following means to determine the best way to identify and package information for citizens and other stakeholders:

- Discussion Forums
- User satisfaction surveys
- Online feedback from citizens
- Analysing website usage reports, including search terms and statistics
- Usability testing and research
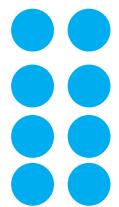
5.2

Content Authenticity, Accuracy & Currency

It is the duty of every Web Information Manager to ensure that the content on his/ her website is always authentic, up-to-date and latest. This fact assumes paramount significance in the context of Government websites since the public puts a lot of trust in the information available on the official websites of any department.

5.2.1 Each and every bit of content published on a Government website should be verified and checked thoroughly as the public expects nothing less than authentic and accurate information from a credible source such as an official Government website. The Departments MUST have a Content Contribution, Moderation and Approval Policy (CMAP) stating the responsibility, authorisation and workflow details with regard to content publishing on the site.

5.2.2 The Homepage MUST and every important entry page of all Indian Government websites/portals should display a timestamp indicating one of the following:

    a. Date on which the information was posted on the website.

    b. Date on which the content was last reviewed and/or modified.

5.2.3 Every piece of content appearing on the Government website should be reviewed after a pre-decided duration for its accuracy, relevance and currency. All Government Departments MUST formulate a proper web Content Review Policy (CRP) depending upon the nature of their content and if possible, also publish the policy on their website.

5.2.4 In case the nature of the content is 'historical' i.e. it will never change (e.g. press releases, speeches, published reports/documents of a Department etc.), the date of posting the content may be mentioned along with a note indicating the nature of the document and explaining that it is not subject to revision.

5.2.5 In case the reports and documents are voluminous and it is difficult to mention the timestamp on every page, the same MUST be indicated on the main page as well as on all icons/places which link to that document.

5.2.6 For time sensitive content which expires after a certain date (e.g. tender notifications, announcements, contest entries etc.), a policy on whether the content should be archived for future reference or removed altogether from the website should be decided by the concerned Department after careful consideration of the nature of content. However, 'expired or outdated' content MUST not be presented or flashed on the website. Such content should be removed or archived as per the content archival policy (CAP).
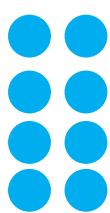
5.3
Language

The language used in a Government website is very important for ensuring effective communication with the target audiences. If the language on the website is complex and uses terminology which a common visitor is unfamiliar with, the very purpose of having the website will be lost.

5.3.1 Departments should ensure that homepage, all major entry points, and navigational elements of Government websites are written in clear language appropriate for the site's content.

5.3.2 Indian Government websites cater to diverse target audience with diverse demographic profiles and educational background. Therefore it is highly desirable that the language used in the Government website is understood easily and correctly by all sections of the audiences. Departments may test the language and its comprehension with a sample set of typical visitors before making the site live for all audiences.

5.3.3 Writing for the web is very different from writing for the Print medium. One of the best ways of making the language web friendly is to keep the sentences short and simple. Long, convoluted sentences seem unfriendly on screen and can distract the visitors.

5.3.4 There are tools available which can help a Department evaluate how easy to understand and comprehend the language used on their website is. Departments should use such language tools, including language software, to evaluate the readability of the website's content.

5.3.5 The language used in a Government website MUST be free from any spelling or grammatical errors of any kind. Further, there should be uniformity across the site when it comes to using British/American English.

5.3.6 Abbreviations/Acronyms, which may be typical in Government parlance and may not be commonplace with citizens of diverse backgrounds should be avoided or expanded at all possible places. At the same time, if a short form or abbreviation of a term is more popularly known and understood by the citizens, then the short form/abbreviation should also be mentioned.

5.3.7 The language of complete web page MUST be indicated programmatically by the use of lang attribute. If there are any changes in the default language of the document, either in the document's text or any text equivalents (e.g., captions), they MUST also be clearly identified. *(Ref. WCAG 3.1.1 & 3.1.2)*
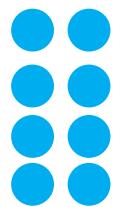
5.4
Consistent Terminology

Common look and feel in Government websites of any country helps in promoting the brand image of the Government; raises user confidence; provides a user-friendly experience in navigating Government websites; and organises information more consistently to facilitate search. An integral part of the common look and feel strategy is the usage of standard content terminology, positioning and framework. Usability Research has established that using common terms and placement of content can help visitors locate the information they want more quickly and conveniently.

5.4.1   Hence it is suggested that 'Consistent Content Terminology and Positioning' should be adopted by Government websites in India. This could act as a beginning for adopting a larger view towards common look and feel of Indian Government websites in the long run. If a certain 'term' has been presented in a particular manner at one place in the website, it should be referred to in the same manner at all places in the site.

5.4.2   Components that have the same functionality within a set of Web pages MUST be identified consistently. If identical functions have different labels on different Web pages, the site will be considerably more difficult to use. It may also be confusing and increase the cognitive load for people with cognitive limitations. *(Ref. WCAG 3.2.4)*

> **For example**
>
> - If a certain Government entity has been referred to as the 'Department' at one place in the site, it should not be mentioned as 'organisation' or some other name at an alternative place in the same site.
>
> - In any application form, if the button to submit information after filling up the form says 'SUBMIT' then it must say so across the entire website. It should not happen that different terminology is used in the same context at various places in a single website.

5.5
International Conventions

Web as a medium transcends all geographic and physical boundaries. Obviously therefore, the target audience of any website could be multicultural with highly varied demographic backgrounds. It should be ensured that the content of every Indian Government website takes international and cultural conventions into account.
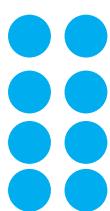
5.5.1   **Currency**: The mention of Indian Currency should be uniform across all Indian Government Websites. As per international convention, any monetary value in terms of Indian currency may be described as INR (Indian National Rupee or ₹).

5.5.2   **Time**: To mention timings in any context, the IST (Indian Standard Time) should be used and if possible, the standard reference of it with respect to the more widely known internationally GMT (Greenwich Mean Time) may be mentioned.

5.5.3   **Phone Numbers**: The format for mentioning the phone numbers should be according to international conventions (+Country Code - Area Code- Phone No.) and uniform across all Indian Government websites. e.g. +91-11-2430XXXX.

5.5.4   **Date**: The format for date across all pages of Indian Government websites should to be dd/mm/yyyy to ensure uniformity.

5.5.5   **Holidays**: Holidays and Work Hours may vary between geographical areas and cultures and hence the websites should provide and clarify information taking into account the culturally specific terms. Time zone variations as well as workday variations should be considered in this context.

5.5.6   **Icons**: Icons can be international symbols or may be culturally dependent. Icons may be accompanied by text to assist individuals who are not familiar with the icons. Icons that present meaningful information must be accompanied with alternate text to assist persons with visual impairment. *(Ref. Section 6.6.3)*

5.5.7   **Hemispherical**: Some references are hemispherically oriented. Winter means something different in the northern hemisphere than it does in the southern hemisphere. Equating seasons to months should be avoided. Note that references such as "west" or "east" may be culture-or hemisphere-specific.

5.5.8   **Postal/Physical Address**: When presenting or collecting address information, country, state and postal/pin code should be included. It is important to know that postal codes across Countries vary in format, and validation code should take this into consideration. It may be useful to collect Country, State or Postal/ PIN Code information before other information to minimise the user entry required, although it may not be made compulsory as many users may not know details such as PIN Code.

Though it is preferable to follow international convention, however if for some reason there is a deviation the same should be highlighted in the 'help' section.
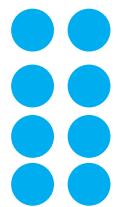
5.6

Information Architecture & Relationship

Information Architecture is concerned with how information is organized, structured, labelled, and presented for maximum access. The content of a Government website or any website per se, has to be structured in such a way that the target audience is able to access the desired information with minimum effort. The following guidelines are important for achieving the objective of well-organized Information Architecture:

5.6.1   It is imperative that the information and services on the website are well organised and categorized into relevant modules/sections and sub-sections so that any information can be located conveniently and is not buried deep inside WebPages. These sections or categories may be identified with headings or labels. Headings wherever used MUST correctly describe topic or purpose of content. Headings must be specified using HTML heading tags (H1 to H6) with proper hierarchy. When headings are clear and descriptive, users can find the information they seek more easily, and they can understand the relationships between different parts of the content more easily. Descriptive labels help users identify specific components within the content. Labels and headings do not need to be lengthy. A single word, may suffice if it provides an appropriate cue to finding and navigating content. *(Ref. WCAG 2.4.6)*

5.6.2   The objective of the Homepage of a website is to allow the visitors to locate the desired information in the easiest possible manner. Homepages must be designed so as to prominently highlight the most requested information and services. Further, the homepage should provide an easy-to-identify section where the purpose of the website and the value to citizens is explained in terms which they can understand. Indian Government websites should ensure that all information, which is of direct importance to the citizen, is accessible from the Homepage itself.

5.6.3   Sighted users perceive structure and relationships through various visual cues present on a page (page headings are in a larger and bold font; list items are preceded by a bullet; form fields may be positioned as groups that share text labels; a different background color may be used to indicate related items and so on). However visually challenged users cannot take advantage of these cues. It must be ensured that these informations and relationships are preserved even when the presentation format changes. (For example when the content is read by a screen reader or CSS is turned off or replaced).Therefore departments MUST ensure that Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. *(Ref. WCAG 1.3.1)*

5.6.4 When the sequence in which content is presented affects its meaning, a correct reading sequence MUST be programmatically determined. This helps people who rely on assistive technologies like screen readers because the meaning evident in the sequencing of the information in the visual presentation will be the same when the content is presented in spoken form. This also preserves the meaning of the page when the CSS is turned off or not supported. It should be noted that a sequence is meaningful if change of order shall impact its meaning. Two independent content items like two separate articles in a page may be placed in any sequence without affecting the meaning. Similarly the navigation block and the content area may be placed in any sequence without affecting their meaning. *(Ref. WCAG 1.3.2)*

5.7

Multilingual Versions

India is a country with diverse cultures and as many as 22 languages. One of the major users of Government websites are common citizens with highly diverse demographic profiles. Due to the various initiatives taken by Centre and State Governments, as well as the private sector, Internet is now accessible even in the remote parts of the nation.

At present, a majority of the content in Government websites is in English, except few which have content in Hindi or one of the Regional languages. Thus, even though Government websites are accessible, they are still not usable. Hence, there is a need to put the information in Regional languages. Depending on the nature of the content and its prospective usage, content should be translated in desired languages and should be a part of the same website with prominent links. Technology for publishing the content in Indian languages is already quite developed and a large number of tools are available to support this.

5.7.1 Ideally all the pages on the website should be translated in Hindi or other Regional languages. In case it is becoming difficult to do so, Departments MUST identify the content which is widely accessed by the public and begin to put up such content in multiple languages. The web pages MUST use Unicode character set.

5.7.2 It MUST be ensured that the documents/pages in multiple languages are updated simultaneously so that there are no inconsistencies, at any point, between the various language versions. Prominent link to the bilingual version must be provided.

5.7.3 In case it is practically difficult to update the versions in all languages simultaneously due to delays on account of translation etc., the obsolete information should be removed from the site till the latest information is uploaded. In any case, a time stamp indicating the date of uploading the information and its validity should be put along with all the time sensitive documents.

Chapter 06 | # DESIGN

Design

6.1

Visual Identity

Design in the broad sense is a process that achieves the end result of enhancing the user experience by presenting the content in a form that is easily understandable, navigable and searchable by the user, in addition to being visually appealing. The branding of a website can be established by incorporating common design elements such as colours, logos, styles, etc., into every page. This presents a professional and consistent visual identity as well as an important signpost that tells visitors where they are.

6.1.1 Therefore, visual/textual identity elements highlighting the Indian Government's ownership of the site MUST prominently stand out on the page.

6.2

Page layout

Page Layout is a significant consideration in the overall design interface of any website. Following are some guidelines to achieve well laid out pages:

6.2.1 A consistent page layout with reference to navigation elements MUST be maintained throughout the site, i.e., placement of navigation elements should be uniform across the website. *(Ref. WCAG 3.2.3)*

6.2.2 Focus should be laid on a few important elements of the page, so that the visitor may be guided to those portions, which deserve most attention. If a lot of elements in a webpage are blinking/flashing or highlighted, the visitor will not be able to concentrate on the essence of the page.

6.2.3 There should be a clear demarcation of components. This can be guided by the Information Architecture where information of one kind is grouped together and presented visually at one point in the page.

6.3

Graphics, Buttons & Icons

Buttons and icons are symbolic representation of objects and the representation of actions
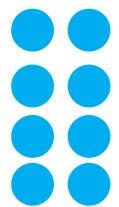
that can be applied to objects. Icons, if used properly can be a powerful technique for communication and attracting attention. They can hold the users attention, add interest to a website and quickly convey information. They are also free from the barriers of language.

6.3.1   While using national identity symbols like Flag, National Emblem etc., it MUST be ensured that the images are in a proper ratio and colour.

6.3.2   The graphic elements like buttons and icons should be simple and their meaning and symbolism should be self explanatory and relevant.Buttons and Icons should be large enough to be distinguishable on a high-resolution monitor, since the display size of components decreases with the increase in the screen resolution.

6.4

Typography

6.4.1   The content of the site should be readable with default standard fonts.

6.4.2   Fonts like Verdana and Georgia that are suited for screen viewing may be used. Text that must be in a particular font for reasons such as branding may use an image and provide the same as Alt text. *(Ref. Section: 6.6.3)*

6.4.3   When using Hindi/Regional language fonts the page MUST be tested on major browsers for any inconsistency (loss of layout). Unicode character must be used.

6.4.4   Italic fonts are not legible in small font sizes. Paragraphs in all capital characters and italics should be used sparingly as they hinder legibility in big blocks of text.

6.4.5   It is author's responsibility to create Web content that does not prevent the user agent (e.g. browser) from scaling the content effectively, therefore Except for captions and images of text, text MUST be resizable without the use of assistive technology by upto 200% without loss of content or functionality. *(Ref. WCAG 1.4.4)*

6.4.6   Font properties should be such that the text MUST be readable both in electronic and print format and the content MUST print correctly on an A4 size paper.

6.5

Colour

6.5.1   Proper contrast between text and background is essential for users who have low
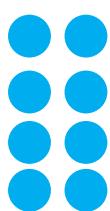
vision. Therefore the visual presentation of text and images of text MUST have a contrast ratio of at least 4.5:1 except:

- If the text is purely for decorative purpose.
- Is not visible. or Is a part of an inactive user interface.
- Is a part of a logo where it has no minimum contrast requirement.
- That are part of a picture that contains significant other visual content.
- If the text is substantially large in size (18 pt or 14 pt bold) it must have a contrast ratio of 3:1. (Ref. WCAG 1.4.3)

6.5.2 Use of colour should depend on the target audience. For example, a site for children may use bigger fonts and bright colours to grab the attention of kids while a site designed for researchers and academicians should focus on content with subtle use of colours.

6.5.3 Websites should ensure the colours used for text and graphics look good on a variety of platforms, monitors and devices.

6.5.4 Color is an important asset in presentation of Web content however, some users have difficulty perceiving color e.g. People with partial sight or older users who do not see color well. In addition there are people using text-only, limited-color or monochrome displays and browsers.If a page has information that is conveyed by color differences like: "required fields are red", "error is shown in red", and "january sales are in red, july are in blue" or indications of an action like using color to indicate that a link will open in a new window then these users may not be able to access such information. Therefore it MUST be ensured that Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. *(Ref. WCAG 1.4.1)*

6.6

Images

6.6.1 Use of images for representing text should be limited

Though images add life to a website, they also increase downloading time. Images should only be used when it adds value to the content. Images should not be used to present text as those using text only browsers shall not be able to access the information thus rendering the site inaccessible to many. Therefore, text MUST be used to convey information rather than images of text except when the image of text can be customised to the users requirement or when a particular representation of text is essential for the information being conveyed (such as a text in a logotype): The use of text, rather than images of text, should be considered for page headings and website navigation items (Menus). *(Ref. WCAG 1.4.5)*
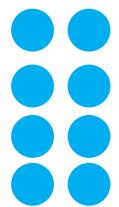
6.6.2 Size of image files should be minimised

The size of image files should be reduced as much as possible to minimise the download time of web pages. A variety of techniques can improve the download time of pages:

- Scaling of images should be avoided as they tend to distort when scaled. Instead, a correct size should be prepared in image processing software.

- A thumbnail (a smaller version) for a large image and link to the full-size copy should be provided where appropriate.

6.6.3 Images and other non text content MUST be made Accessible

- A meaningful explanatory text equivalent MUST be specified for images and other non text content e.g. by using the ALT attribute. The ALT text for an image is displayed before the image is fully downloaded. It is the main source of image information for users of text-only browsers, users of browsers with graphics turned off, and users who are sight impaired. The description should summarise the content or purpose of the image. For example, to use the description 'Picture' to explain a graphic does not serve any purpose. The following situations are exceptions:

  (i) If the non text content is a control or accepts input e.g. a submit button then it must have a name describing the purpose of the control.

  (ii) If the non text content is time based media (audio/video) then the text equivalent provides a descriptive identification of the same.

  (iii) If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content.

  (iv) If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content.

  (v) CAPTCHA: If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities.

  (vi) If non-text content is pure decoration, is used only for visual formatting,
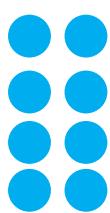
or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology (by using blank alt attribute). *(Ref. WCAG 1.1.1)*

- The HEIGHT and WIDTH dimension attributes force the browser to allocate space for images and download the text first. The height and width specifications should be the same as the actual height and width of the image. This speeds up the time to download the web page and display the content.

6.7
Audio / Video / Animation

The use of audio/video clips in a website can enrich the content and render the communication more effective for the visitor; however, the following guidelines should be followed while including audio/video clips on the website**.**

6.7.1 Download Details for Video and Audio Clips

a. Download information MUST be provided to help users determine whether they wish to access the video or audio clip. This includes the download and usage instructions, file size, and file format.

b. If a specific software programme is required to access the multimedia file, a link to enable the user to download it MUST be provided.

6.7.2 Text Equivalents for Video and Audio Clips

In order to ensure that content of video and audio clips is accessible to all, including those with impaired vision, hearing impaired or those accessing the information on slow connections:

a. Government websites MUST provide equivalent information of audio only/ video only clips (e.g. a text description of the audio/video). In case of video-only clips audio description of the video may also be provided in place of text. *Ref. WCAG 1.2.1*

b. When audio (live or pre recorded) is synchronised with other media for presenting information the audio information MUST be presented as captions for the benefit of hearing impaired or those who do not have access to audio. Captions must not only include dialogue, but identify who is speaking and include non-speech information conveyed through sound, including meaningful sound effects. In case of video presented in synchronised media
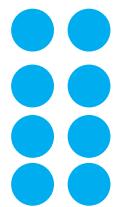
audio descriptions must be provided (if all of the information in the video track is already provided in the audio track, no audio description is necessary) *WCAG 1.2.2 & 1.2.3*.

6.7.3   Animations

The use of animation can be an effective means for drawing attention to key aspects of a website. However, Government websites should ensure that animations used on the site do not distract or irritate users or lead to unacceptable download times. Animation should be used only if it adds value to a page. File sizes of animated images should be kept small by limiting the number of frames.

a. Certain special effects such as blinking or flashing have been reported to cause epileptic seizures. It is also seen that people are more sensitive to red flashing than other colours.Web pages MUST not contain anything that flashes more than three times in any one second period. *(Ref. WCAG 2.3.2)*

b. For any moving, blinking or scrolling information that starts automatically and lasts for more than 5 seconds and is presented in parallel with other content, there MUST be a mechanism for the user to pause, stop, or hide it (unless the movement, blinking, or scrolling is part of an activity where it is essential). Many web pages also contain auto updating content that disappears or is updated in a preset interval of time e.g. stock prices, news etc. In such case also the user MUST have a mechanism to pause, stop or hide the content or to control its frequency unless this auto updation is a part of an activity where it is essential. *(Ref. WCAG 2.2.2)*

c. If any audio on a Web page plays automatically for more than 3 seconds, there MUST be mechanism to pause or stop the audio. Individuals who use screen reading software can find it hard to hear the speech output if there is other audio playing at the same time. Also as screen readers speech output is controlled via the same volume control as the system sound control the webpage MUST provide a means to control the volume of audio playing in the page independently from the overall system volume level. *(Ref. WCAG 1.4.2)*

6.8
Navigation

Consistent navigation makes it easy to use a website since a visitor does not need to understand or remember different navigation styles for different sections. Therefore to promote ease-of-use for all citizens, Government websites must have a navigation scheme that is used consistently across the website.
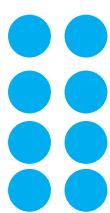
The organisation and navigation scheme of the content in the website should be either categorised by subject (topic, tasks, services, life events), by audience group, by geographic location, or by any combination of these factors. Web information managers should analyse the wants and needs of citizens and other intended target groups when organizing the content of Government websites.

6.8.1　It must be possible for a visitor to reach the Homepage from any other page in the website.

6.8.2　Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages MUST occur in the same relative order each time they are repeated, unless a change is initiated by the user. *(Ref. WCAG 3.2.3)*

6.8.3　Navigation items of the same type should look and behave the same way. For example, if a set of pages on one topic has subtopic links in the left navigation bar, pages on other topics should also have subtopic links in the left navigation bar that look and behave identically.

6.8.4　Links to under construction pages MUST be avoided as far as possible.

6.8.5　Each page MUST be a standalone entity in terms of ownership, navigation and context of content.

6.8.6　List of all levels between the homepage and current page should be provided on each page (as breadcrumbs).

6.8.7　Navigation to external websites should be enabled in such a manner that the external website opens in a small sized browser window. This is to ensure that the context remains on the screen for the visitor.

6.8.8　Web pages and applications often have content that is repeated on other pages or screens (for example navigation links, heading graphics, banner frames etc). A sighted user can ignore the repeated material by focusing on the main content area but it is not possible for a person using a screen reader as the content is read sequentially. Therefore Web pages MUST provide a mechanism to bypass blocks of content that are repeated on multiple Web pages. This may be done by providing a link at the top of each page that goes to the main content area. *(Ref. WCAG 2.4.1)*
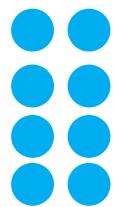
6.9

Site Search

"Search" is a standard facility on any website now as visitors expect to be guided to the desired information and service through an easy to use search facility. Effective search functionality is crucial for mining through the large volumes of information made available on Government websites. Following are some of the guidelines to achieve the same:

6.9.1 Government websites MUST include either a "Search" box or a link to a "Search" page from every page of the website. The search box or link must be titled "Search", as it is a standard term understood by web surfers world over. As per internationally accepted Usability principles, search boxes are most effective when placed in the same position on all pages (usually within the upper third part of the webpage). *(Ref. WCAG 2.4.5)*

6.9.2 Search results should be displayed in an easy-to-read format that, at a minimum, shows visitors the term(s) they searched for and may highlight the term(s) in each search result. Search results should be marked with an HTML heading so that the screen reader users can quickly locate search results.

6.9.3 Departments should carefully determine the scope of their search index to determine which content should be included and which content should be excluded. This further implies that the content not meant to be in the public domain should not be included in any web-based file that could be retrieved through any search engine.

6.9.4 The frequency of indexing the content of a Government website should be pre-decided by the hosting provider. Content that is added and updated frequently, such as press releases, should be indexed more frequently.

6.9.5 Government Departments should regularly use traffic analysis tools to identify the common search terms used to reach their website. This shall enable a higher ranking of the site on search engines after due customisation.

6.9.6 Although usability research indicates that very few people use "advanced" search features, Departments should allow visitors to conduct more refined, focused searches to achieve more relevant results.

6.9.7 Considering the fact that many people are unfamiliar or unskilled at using search technology, the website should provide help, hints, or tips, and include examples, along with its search facility to aid the visitors.
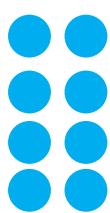
6.9.8 Users may expect the site index/search to access all the appropriate content and not display content from outside the site. In case the search results reflect the results from outside the website, it should be clearly distinguished and mentioned on the top of the page.

6.10

Sitemap: Powerful Navigation Aide

The citizens visiting Government websites need to be able to find the information and services they seek, as easily and quickly as possible. A site map represents the structure of a website, textually as well as graphically, on a single page. A proper 'Site-Map' can provide a convenient and easy-to understand view of the contents in the whole site. It also facilitates quick access to the information that the citizens want. Following guideline pertains to site maps:

6.10.1 Every Indian Government website MUST have a 'Sitemap' linked through to Homepage as well as all important entry pages of the site. *(Ref. WCAG 2.4.5)*

6.11

Frames

Frames are an HTML technique used by web site designers to display two or more pages in the same browser window. Each frame is built as a separate HTML file, but with one "master" file to identify each frame. When a user requests a page with frames, several pages are displayed as panes. Framesets are not supported in HTML5. Use of frames must be minimised as many search engines do not index framed web pages properly, however if frames are used, it should be ensured that:

- Each frame is titled to facilitate frame identification and navigation.
- HTML file name of each frame is meaningful.
- A text title is included on each frame (this can be hidden in visual browsers).

Chapter 07 | DEVELOPMENT
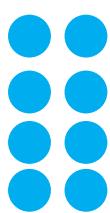
Development

Use of Open Standard based tools and technologies for the development of websites, software as well as content are very important to interoperability and accessibility of websites. World wide web consortium (W3C) is an International body working towards defining standards in web technologies and formats for publishing content on the web.

With respect to markup languages Indian Government websites should comply with W3C standards. Most of the browsers, softwares, companies/communities, also try to comply with W3C standards. Some of the commonly required standards are listed below:

7.1

Markup Languages

HTML (Hypertext Markup Language) is at the core of the foundation of World Wide Web. Language has undergone a number of revisions to enable it to be more powerful. HTML 4.01 version established it as a structural document markup language and is oriented towards the use of Cascading Style Sheets (CSS). The latest standard in HTML is version 5.0. XML (Extensible Markup Language) is the means to extend HTML further and make it more generic. XSL (eXtensible Stylesheet Language) is the preferred style sheet language of XML. XHTML 1.0 is an XML based markup language and gives a new dimension to markup languages.

Indian Government websites/web documents/pages/forms should validate to following published grammars:

- HTML 5.0
- XHTML 1.0
- XML 1.0

Web pages should be tested for compliance with validation tools such as W3C markup validator. For further details on the above markup languages, visit the website of W3C at http://www.w3c.org.
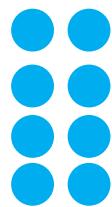
7.2

Cascading Style Sheets (CSS)

Cascading Style Sheets (CSS) is a style sheet language used to describe the presentation of a document written in a markup language. Its most common application is to style web pages written in HTML and XHTML. The CSS specifications are maintained by the World Wide Web Consortium (W3C). Its current specifications is CSS3.

CSS is used by both the authors and readers of web pages to define colours, fonts, layout, and other aspects of document presentation. It is designed primarily to enable the separation of document content from document presentation. This separation can improve content accessibility, provide more flexibility and control in the specification of presentational characteristics, and reduce complexity and repetition in the structural content. CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices.

To know more about CSS, visit
http://www.w3.org/Style/CSS/.

Advantages of using CSS include:

- Presentation of information for an entire website or collection of pages can be held in one CSS file, allowing global changes to be propagated quite conveniently.

- Web browser software can store a copy of the CSS file in the computer's cache, so that it doesn't have to be downloaded each time the user views a web page that references it, hence improving the access time.

- Different users and screen readers can have different style sheets: for example a large text alternative for visually impaired users or a layout optimised for small displays for mobile phones.

- The document code is reduced in size and complexity, since it does not need to contain any presentational markup.

7.2.1 Therefore Indian Government websites should use Cascading Style Sheets to control layouts/styles and MUST make the interface responsive to cater to a wide range of screen sizes.

7.2.2 Websites that use style sheets should 'degrade' gracefully so that the site remains fully functional even if the stylesheet settings are ignored. Therefore the Web pages in Indian Government websites MUST have the same logical order without the style sheets as they have with the style sheets.
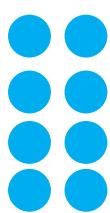
7.3

Scripting Languages

Scripting languages are an easy and fast means to enable or include more controls in Web pages. They can be implemented either as Server side scripting languages using PHP, JSP, PERL and ASP or as Client side scripting language using JavaScript.

7.3.1 Server side scripting languages should be preferred over Client side since client side scripting may face issues of browser incompatibility, scripts being turned off by browsers, security etc.

7.3.2 It should be ensured that pages are usable when scripts, applets, or other programmatic objects are turned off or not supported. If this is not possible, provide equivalent information on an alternative accessible page.

7.4

File Formats

Documents form a very important and significant component of Government websites. Indian Government Websites should therefore provide access to documents in appropriate File Formats that are based on open standards and do not impose an unnecessary burden of downloading or acquiring specific software on the intended audience.

When choosing file format(s), Departments should consider: Intended use of the material, Frequency of use, Accessibility of the format and Level of effort and time required to convert the material to the specific format.

File formats for different forms of content are discussed below:

7.4.1 Graphics & Multimedia files

a. Sites should have image and graphic components in JPEG, PNG and GIF formats and the same should be compressed without losing on visual quality as far as possible, to allow faster downloads.

b. Multiple graphic images at the server may be used (such as providing a thumbnail image with a link to a higher resolution graphic) to make the site more usable even for low bandwidth connections.

c. Departments may use Web and multimedia technologies to enhance sites, on the condition that all elements are accessible.
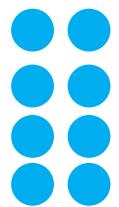
7.4.2 Documents

a. Government websites shall have a lot of information in the form of documents such as Acts, Rules, Schemes, Gazettes, Forms, Circulars and Notifications. Accessibility and usability of these documents by all citizens is as important as that of the entire website. Departments MUST either use HTML format or any other format that makes the document accessible. In case documents are published in a format other than HTML format, departments MUST provide a link to the website from where the document reader can be downloaded free of cost.

b. When the document has been provided in a format other than HTML, websites should include a text description of the document, including the title, file type, file size, and effective date. This will ensure that visitors have a reasonable understanding of what to expect when they view the document.

c. When the document has been provided in a format other than HTML, websites should include a text description of the document, including the title, file type, file size, and effective date. This will ensure that visitors have a reasonable understanding of what to expect when they view the document. The document should be properly tagged and should not contain scanned images of text *(Ref. 6.6.1)*. This will ensure that the document is accessible to screen reader users (refer guidelines website web.guidelines.gov.in for details).

7.5
Ready Reference for Developers

a. It MUST be ensured that in content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and IDs , if any, are unique, except where the specifications allow these features. This helps to ensure that user agents, including assistive technologies, can accurately interpret and parse content. If the content cannot be parsed, then different user agents may present it differently. Some user agents use "repair techniques" to render poorly coded content. Since repair techniques vary among user agents, authors cannot assume that content will be rendered correctly by specialized user agents. *(Ref. WCAG 4.1.1)*

b. Labels or instructions MUST be provided when content requires user input (for example in forms). Text instructions that describe the input must be provided at the beginning of a form or set of fields. Elements associated with input must be labeled to ensure that information about the input field is spoken by screen readers when the field receives focus.

(Ref. WCAG 3.3.2)

c. In situations where web functions are time-dependent, (for example, filling out online form) it will be difficult for people with disabilities such as blindness, low vision, dexterity impairments, and cognitive limitations to perform the required functions before a time limit occurs. This may render the service inaccessible to them. It must therefore be ensured that such users are given adequate time to interact with Web content whenever possible. For each time limit that is set by the content, the user MUST be allowed to turn off the time limit, adjust the default setting before encountering it or is warned before time expires and given option to extend the time limit with a simple action (for example, "press the spacebar"). *(Ref. WCAG 2.2.1)*

Activities that essentially require a time limit (for example an online auction) or the time limit is too long (say 20 hours) are exceptions.

d. Many users including the visually challenged cannot perceive shape, size or use information about location or orientation. For such users the content that relies on knowledge of the shape or position of objects becomes inaccessible (for example, "round button" or "button to the right"). Hence It MUST be ensured that instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound. Additional information needs to be provided to clarify anything that is dependent on this kind of information. *(Ref. WCAG 1.3.3)*

e. If an input error is automatically detected, the error MUST be described to the user in text. The error message should be as specific as possible. This will ensure that users are aware that an error has occurred and can determine what is wrong. Describing the error in text in addition to highlighting the errors will help screen reader users, who cannot distinguish colour and users with cognitive disorders who have difficulty in perceiving the meaning of other visual cues. *(Ref. WCAG 3.3.1)*

f. All functionality of the content MUST be operable through a keyboard interface without requiring specific timings for individual keystrokes, except where input depends on the path of the user's movement (for example, drawing freehand curves or using handwriting to write). *(Ref. WCAG 2.1.1)*

g. Whenever a web page is rendered using plug-ins or embedded applications, it is possible that functionality of the Web page restricts the keyboard focus to a subsection of the content, unless the user knows how to leave that state and "untrap" the focus. This situation may affect navigation for people who rely on a keyboard or keyboard interface to use the Web, including visually challenged
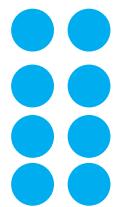
and people with physical disabilities. Therefore it MUST be ensured that if focus can be moved to a component of the page using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it is not possible   the user is advised of the method for moving focus away. *(Ref. WCAG 2.1.2)*

h.   It MUST be ensured that the purpose of each link can be determined from the link text alone or from the link text along with its programmatically determined link context e.g. by using title attribute as a tooltip to clarify the purpose of link. *(Ref. WCAG 2.4.4)*

i.   When any component receives focus, it MUST not initiate a change of context. Developers must use "activate" rather than "focus" as a trigger for change of context. This ensures that functionality is predictable as visitors navigate their way through a webpage. (Examples of changing context when a component receives focus include forms being submitted automatically when a component receives focus or new windows launched when a component receives focus). *(Ref. WCAG 3.2.1)*

j.   Entering data or selecting a form control must have predictable effects. Changing the setting of any user interface component MUST not automatically cause a change of context unless the user has been advised of the behaviour before using the component. Unexpected changes of context can be disorienting for users with visual disabilities or cognitive limitations. *(Ref. WCAG 3.2.2)*

k.   Metadata adds semantic information to pages and sites and provides contextual information for people navigating the site, especially those with screen readers who rely on things such as page titles, structured page headings and lists. Metadata may also be used by some search engines. Indian Government websites MUST provide metadata like, keywords, and description at least on Homepage and all important entry pages.

l.   Tables help in organising and presenting data on a webpage. However, many designers in the past have been using tables to make the layout of Web pages. This has resulted in the Web pages not being accessible to people using assistive technologies such as screen readers. For this reason, Use of Tables for page layout should be avoided. For data tables, proper tags and markup MUST be provided to identify row and column headers and associate data cells and header cells.

m.   When users navigate sequentially through content, they should encounter information in an order that is consistent with the meaning of the content

and can be operated from the keyboard. Hence if a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components MUST receive focus in an order that preserves meaning and operability. *(Ref. WCAG 2.4.3)*

n. For all user interface components, it is a MUST that the name and role can be programmatically determined; states, properties, and values can be programmatically set; and notification of changes to these items is available to assistive technologies. *(Ref. WCAG 4.1.2)*

o. Any keyboard operable user interface MUST have a mode of operation where the keyboard focus indicator is visible. This helps the user know which element among the multiple elements present in the page has focus. For e.g., in case of a button a visual change in the button (e.g. color, size) can indicate that the focus is on the button. *(Ref. WCAG 2.4.7)*

p. If an input error is automatically detected and suggestions for correction are known, then the suggestions MUST be provided to the user, unless it would jeopardize the security or purpose of the content. Input error occurs if the user omits a certain information that is required by the webpage or the information provided by the user is not in the correct format or falls outside the permissible value.This is to ensure that the users receive appropriate suggestions for correction of input errors if possible. *(Ref. WCAG 3.3.3)*

q. For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or submit user test responses, at least one of the following MUST be true: *(Ref. WCAG 3.3.4)*

- **Reversible**: Submissions are reversible.

- **Checked**: Data entered by the user is checked for input errors and the user is provided with an opportunity to correct them.

- **Confirmed**: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.

7.6
Validation & Testing

Websites should be validated and tested with automatic tools and human review. Automated methods are generally rapid and convenient but cannot identify all issues. Human review can help in issues like ensuring clarity of language and ease of navigation.

Following are some important validation methods that may be followed:

    a. Departments may use automated accessibility tool and browser validation tool.

- Validate syntax (e.g., HTML, XML, etc.).
- Validate stylesheets (e.g, CSS).

    b. It is a MUST that Indian Government websites are tested for multiple browsers and versions of browsers, operating systems, connection speeds, and screen resolutions to ensure access by all.

    c. Use of a self-voicing browser, a screen reader, magnification software, small display, etc.

    d. Use spell and grammar checkers. Eliminating grammatical errors increases comprehension.

    e. Review the document for clarity and simplicity. Readability statistics, such as those generated by some word processors may be useful indicators of clarity and simplicity. Better still, ask experienced (human) editors to review written content for clarity.

7.7

Web Application Security

Web Application security is of paramount concern to owners as well as consumers of the website. A lot of security threats are handled at data centres and server administrator level where the application is hosted. Application developers should however be sensitive about security aspects, as a large number of security threats arise due to vulnerability of application software code.

These application driven attacks sometimes turn out to be quite fatal. Best Practices to follow while developing web applications using various technologies are available on CERT-IN website (http://www.cert-in.org.in) as well as in internet space. Developers should read, understand and follow these Best Practices during development. NIC as well as CERT.IN have empaneled a number of agencies to conduct the security audit of applications.

7.7.1 Each website/application MUST undergo a security audit from empaneled agencies and clear the same, prior to hosting and after addition of new modules.

7.7.2 Department MUST formulate a security policy to address various security issues related to the website.

Chapter 08 | WEBSITE HOSTING
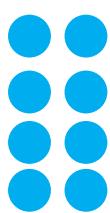
Website Hosting

8.1
Website Hosting

The fundamental purpose of a Government website is to deliver the information and services to the citizens and other stakeholders using the medium of Internet. Generally, websites/portals/web applications are hosted on special purpose servers in a Data Centre.

Data Centre is a facility equipped with controlled power, cooling systems, physical security and access control. Generally, a large number of servers are hosted in a Data Centre, powered by high speed networking infrastructure, storage system along with a storage network. Provision for back-ups of data/information residing in Data Centres is also an important service of Data Centre. Multi-tier security infrastructure is also a crucial component of Data Centres.

While it is extremely important to develop websites using state-of-the-art technologies, hosting infrastructure plays a crucial role in the performance, availability and accessibility of these websites to end users with varying set-ups.

Hence, configuration of hosting server infrastructure as well as facilities at Data Centres are important aspects to review, prior to hosting. Following section details the kinds of facilities and services that the Department should expect from their hosting service providers.

8.2
Hosting Service Provider

8.2.1   Indian Government websites must be accessible to the public in a fast and secure manner on 24x7 basis. It is important that the Web Hosting Service Provider (HSP) for a government department be chosen with extreme caution and care, keeping the following in mind:

   a.   The HSP MUST possess state-of-the-art multi tier security infrastructure at both, physical and network level as well as security policies to ensure the best possible security to Government websites.

   b.   The Web Hosting Service Provider MUST also use devices such as firewall and intrusion prevention systems to make the website more secure.
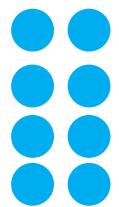
c.   The Web Hosting Service Provider MUST have a redundant server infrastructure to ensure fastest restoration of the website in the event of any unforeseen hardware/software failure.

d.   The HSP MUST have a Disaster Recovery (DR) Centre in a geographically distant location and a well drafted DR plan for fast restoration of the services during any disaster.

e.   Provision should be given to the concerned Department to remotely update their website in a secured manner.

f.   The HSP should also provide the facility of staging infrastructure in order to facilitate the testing of the new websites as well as their enhanced or revised versions' content prior to publishing on the internet.

g.   HSP should provide web server statistics required for performance evaluation on a regular basis. If possible, online access to the traffic analysis should be provided so that the Department can access the traffic analysis at any point of time for the purpose of evaluation.

h.   Web Hosting Service Provider MUST provide helpdesk and technical support to the department on 24 x 7 x 365 basis.

8.3

Contingency Management

The website of a Government Department is its presence on the Internet and it is very important that the site is fully functional at all times. It is expected of the Government websites to deliver information and services on a 24x7 basis. Hence, all efforts should be made to minimise the downtime of the website as far as possible.

It is therefore necessary that a proper Contingency Plan MUST be prepared in advance to handle any eventualities and restore the site in the shortest possible time. The possible contingencies include:

8.3.1   **Defacement of the website**: All possible security measures must be taken for a Government website to prevent any possible defacement/hacking by unscrupulous elements *(Ref. 7.7.1)*. However, if despite the security measures in place, such an eventuality occurs, there must be a proper contingency plan, which should immediately be executed. If it has been established beyond doubt that the website has been defaced, the site must be immediately blocked. The contingency plan must clearly indicate as to who is the person authorised to decide on the further course of action in such eventualities. The complete contact details of this authorised person must be available at all times with the web management team.
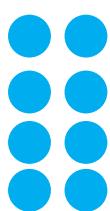
Efforts should be made to restore the original site in the shortest possible time. At the same time, regular security reviews and checks should be conducted in order to plug any gaps in the security.

8.3.2   **Data Corruption**: A proper mechanism has to be worked out by the concerned Government Departments, in consultation with their web hosting service provider, to ensure appropriate and regular back-ups of the website data are being taken. These enable a fast recovery and uninterrupted availability of the information to the citizens in view of any data corruption.

8.3.3   **Hardware/Software Crash**: Though such an occurrence is a rarity, still in case the server on which the website is being hosted crashes due to some unforeseen reason, the web hosting service provider must have enough redundant infrastructure available to restore the website at the earliest.

8.3.4   **Natural Disasters**: There could be circumstances wherein due to some natural calamity, the entire data center where the website is being hosted gets destroyed or ceases to exist. A well planned contingency mechanism has to be in place for such eventualities wherein it should be ensured that the Hosting Service Provider has a 'Disaster Recovery Centre (DRC)' set up at a geographically remote location and the website is switched over to the DRC with minimum delay and restored on the Web.

Apart from the above, in the event of any National Crisis or unforeseen calamity, Government websites are looked upon as a reliable and fast source of information to the public. A well defined plan for all such eventualities should be in place within all Departments/Organisations so that the emergency information/contact help-lines could be displayed on the website without delay. For this, the concerned person in the Department responsible for publishing such emergency information should be identified and his/her complete contact details should be available at all times.

Chapter 09

WEBSITE PROMOTION

9.1   SEARCH ENGINE OPTIMISATION

9.2   WEBSITE PROMOTION TECHNIQUES
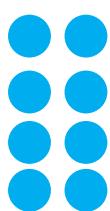
WEBSITE PROMOTION

Web is a medium of mass information dissemination. With the exponential growth in the number of websites, which has even crossed the one billion mark, the question of visibility on the Internet/Web has assumed critical significance.

The ultimate aim of any Government website should be to provide information and services to as many citizens as possible. The existence of any Government site lying inaccessible on the web is meaningless. For this purpose a conscious and concentrated effort has to be made to increase the reach of the website.

Therefore, the importance of website promotion, especially in the context of Government websites which aim to reach the largest possible number of citizens and stakeholders cannot be overemphasised.

9.1

Search Engine Optimisation

People usually search for a website through search engines. Therefore searching for a site in a search engine by using the Department name or the services offered by it as keywords should preferably bring the website in the first five results on major search engines.

In order to achieve this, **the following guidelines may be followed**:

9.1.1   The Page Title should include useful and distinctive indication of the contents and should be self-explanatory. The HTML title should be chosen carefully considering its role in search engine indexing, query responses, window title bar and in bookmark labels. *(Ref. 2.1.6)*

9.1.2   Department name, services offered, schemes, location etc. should form a part of the Meta information (meta tags) of the HTML page. The important meta tags that MUST be included are keywords and description tag. These tags are present in the <head> portion of the html page and while they are not displayed as part of the page content in web, search engines can read them.

9.1.3   Search engines often display the first few lines of a Web page to help searchers to identify the sites they want to visit. The description meta tag should be used to provide guidance to search engines on what to present to the users in the search response.
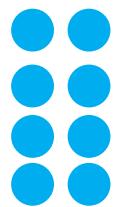
9.1.4   Search engines only consider limited number of keywords when indexing pages. Government websites should present keywords in the order of priority and without duplication.

9.1.5   The content of the web page should be in textual form as far as possible, including hyperlinks. Important points/programmes/schemes etc. should be highlighted as headings marked by HTML heading tag.

9.1.6   HTML links should be specific. Instead of just 'Our Programmes', a link saying 'The Programmes of _Department name_' will be more favourable for a search engine.

9.1.7   Link exchange with related Government sites increases the weightage of the site for search engines, thus improving its ranking in search results. It will also bring more visitors, who are looking for similar schemes, services or information, to the site.

9.2
Website Promotion Techniques

Apart from search engines the website may be promoted through other media like print, television etc. This will prompt casual visitors to browse the website and if they find the information useful, they may visit the site more often.

9.2.1   All the advertisements/public messages including Press Releases, Tender Notifications etc. issued in the Newspapers/Audio-visual media by the concerned Department MUST prominently mention the URL of the web site clearly in order to give it due publicity. It should be directed that no press release or advertisement of any Government Department shall be issued to the press without checking the presence of the URL of the website and necessary steps should also be taken to ensure the presence of relevant corresponding information on the website.

9.2.2   All the stationery items of the Department such as Letterheads, Visiting Cards Publicity material such as Brochures, Pamphlets and documents such as the Annual Report etc. MUST display the URL of the web site.

9.2.3   The website URL may become a part of the mail signature for all the outgoing mails from the Departments and its employees.

9.2.4   The website should also be promoted by link exchange with other Government websites as well as international websites.
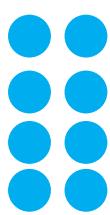
9.2.5 Providing regular and updated news on various issues related to the Government, citizens etc. are very important tools of promotion. Regular revised updates on all important issues related to Government and in interest of the citizens should be highlighted/placed on the website. Frequent updates and change in contents will bring the visitors back to the portal and will keep the readers interested in the website.

9.2.6 Sending regular updates on the websites to registered and interested users through an electronic newsletter should form an important means of promotion.

Chapter 10 | WEBSITE MANAGEMENT
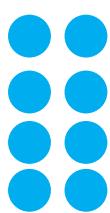
WEBSITE MANAGEMENT

10.1
Website Management Team

The success of any endeavour depends upon the backing of a strong and enthusiastic team. In case of a Government website, the role of a Website management team assumes paramount importance in ensuring its credibility amongst its patrons.

10.1.1 Departments MUST appoint a Web Information Manager (WIM) whose role shall be to ensure that there is a proper flow of content to the site and that content quality and user satisfaction issues are taken care of. To achieve this WIM has to coordinate with the various groups within the Department and undertake the following activities with regard to the Indian Government website being maintained by her/him.

- Formulation of policies concerning management of content on the web through its entire life cycle viz. Creation, Moderation, Approval, Publishing and Archival. Ensuring that all content on the website is always authentic, up-to-date and obsolete information or services are removed.

- Set a mechanism for periodically validating links to related information. An automated report can provide a list of broken links on the site, which can be immediately corrected.

- Getting the website certified for Guideline Compliance and ensuring that it remains compliant throughout its lifecycle.

- Web Information Manager is overall responsible for quality and quantity of information and services on the website. The complete contact details of the Web Information Manager should be displayed on the website, so that the visitor could contact him/her in case of some queries or requirements.

- Since the websites receive a significant amount of feedback/query mails from the visitors, it is the responsibility of the Web Information Manager to either reply to all of them himself/herself or designate someone to regularly check and respond to the feedback/query mails.

10.1.2 Besides the Web Information Manager, a Technical Manager should also be appointed for every Indian Government website whose responsibilities would be:
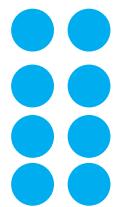
- Regular monitoring of website for Performance, Security and Availability.

- Ensuring compliance with policies (organisational, regulatory, legislative, etc.) that may require changes in website content, architecture, and security.

- Periodic security audit of the website in line with major revisions.

- Analysis of traffic on website and feedback to development/management team.

10.1.3 In case of a large website/multiple websites, a team should be setup with Web Information Manager having professionals skilled in HTML Authoring, Programming, Design, Content etc.

10.2
Website Maintenance Tools

Web is a dynamic medium and a website grows with time with addition of new content and features. The website therefore requires regular maintenance to ensure that the quality is maintained and it meets the expectations of the visitor. With the increase in content size and complexity, it becomes difficult to manually maintain the site and therefore automated tools should be used for updation, analysis and checking the site. It is intended that the practice of using these tools may be adopted from the beginning as it avoids difficulties later.

Some such tool categories are suggested below:

10.2.1 Website Authoring Tools

Website Authoring Tool is a software for generating well-engineered web pages. Lots of web page authoring tools are available in the market, as well as in the free domain. One can choose any tool based on the requirements, however, the following should be ensured while selecting the tool:

- It generates pages that conform to all of the requirements, recommendations and options of this guideline.

- It conforms to the Web Consortium's Authoring Tool Accessibility Guidelines.

10.2.2 Web Content Management System

A web Content Management System (CMS) is the software used for creating and managing web content. It is used to manage and control a large, dynamic collection of content on a website/portal (HTML documents and their associated documents and files). CMS facilitates content creation, content control, editing,
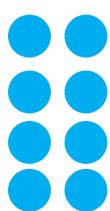
and many essential content maintenance functions. Usually the software provides interface where users with little or no knowledge of programming languages and markup languages can create and manage content with relative ease of use. A wide variety of CMS solutions are available right from customised CMS to enterprise class CMS software available commercially as well as in free domain.

Ease of use, support for a variety of content, automated templates, content workflow management are some of the features to be looked into in CMS software. For small scale websites, developers could also develop website specific CMS solutions, as it may turn out to be cost effective in many instances.

10.2.3 Web Analytic tools

Many organisations rely on statistics regarding site usage to measure the impact of the site and also for reorganising or enhancing their website further. Some use simple counters while others use more sophisticated Web analyser tools to obtain data. Counters add little value to a site and often appear to be self-congratulatory. Web analyzer tools provide more information and are virtually transparent to the end user, therefore Web analyser tools should be the standard means of collecting site usage data. Counters should not be used to perform this function.

10.2.4 Validation and Testing

The code of the webpages, scripts and applications may be tested manually or with automated tools to ensure that the quality of web content is maintained and all compliance related guidelines are adhered to.

10.3
Website Monitoring

Web being a dynamic medium, changes in terms of technologies, access devices and even the users requirements happen frequently. Keeping this in mind, Indian Government websites MUST have a website monitoring policy in place. Websites must be monitored periodically in accordance with the plan to address and fix the quality and compatibility issues around the following parameters:

a. **Performance**: Site download time should be optimised for a variety of network connections as well as devices. All important pages of the website should be tested for this.

b. **Functionality**: All modules of the website should be tested for their functionality. Moreover, interactive components of the site such as discussion boards, opinion polls, feedback forms etc. should be working smoothly.
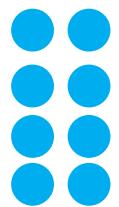
c.   **Broken Links**: The website should be thoroughly reviewed to rule out the presence of any broken links or errors. A number of tools and techniques are now available to easily detect the broken links in a website.

d.   **Traffic Analysis**: The site traffic should be regularly monitored to analyse the usage patterns as well as visitors' profile and preferences. Traffic Analysis tools also give reports on broken links.

e.   **Feedback**: Feedback from the visitors is the best way to judge a website's performance and make necessary improvements. A proper mechanism for feedback analysis should be in place to carry out the changes and enhancements as suggested by the visitors.

10.4
Archiving of Documents

Government websites generally are storehouses of a large number of documents and reports, which are of relevance and importance to specific audiences as well as citizens at large. Many times, these documents also have historical importance and are also referred to extensively for academic and research purposes. These documents can be accessed online only for a specific period of time and need to be moved to offline archives on the expiry of the pre-decided duration. This is important since these old documents sometimes need to be referred to for regulatory or legal purposes.

The Departments MUST have a well-defined Archival Policy with regard to such old documents stating the duration for which they would be kept online, when would they be moved to offline archives and if/when would they be permanently deleted or purged.

10.5
Compliance with Guidelines and Standards

Since these guidelines aim at fulfilling the common objective of making the Indian Government websites citizen friendly and conform to high standards of quality, the website development and management teams in all Departments should endeavor to comply with these guidelines in earnest spirit.

Further, the website management teams should ensure that all Government websites undergo and clear a security audit carried out by an authorised empaneled agency before being hosted, as well as after major revisions.
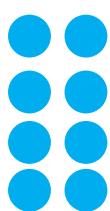
10.6
Website Review & Enhancement

Departments and Organisations that own Government websites, and the citizens they serve, want these websites to be as useful as possible. Government Departments at all levels should evaluate visitor satisfaction and usability of their websites and use the outcome of assessments to improve the websites.

10.6.1 Besides regular feedback through feedback form, Departments may obtain visitor feedback through online questionnaires or surveys where the visitors can be asked to rank the website on various parameters and give detailed inputs on what improvements they would like to see on the website.

10.6.2 Detailed review of web analysis reports over a long span may also reveal a lot of information on usage or expectations from the website.

10.6.3 In order to keep abreast with the latest technologies as well as to cater to the visitor's demands for major changes and enhancements in the website, Indian Government sites should opt to undergo a formal review by an internal group or an external agency to further orient them towards citizens and other stakeholders.

10.7
Website Policies

Websites represent the face of the department in the cyber world. Like the Department itself, the website also has to continually grow and evolve. As the website grows in size and reach, the expectations of the citizen also grow. It is therefore important that we set down rules and regulations to operate and manage the websites effectively.

Although different policies and their need and purpose is explained in various sections of this document for the sake of convenience, a complete list of policies along with the section are referenced below:

S. No.	Policy	Ref. No.
1.	Copyright Policy	3.1
2.	Hyperlinking Policy	3.2
3.	Terms & Conditions	3.3
4.	Privacy policy	3.4
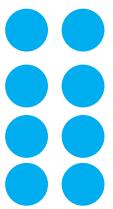
S. No.	Policy	Ref. No.
5.	Content Contribution, Moderation and Approval Policy (CMAP)	5.2.1
6.	Web Content Review Policy (CRP)	5.2.3
7.	Content Archival Policy (CAP)	5.2.6
8.	Website Security Policy	7.7.2
9.	Contingency Management	8.3
10.	Website Monitoring Policy	10.3

All the above policies MUST be duly approved by the Web Information Manager.

Chapter 11   # MOBILE APP GUIDELINES
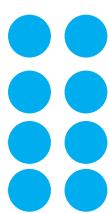
Mobile App Guidelines

11.1
Scenario

There has been a spurt in development of mobile applications due to shift to digital governance. This has empowered citizens like never before. Most of the mobile platforms come bundled with assistive technologies which have been a boon for persons with disabilities. Developers should give due consideration to platform specific features including accessibility in order to ensure rich and useful experience for all users.

Government initiatives such as the Digital India campaign are increasingly delivering basic functions of governance through information technologies. In the past year, the government, private sector and the world at large have embraced mobile applications as a preferred medium for user interactions and transactions.

In addition, the overall app market in India has also grown manifold. The users are downloading apps for accessing various everyday services like transportation, communication, health and entertainment.However, for persons with disabilities, many of these apps, and consequently the services they provide, are inaccessible and often impossible to use.

The Government of India has recognized that accessibility is a concern which it needs to address if it has to engage comprehensively and effectively with the public. The Guidelines for Indian Government Websites (GIGW 2009), the National Policy on Universal Electronics Accessibility (2013) and most recently the Rights of Persons with Disabilities Act 2016 all require compliance with web accessibility standards and provision of public information and resources in accessible electronic format. The increasing adoption of mobile as an engagement platform hence necessitates the adoption of guidelines to ensure that applications are accessible to and usable for persons with disabilities.

11.2
International Standards

Presently there is no single international standard on the accessibility of mobile apps. The World Wide Web Consortium (W3C) is working on a standard, which will take time to be published. In the meantime it has published some best practices, primarily based upon the (Web Content Accessibility Guidelines (WCAG) 2.0. There are also guidelines available from Android and iOS.
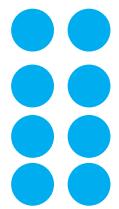
11.3
Objective

The objective of these mobile accessibility guideline is to help developers, designers and testers to create mobile apps that are universally accessible. An accessible application is one which is usable by everyone irrespective of their abilities. These mobile accessibility practices have been formulated after reviewing various globally accepted standards and guidelines, as mentioned in the section on the international position on Mobile app standards.

The Mobile Accessibility practices discussed below are not technology specific, but the examples are based on either Apple iOS or Google Android operating systems. The other mobile platforms are not used widely. The techniques to test or implement a specific practice may differ depending on the operating system.

Both the Android and iOS operating systems provide standardized mechanisms to communicate various attributes of a user interface element (UI Element) such as the label associated with a UI element, role of a UI element (such as whether it is a button or an edit control,) and state information (such as whether it is disabled, checked or pressed.) This mechanism is called Accessibility Application Programming Interface (API) and it provides reasonably good information for standard UI elements.

11.4
Mobile Accessibility Guidelines

11.4.1 Platform accessibility settings

Most mobile platforms provide accessibility settings such as contrast between background and foreground text, invert colors, large text, grayscale, mono audio etc. Users select the relevant setting as per their requirement and expect all the apps to behave accordingly. All the accessibility options in the device settings should be reviewed and it must be ensured that each accessibility feature behaves as intended. For example, if a user chooses invert color option, and the app is already showing black text on a white background then it should show white text on black background which is easy on the eyes for many users with photosensitive eyes. Many other users without any well-known eye condition also find this easier for prolonged reading. Hence **it MUST be ensured that platform accessibility features are optimally used and they behave as intended**. App designers should also follow platform specific design guidelines.

11.4.2 UI Labels

Each UI element must have an accessible label for content such as images, buttons and other controls. An accessible label is recognizable by assistive technology
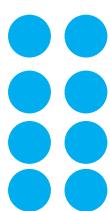
such as Voice over or Talk Back. labels that are embedded into an image must be avoided as they cannot be parsed by screen readers. Hence **it MUST be ensured that Proper labels have been provided for all UI elements**.

Following key points should be considered while labeling UI elements:

a. A label must be precise and clear: Think about the purpose that the UI element serves. For example, label "Add to favourites" for adding an item to favourites. Action verbs that describe the purpose of the UI element must be used in order to provide appropriate labels.

b. Timely Update:In case the functionality of the UI element changes, the label must be updated as well. For example, "Play" button must change to "Pause" and vice versa for media files. Updated labels make it easy for the users to interact with the app.

c. Role and state information should not be provided as the as part of label: This information is provided separately through Accessibility API (described in Practice 3).For instance, "Play "button to be labeled as "Play", and not "Play button" because the button's role will be indicated through accessibility API.

d. Label strings should be localised: This is required for users using the applications in different languages.

11.4.3 Role information for UI elements

Every UI element can be identified visually with its look and feel. As users with blindness cannot perceive visual information, **the role for a UI element MUST be available programmatically so that assistive technology can report this either through speech or Braille**. In order to do so, use platform specific roles or traits for standard UI elements. For example, a button is announced as "Button" along with the label for assistive technology users. In case of custom UI elements, use platform accessibility API to report the role information.

11.4.4 Hints for active UI controls

A Hint is a brief, localized phrase that describes the results of an action on a UI control. It is like a tool tip that lets the user find out how to interact with the UI control. Hints are only required for UI controls that allow users some interaction, and are not required for UI elements such as labels or plain text. In case of custom UI controls, hints also report the screen reader gestures that users could perform to interact with the control. The standard UI controls have hints supplied by the APIs, but those hints might have to be changed depending on the usage. **It MUST be ensured that hints are provided for all active UI control elements**.
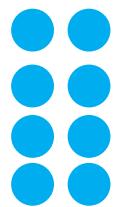
11.4.5 State information for a UI control

In addition to the role of a UI control, assistive technologies must identify the current state of a UI control. For example, the state of checkbox checked/ unchecked, tab selected or not, a push button pressed or not etc. should be notified. This information must also be reported as soon as it is changed. The standard UI controls provide this information by default, but for custom controls, this information must be supplied by platform specific accessibility APIs. **The changes of state of UI controls MUST be dynamically updated and accurately available to the assistive technologies**.

11.4.6 Grouping of Related UI elements

Related UI elements such as book title and author name for a book MUST be grouped together so that assistive technologies can present it as a single UI element, reducing the gestures for interaction. This also helps to increase the touch target so that users with low vision, users having motor difficulties and users with big fingers can more easily interact with it. The following points are important for grouping related elements:

a. A group must have only one actionable UI control.

b. Updating UI controls such as progress bar must not be grouped with any other control as users need only the updated information.

11.4.7 Simple interface and enough spacing between elements

UI should be clean and simple. Vertical and horizontal scrolling should be avoided. This allows users with low vision to zoom and interact with the controls with ease. **A non-interactive space of at least one point for iOS or 1 DP for android MUST be provided between actionable UI elements**. This allows users with low vision, users having motor difficulties and users with big fingers to avoid touching a wrong UI element.

11.4.8 Touch Target

Many users find it difficult to interact with small screen elements. It could be due to big or unsteady fingers or motor or visual difficulties. So, the **touch targets MUST be at least 9x9mm regardless of screen size**.

11.4.9 Bring focus to the active UI control

Since Mobile screens are small, all the UI elements cannot fit on the screen at a time. UI elements such as buttons that take less space are used to bring up other UI elements such as dropdowns. For example, users would activate the "MM" button to bring up the month dropdown. In such scenarios, the dropdown should get the focus when the user activates the button. If the focus is not set properly, blind and low vision users may not be able to realize that the UI has changed.
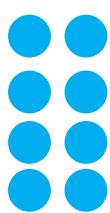
It sometimes takes many attempts to find out the new elements and if such interactions are time sensitive, a timeout could occur and the user would have to start all over again. Even without timeouts, new users could find it difficult to manage such interactions thus impacting the user experience. **Therefore focus MUST be brought to the active UI control**.

11.4.10 Custom actions for context specific UI

When a UI control has context specific menu items, users MUST be informed that such a menu is present and must be able to activate those menu items. A Custom Action is an effective technique to support such an interaction. Both Android and iOS provide Custom Actions that are available to assistive technology users. When an element with a custom action is focused, assistive technology lets the user know that such actions are available and then users can use well known gestures to perform those actions. Alternatively, use the accessibility API to report to the user what new UI elements are available and where such elements are present on the screen. This way users can locate those elements. This technique should only be used if Custom Actions are not available.

11.4.11 Logical and meaningful sequence

Screen reader mobile users rely on gestures to navigate and interact with the content and the UI controls. **Content when navigated using the screen reader gestures, MUST form a meaningful sequence**. The controls on the mobile screens and the interaction produced need to be logical.

11.4.12 Screen orientation

Assistive technology users could lock screen orientation to avoid interference with their interaction with the device. Hence the following should be followed while handling screen orientation:

a. If the user has turned on "Locked Orientation" option for iOS or disabled the Auto-rotate screen option for Android, then the app should not try to change the screen orientation.

b. If Screen orientation change is not disabled then it should be ensured that the screen orientation change is not disruptive and the focus does not move from the focused screen element.

c. Screen orientation change should be reported using accessibility API.

d. Report Screen orientation at the start if it is different from the default setting when screen orientation change is disabled. Otherwise, the change should be reported every time the orientation changes.
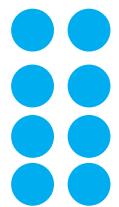
11.4.13 Resizable Content

Users with low vision may need to increase the size of the UI elements to be able to see well. **The app MUST resize its UI elements in accordance with device settings for text size**.

11.4.14 Color contrast

Users with low vision or users in poor lighting condition would find it difficult to see the UI elements on the screen if the foreground elements cannot be differentiated from the background. Therefore, **color contrast ratio between foreground text for up to 18 point font and background MUST be at least 4.5:1**.

11.4.15 Color or shapes MUST not be used to communicate important information

Relying only on color or shape to communicate important information can be problematic for certain persons with disabilities such as users with color blindness or users with blindness. The following considerations are critical:

a. Text equivalence for color coded or shape dependent information must be added. For example, if an app has a required field, then it could provide the word (Required) if the space permits or use placeholders.

b. The app must disable the button used to move the menu forward until the field is filled-out. Just relying on the shape of a button to indicate the disabled state does not work for many users with disabilities.

c. Apps must not use color-based references such as Click on Red or Square button; instead have text references such as Click on Next button.

11.4.16 Onscreen keyboard and hardware keyboard

Mobile platforms provide support for both onscreen keyboard and hardware keyboard. App designers must ensure that both are accessible with assistive technology such as magnifier or a screen reader. Note the following points while developing and testing the input interface:

a. Do not automatically change focus: If a user is entering data and the focus shifts automatically, the user would find it difficult to enter data. **Focus MUST be changed only when the user activates a UI element that is designated for confirming an action such as the Submit button**.

b. Select the correct onscreen keyboard: **It MUST be Ensured that the appropriate keyboard is invoked by the app depending on the type of field or the data that needs to be provided by the user**. For example, the appropriate on-screen keyboard must be invoked for normal text, numerical data, email address or web address. This recommendation is
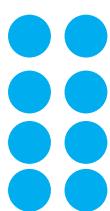
not only helpful for users with disabilities; it also enhances the comfort of other users.

c. Though many users work with the onscreen keyboard, others still prefer using a hardware keyboard that comes built-in or is connected with mobile devices via Bluetooth. Apps must be tested with hardware keyboards as well. **It MUST be ensured that Apps are compatible with hardware keyboard**.

11.4.17 Gesture commands

Complex gesture patterns make application usage difficult for those who do not have use of all of their fingers, or use the device with a single-hand. **Gestures that require 3 or more fingers to interact with UI elements MUST be avoided**. If such complex patterns cannot be avoided, provide an alternate to perform the same action or allow the user to create a custom gesture. For example, an additional setting may be provided to customize gestures as per user requirements.

11.4.18 Time Provided for action

Many users require extra time to be able to finish an action. **Session timeouts MUST be avoided. If a timeout cannot be avoided, then an option MUST be provided for users to extend the time limit before the timeout occurs**. Also, make sure that the time extension element focus is properly set.

11.4.19 Captions and subtitles/transcripts

Many users who have hearing difficulties or who find the language in the audio difficult to understand would need captions or transcripts that help them to understand the content of the audio. **Captions MUST be provided for all audio content and subtitles/transcript MUST be provided for all video content that is accompanied by audio**.

11.4.20 Audio descriptions for video content

Users with blindness may find it difficult to understand important visual information which is not available in the audio format. **If the application contains video that does not have an audio equivalent, audio description for the video content that is crucial for blind users to understand the content MUST be provided**. It is not required to provide audio for decorative and non-essential video content.

11.4.21 Flashing content

Some users get seizures if any content flashes more than 3 times per second. **Therefore, it MUST be ensured that no content flashes more than 3 times in one second**.
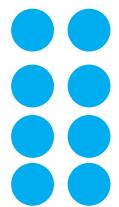
11.4.22 Meaningful Notifications and Error Messages

Notifications are meant to inform and guide users. They can be error messages, alerts, instructions, and changes of state, responding to an interaction or a range of other cues. Use operating system alerts or inline messages.It should be Ensured that the notifications are audible and can be read by screen readers. Preference should be given to operating system alerts as they are easier to understand. Custom made notifications should be clear and precise.

11.5
General Guidelines

11.5.1 App size and performance

a. Users are reluctant to install and use apps which are large in size as mobiles have limited storage. The app should be small to encourage installs and retentions.

b. Applications may be used in areas where network connectivity is erratic or slow therefore the app should be able to perform bare minimum functionality in absence of network connectivity. The users should be appropriately informed.The app should use network in an efficient and optimized manner. Platform specific guidelines should be followed for network management.

c. Users may not be able charge the mobile frequently hence apps with heavy battery usage are uninstalled immediately. Battery draining features may be avoided.

11.5.2 Testing

Before uploading the app on the play store it should be ensured that the app looks good on variety of screen sizes and the app runs on all popular versions of the target platform.

11.5.3 App Icons and other images

In order to make the app's Play store listing compelling, unique app icon, attention-grabbing images, video of app in action and crisp short description may be used . Check the following links.

Android:

https://developer.android.com/distribute/best-practices/launch/store-listing.html

iOS:
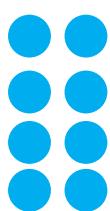
https://developer.apple.com/app-store/insights/

11.5.4 App Promotion

To increase awareness about the app follow the best practice at

Android:

https://developer.android.com/distribute/best-practices/index.html

iOS:

https://developer.apple.com/app-store/marketing/guidelines/

11.5.5 User Feedback

User Feedback is an important source for suggestions and improvements. Hence keep a constant watch on app feedback and reviews at the platform specific stores.

Android:

https://support.google.com/googleplay/#topic=3364260

iOS: iTunes Connect

11.5.6 Minimum Content for the mobile applications

As it difficult to maneuver large menus and complicated elements on a mobile screen due to limited screen size; the amount of information bundled with the app should be limited. This will ensure easy navigation and will also keep the size of the mobile app small. However the following should be are adhered to.

    a. Splash screen should clearly indicate the name of app, logo and Ministry/ Department Name and address.

    b. Using Logo, App Name etc on each page should be avoided so that due importance can be given to the app content.

    c. **Clear instructions on using the app MUST be provided**.

    d. An "about <name of the app>" section in the app's main navigation menu giving details about the version/build of the app and various other information such as contact information, ownership details, copyright notice, terms of use, privacy statement etc should be provided.

11.5.7 Security

Security lapses during the development of the mobile app may result in large scale sensitive data theft besides being an embarrassment for the organization. Hence due importance must be given to the security audit of the mobile app
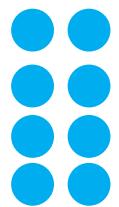
and the backend APIs. Also developers should always keep in mind that the mobile device is liable to be easily misplaced/lost and the user may also use open networks where data can be easily compromised.

a. Wherever possible sensitive information must not stored be on the mobile.

b. App should be checked against the mobile app security

https://www.owasp.org/images/1/1b/Mobile_App_Security_Checklist_0.9.3.xlsx

c. **Mobile app and APIs MUST be security audited by Cert-in empanelled vendors**.

d. Follow platform specific Security best practices.

Android

https://developer.android.com/training/articles/security-tips.html

IOS: **https://developer.apple.com/security/**

e. Only HTTPS must be used to access APIs

11.5.8 App Expiry

Due to increased visibility and ease of use mobile apps are launched for time bound events such as elections, examinations etc. Hence purpose and relevant timelines should be clearly indicated for the app. On completion of pre-decided timeline the app should be removed from the play-store. In addition to this the app should also be able to generate notification on the installed device informing the user about the end of the life cycle.

11.5.9 Data Capture for key elements

The data capture for key elements of the App Such as Aadhar, Voter-ID, PAN, Vehicle numbers, employee-id, beneficiary-id etc. may be read as QR CODE (2D Barcode) in order to eliminate typo errors and to provide service instantly. Care should be taken to implement the guideline form UIDAI whenever Aadhar number and e-KYC details are used.

11.6
Hosting

11.6.1 Mobile API Hosting

a. **Security Audited APIs MUST be hosted in highly secure data centers**

equipped with firewalls and other security features.

 b. **Hosting service provider MUST provide 24X7 accesses to APIs and backend databases**.

 c. Appropriate disaster recovery site should be configured at different geographical location to avoid disruption of service in case of natural or manmade disasters.

 d. API hosting service provider should also provide technical support and help to the owner of the application.

 e. Adequate security measures must be built in the API to detect and discourage unauthorized use of the APIs.

11.6.2 Mobile App hosting

Apps are invariably hosted on the play stores of the target platform which have their own policies and guidelines. Play stores are public platforms and any user is allowed to upload app after paying a nominal fees to become a registered user. However for better visibility and access ensure that the app is uploaded through the official account of the API hosting service provider. Ensure compliance to target platforms policies.

11.7
Contingency Management & Disaster Recovery

11.7.1 APIs

Contingency management plan should be similar to the one adopted for other websites and portals hosted in the data Center.

11.7.2 Mobile Apps

Mobile applications are hosted on Play stores of the respective vendors having their own Contingency Management Plan & Disaster Recovery Process.

11.8
Mobile Application Policies

11.8.1 Privacy Policy for Mobile Application

Privacy policy should be a carefully written document clearly stating purpose of collecting the information if any through the app. It should also clearly state the
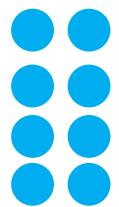
mobile resources app is liable to use such as contact list , SMS, Folders, etc.

Sample privacy Policy

This privacy policy governs your use of the <Name of App> mobile application that is hosted at NIC's e-Gov Mobile App Account in Google Play Store. The contents published on these Applications were provided by the concerned Ministries/Departments of Government of India or the allied government establishment. This information provided through these applications may not have any legal sanctity and are for general reference only, unless otherwise specified. However, every effort has been made to provide accurate and reliable information through these applications. Users are advised to verify the correctness of the facts published here from the concerned authorities. National Informatics Centre will not be responsible for the accuracy and correctness of the contents available in the application.

User Provided Information

The Applications may obtain the information you provide when you download and register the Application. Registration is optional. However, please keep in mind that you may not be able to use some of the features offered by an Application unless you register.

When you register and use the Application, you generally provide (a) your name, email address, age, user name, password and other registration information; (b) download or use applications from us; (c) information you provide when you contact us for help and (d) information you enter into our system when using the Application, such as contact information and other details.

The information you provided may be used to contact you from time to time to provide you with important information and required notices.

Automatically Collected Information

In addition, the Application may collect certain information automatically, including, but not limited to, the type of mobile device you use, your mobile devices unique device ID, the IP address of your mobile device, your mobile operating system, the type of mobile Internet browsers you use, and information about the way you use the Application.

When you visit the mobile application, it may use GPS technology (or other similar technology) to determine your current location in order to determine the city you are located within and display a location map. The location information may be sent to authorities for taking necessary actions and making policy decisions.

If you do not want the app to use your location for the purposes set forth above,
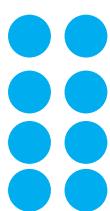
you should turn off the location services for the mobile application located in your account settings or in your mobile phone settings and/or within the mobile application. However, if the service provided by the Application requires the location services using GPS technology, such services offered by the application will not be available to you.

We may disclose User provided and Automatically Collected Information as required by law, such as to comply with a subpoena, or similar legal process when we believe in good faith that disclosure is necessary to protect our rights, protect your safety or the safety of others, investigate fraud, or respond to a government request with our trusted service providers who work on our behalf, do not have an independent use of the information we disclose to them, and have agreed to adhere to the rules set forth in this privacy statement.

You can stop all collection of information by the Application easily by uninstalling the Application. You may use the standard uninstall processes as may be available as part of your mobile device or via the mobile application marketplace or network.

Data Retention Policy, Managing Your Information

We will retain User provided data for as long as you use the Application and for a reasonable time thereafter. We will retain Automatically Collected information also for a reasonable period of time depending on the nature of application and thereafter may store it in aggregate. Please note that some or all of the User Provided Data may be required in order for the Application to function properly.

Misuse by Non Targeted Users

All mobile apps are meant for use by the targeted audience only. Misuse by non-targeted users should be prevented by owner of the mobile.

Security

We are concerned about safeguarding the confidentiality of your information. We provide physical, electronic, and procedural safeguards to protect information we process and maintain. For example, we limit access to this information to authorized employees and contractors who need to know that information in order to operate, develop or improve our Application. Please be aware that, although we endeavour to provide reasonable security for information we process and maintain, no security system can prevent all potential security breaches.

Changes

This Privacy Policy may be updated from time to time for any reason. We will notify you of any changes to our Privacy Policy by posting the new Privacy Policy here . You are advised to consult this Privacy Policy at *(http://your_privacy_policy_*
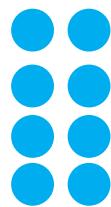
url) regularly for any changes, as continued use is deemed approval of all changes. You can check the history of this policy by clicking here.

Your Consent

By using the Application, you are consenting to our processing of your information as set forth in this Privacy Policy now and as amended by us.

Contact us

If you have any questions regarding privacy while using the Application, or have questions about our practices, please contact us via email at <e-mail_id>[at] gov[dot]in.

11.8.2 IPR and Copyright

As mobile applications are hosted on Play stores which are essentially a public platform IPR and copyright have an extremely important role to play. An appropriate copyright notice can help deter infringement/plagiarism of the app as well as associated APIs.

Copyright statements can also be uploaded on the play stores along with the app clearly indicating the ownership.

Before launching an app get the app Name and logo protected through IPR (http://ipindia.gov.in/index.htm).

Ministries/Departments owning the app should identify competent authority to report/ escalate issues related to copyright infringement and misuse of APIs.

Android:

https://support.google.com//legal/troubleshooter/1114905

Apple App Store:

https://www.apple.com/legal/internet-services/itunes/appstorenotices/#?lang=en

Sample Copyright policy

Name Logo and design of the app is subject to copyright protection. The content may be viewed/downloaded without requiring any specific prior permission. Any other proposed use of the material is subject to the approval of (Name of Department). Application for obtaining permission should be made to (email address of the concerned Department).

11.8.3 Terms and conditions

Clearly worded terms and condition will set the rules and regulation that needs to be followed by the owner of the app and the users of the app. Terms & Conditions shall address the Ownership Details, Usage Policy of Content, Legal
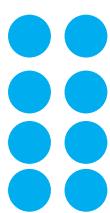
Aspects

Sample Terms and Conditions

The App is designed, developed and maintained by (Name of the Department) Government of India. Though all efforts have been made to ensure the accuracy and currency of the content on this app, the same should not be construed as a statement of law or used for any legal purposes. In case of any ambiguity or doubts, users are advised to verify/check with the Department(s) and/or other source(s), and to obtain appropriate professional advice.

Under no circumstances will this Department be liable for any expense, loss or damage including, without limitation, indirect or consequential loss or damage, or any expense, loss or damage whatsoever arising from use, or loss of use, of data, arising out of or in connection with the use of this app.

These terms and conditions shall be governed by and construed in accordance with the Indian Laws. Any dispute arising under these terms and conditions shall be subject to the jurisdiction of the courts of India.

You must comply with App T&Cs as these apply to your use of the App and the Service T&Cs apply to your use of the Service that you access and use through the App. Any violation of these App T&Cs or the Service T&Cs may result in the termination of your access to the App and/or the Service.

The App is for your own personal use only. Any commercial use will result in termination of your access to the app and service. You cannot distribute or copy or modify any part of it in any way.

You must not attempt to extract any source code from the App, disassemble it or make any derivative versions, or attempt to interrupt or decipher the transmissions between the App and our systems.

The user of the app must not use the app for any the following

    a.   Unlawful, malicious or criminal activity;

    b.   Defamatory, harassing or threatening activity. This includes any information that you may add or upload to the app;

    c.   Create disruption in service for other users of the app;

    d.   You must not use the App in a way that may damage or impair the App, the Service or the underlying systems and security.

The App and all copyright, database rights, and other intellectual property rights related to it belong to us.

COMPLIANCE MATRIX

Website Compliance Matrix

1. GENERAL GUIDELINES

2. ACCESSIBILITY GUIDELINES

Mobile App Compliance Matrix

### 1. ACCESSIBILITY GUIDELINES

2. GENERAL GUIDELINES
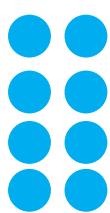
Website Compliance Matrix

Given below is a checklist of mandatory guidelines outlined in this document. Departments may use this checklist to validate their websites against these guidelines and make necessary modification to ensure compliance.

S.No.	GUIDELINE	REF. No.
1. General Guidelines		
1	Department has nominated a Web Information Manager as defined in the guidelines.	10.1.1
2	It has been ensured that all stationery of the department as well as advertisements/public messages issued by the concerned Department prominently display the URL of the web site.	9.2.1, 9.2.2
3	Website has the following clearly defined policies and plans approved by the web information manager.	10.7
	1. Copyright Policy.	3.1.1
	2. Content Contribution, Moderation & Approval (CMAP) policy.	5.2.1
	3. Content Archival (CAP) policy.	10.4
	4. Content Review (CRP) policy.	5.2.3
	5. Hyper linking Policy.	3.2.1
	6. Privacy Policy.	3.4.2
	7. Terms & Conditions.	3.3.1
	8. Website Monitoring Plan.	10.3
	9. Contingency Management Plan.	8.3
	10. Security Policy.	7.7.2
4	Source of all documents, not owned by the dept. that have been reproduced in part or full, is mentioned.	3.1.5
5	Due permissions have been obtained for publishing any content protected by copyright.	3.1.4
6	Home page of website displays the last updated/reviewed date.	5.2.2
7	Complete information including title, size format and usage instructions is provided for all downloadable material.	4.4.7(a), 6.7.1(a), 6.7.1(b)

| S.No.	GUIDELINE	REF. No.
8	With respect to each, Circular, Notification, Document, Form, Scheme, Service and Recruitment notice, The following should be clearly listed in the Website: a. Complete title b. Language (if other than English) d. Purpose/procedure to apply (as applicable) e. Validity (if applicable)	4.2.3 (a,d,e), 4.2.4 (b,d), 4.2.5 (b,c), 4.2.6 (c,e,f), 4.2.7 (a,d), 4.2.9 (a,b,d)
9	All outdated, irrelevant content (like Announcements, Tenders, Recruitment notices, News and Press Releases) is removed from the website and/or placed into the archives as per the archival policy.	5.2.6
10	The language is free from spelling and grammatical errors.	5.3.5
11	Mechanism is in place to ensure that there are no 'broken links' (internal as well as external) or 'Page not found' errors.	3.2.9
12	There are no links to 'under construction' pages.	6.8.4
13	The mechanism is in place to check the accuracy of Hyperlinked Content and Clear indications are given when a link leads out to a non government website.	3.2.8, 3.2.5
14	Website provides a prominent link to the 'National Portal' from the Home Page and Pages belonging to National Portal load in new browser window.	2.3.1, 2.3.2
15	Association to Government is demonstrated by the use of Emblem/ Logo in proper ratio and color, prominently displayed on the homepage of the website.	2.1.1, 6.3.1, 6.1.1
16	Ownership information is displayed on the homepage and on all important entry pages of the website and each subsequent page is a standalone entity in terms of ownership, navigation and context of content.	2.1.2 6.8.5
17	Website uses Cascading Style Sheets to control layouts/styles and incorporates responsive design features to ensure that the interface displays well on different screen sizes.	7.2.1,
18	Website is readable even when style sheets are switched off or not loaded.	7.2.2

S.No.	GUIDELINE	REF. No.
19	Proper page title and language attribute along with metadata for page like keywords and description are appropriately included.	7.5(k), 9.1.2
20	Data tables have been provided with necessary tags/markup.	7.5(l)
21	The website has a readily available Help section linked from all pages of the website.	4.4.6
22	All information about the department, useful for the citizen and other stakeholders, is present in the 'About Us' section and mechanism is in place to keep the information up to date.	4.2.1
23	Website has a 'Contact Us' page providing complete contact details of important functionaries in the department and this is linked from the Home Page and all relevant places in the website.	4.2.11(a) 4.2.11(c)
24	Feedback is collected through online forms and mechanism is in place to ensure timely response to feedback/queries received through the website.	4.4.5(a) 4.4.5(c)
25	The website has been tested on multiple browsers. Hindi/Regional language fonts have been tested on popular browsers for any inconsistency (loss of layout).	6.4.3, 7.6(b)
26	Minimum content as prescribed in the guidelines is present on the homepage and all subsequent pages.	4.5.1, 4.5.2
27	It is ensured through content moderation and approval policy that Website content is free from offensive/discriminatory language.	4.7.2
28	Text is readable both in electronic and print format and the content prints correctly on an A4 size paper.	6.4.6
29	Website has cleared security audit.	7.7.1
30	Website is in the nic.in or gov.in domain.	2.2.1
31	Website is hosted in a data centre in india having the following facilities: 1. State-of-the art multi-tier security infrastructure as well as devices such as firewall and intrusion prevention systems. 2. Redundant server infrastructure for high availability. 3. Disaster Recovery (DR) Centre in a geographically distant location. 4. Helpdesk & technical support on 24x7x365 basis.	8.2.1 (a,b,c, d,h)
32	Website is bilingual with a prominent language selection link and uses Unicode characters.	5.7.1
33	Documents/Pages in multiple languages are updated simultaneously.	5.7.2
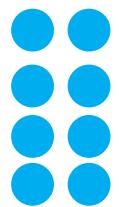
| S.No.	GUIDELINE	REF. No.
34	Documents are provided either in HTML or other accessible formats. Download details (File Format Size) & instruction for viewing these is provided.	7.4.2 (a)
35	Mechanism is in place to ensure that all tender/recruitment notices are published/linked through the website.	4.2.8, 4.2.9
36	All documents have a publish date on the main page.	5.2.5
2. Accessibility Guidelines		
1	All non-text content (like images) has a text alternative that provides equivalent information as the image itself.	6.6.3
2	Scanned Images of text have not been used.	6.6.1
3	The visual presentation of text and images of text has a contrast ratio of at least 4.5:1 between the foreground and background. Large scale text and images of text have a contrast ratio of 3:1.	6.5.1
4	Text can be resized without assistive technology up to 200 percent without loss of content or functionality.	6.4.5
5	There is a mechanism to pause, stop or hide scrolling, blinking or auto updating content that starts automatically and lasts for more than 5 seconds.	6.7.3 (b)
6	Web pages do not contain any content that flashes for more than three times in a second.	6.7.3 (a)
7	Instructions provided for understanding and operating content do not rely solely on sensory characteristics such as shape, size, visual location, orientation, or sound.	7.5 (d)
8	Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	6.5.4
9	Captions or transcript are provided for all prerecorded and live audio and video content.	6.7.2 (a, b)
10	For any audio on a Web page that plays automatically for more than 3 seconds, a mechanism is available to pause, stop or control the volume of the audio independently by from system volume level.	6.7.3 (c)
11	Information, structure, and relationships that are conveyed visually on a web page must also be programmatically determined or are available in text.	5.6.3
12	When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined.	5.6.4
13	All functionality that is available on the web page is operable through keyboard.	7.5 (f)
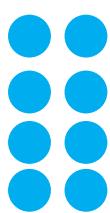
S.No.	GUIDELINE	REF. No.
14	Complete web page is navigable using keyboard only (using tab or arrow keys).	7.5 (g)
15	Current navigation location (Keyboard focus indicator) is visible on the webpage while operating or navigating the page through a keyboard.	7.5 (o)
16	Web pages allow the user to bypass blocks of content like navigation menus that are repeated on multiple pages (by using the skip to content link).	6.8.8
17	Any web page within the website is locatable either through "search" or a "sitemap".	6.9.1, 6.10.1
18	Navigational mechanisms that are repeated across the website occur in the same relative order on each page.	6.8.2, 6.2.1
19	If a webpage can be navigated sequentially and the navigation sequence affect the meaning of operation, then all components must receive focus in the same meaningful sequence (Creating a logical tab order through links, form controls, and objects).	7.5 (m)
20	The purpose of each link is clear.	7.5 (h)
21	Time limit for time dependent web functions is adjustable by the user.	7.5 (c)
22	Complete & self-explanatory title that describes the topic and purpose of the page has been provided.	2.1.6
23	Headings wherever used, correctly describe topic or purpose of content.	5.6.1
24	Language of the complete web page has been indicated. If there is a change in language within a webpage it also indicated.	5.3.7
25	Nomenclature of components that have the same functionality is uniform across the website.	5.4.2
26	When any component on the web page receives focus or its settings are changed it does not initiate change in context.	7.5 (j)
27	Changing the setting of any user interface components does not automatically cause a change in context.	7.5 (i)
28	If an input error is detected, the item is identified and the error is described to the user in text. Suggestions for correction if known are provided to the user.	7.5 (e) 7.5 (p)
29	Labels or instructions have been provided wherever input from the users is required.	7.5 (b)
30	For Web pages that cause legal commitments or financial transactions a mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.	7.5 (q)

S.No.	GUIDELINE	REF. No.
31	Web Page uses markup language as per specification.	7.5 (a)
32	Name and Role of all interface components can be programmatically determined.	7.5 (n)
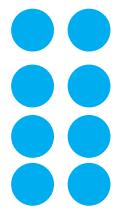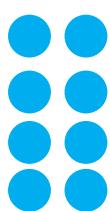
Mobile App Compliance Matrix

S.No.	GUIDELINE	REF. No.
1. Accessibility Guidelines		
1	Platform accessibility features have been optimally used and they behave as intended.	11.4.1
2	Proper labels have been provided for all UI elements.	11.4.2
3	The role for a UI element is available programmatically so that assistive technology can report this either through speech or Braille.	11.4.3
4	Hints have been provided for all active UI control elements.	11.4.4
5	The changes of state of UI controls are dynamically updated and accurately available to the assistive technologies.	11.4.5
6	Related UI elements have been grouped together.	11.4.6
7	A non-interactive space of at least one point for iOS or 1 DP for android has been provided between actionable UI elements.	11.4.7
8	Touch targets are at least 9x9mm regardless of screen size.	11.4.8
9	Focus is always on the active UI control.	11.4.9
10	When a UI control has context specific menu items, users are informed that such a menu is present and are able to activate those menu items.	11.4.10
11	Content when navigated using the screen reader gestures forms a meaningful sequence.	11.4.11
12	The app resizes its UI elements in accordance with device settings for text size.	11.4.13
13	Color contrast ratio between foreground text for up to 18 point font and background is at least 4.5:1.	11.4.14
14	Color & shape is not the only means to communicate important information.	11.4.15
15	Focus is changed only when the user activates a UI element that is designated for confirming an action such as the Submit button.	11.4.16 (a)
16	Appropriate keyboard is invoked by the app depending on the type of field or the data that needs to be provided by the user.	11.4.16 (b)
17	Apps is compatible with hardware keyboard.	11.4.16 (c)
18	Gestures do not require 3 or more fingers to interact with UI elements.	11.4.17
19	Session timeouts have been avoided. If a timeout cannot be avoided, then an option has been provided for users to extend the time limit before the timeout occurs.	11.4.18
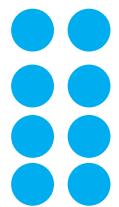
S.No.	GUIDELINE	REF. No.
20	Captions have been provided for all audio content and subtitles/ transcript have been provided for all video content that is accompanied by audio.	11.4.19
21	For videos that do not have an audio equivalent, audio description for the video content that is crucial for blind users to understand the content has been provided.	11.4.20
22	No content flashes more than 3 times in one second.	11.4.21
2. General Guidelines		
1	Clear instructions on using the app have been provided	11.5.6 (c)
2	Mobile app and APIs have been security audited by Cert-in empanelled vendors.	11.5.7 (c)
3	APIs have been hosted in secure data centers equipped with firewalls and other security features.	11.6.1 (a)
4	Hosting service provider provides 24X7 accesses to APIs and backend databases.	11.6.1 (b)