

# Assessing the Effectiveness of Accessibility and Usability of Government Website at District Level

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**Abstract:-** Usability and accessibility of the e-government website are important issues that must be thought about for improving effectiveness, satisfaction, usability and efficiency in services to citizens. Although, there are many Indian e-government websites that are providing on-line services, most of them haven't been tested for usability and accessibility standards. This study assesses effectiveness of an e-government website at the district level for its usability and accessibility. During this study the effectiveness of an e-government website is measured through usability and accessibility testing approach. The aim of this study is to support the mission of the government website by evaluating the present style of design of government website. The research reflects that Indian e-government websites are rated terribly low in terms of accessibility and usability and there is an urgent requirement to improve the usability and accessibility of e-government web site so as to be more practical and user friendly for citizens.

**Keywords—** E-government, WCAG 2.0, Usability, Accessibility Tools

## I. INTRODUCTION:

As the e-government implementation stepping into second section, e-government websites have become a crucial vehicle for communication with users. E-Government has been defined as “a broad-based transformation initiative, enabled by leverage the capabilities of information and communication technology (ICT) to develop and deliver prime quality, seamless and integrated citizen services. E-Government has the potential to make good relationships between the government and public, through citizen empowerment and by providing maximum transparency.

The numbers of citizens seeking data and services on-line are increasing day by day. These users expect government websites to avoid wasting their time

and cash. The responsibility of government is to design simple, user friendly and easy to use websites to be usable by all kinds of citizens. Implementing the simple principle of getting web site, that works well and does not confuse the user or get him annoyed, can facilitate to scale back the abandonment of the web site by users. The user's abandonment can cause unusable web site. Usability outlined as degree to which individuals will perform successfully a collection of needed tasks.

Usability defined as the extent to which a product will be utilized by given users to attain given goals with effectiveness, potency and satisfaction in a defined context of use.

The effectiveness means the accuracy and completeness with which users fulfill defined goals, efficiency means the resources utilized in respect to the accuracy and completeness with which users fulfill their goals, and satisfaction means the comfort and satisfactoriness of use.

Therefore, usability issues check with aspects that create the product ineffective, inefficient, and difficult to learn and operate. Thus, we are able to emphasize the usability in e-government context by ensuring the website design and interface to be simple to use. Usability is incredibly essential in E-Government, as even one usability drawback will adversely have an effect on millions citizens; it will cost them time and cash. There are several poorly designed and unusable systems exist on which users face problems related to learning and operating. That kind of systems leads to the dissatisfaction and frustration to the users.

A Website is called accessible when maximum group of people can access it. Government websites are based on accessibility policies of Web Content Accessibility Guidelines (WCAG 2.0) formulated by W3C. Key accessibility principles of WCAG are given below:

- a) **Perceivable:** All content, like text, multimedia, video and audio should be presented to users in ways in which they will understand. This includes giving textual description for non-text objects (image, audio), color distinction between foreground and background and having relevant alternatives (such as captions for videos) for multimedia data.
- b) **Operable:** user interface components and navigation should be operable, i.e., all practicality must be accessible with the mouse and keyboard.
- c) **Understandable:** Information/content available and user interface of website must be understandable. i.e website pages must be simple and facilitate clarification.
- d) **Robustness:** Content should be robust enough to enable it to interpreted reliably by different types of user with help of different technologies. There should be no markup language and CSS validation errors.

A good design of a website depends on various elements e. color ratio, content, browser independency, layout etc. This paper evaluates the usability and accessibility of a district level government website by manual testing and through open source web accessibility evaluation tools. In this paper “[www.mcpanchkula.org](http://www.mcpanchkula.org)“, a district level government website is considered for evaluation.

## II. METHODOLOGY

The purpose of this study is conducting a usability and accessibility test to find out the effectiveness of government websites at the district level in India. The local level government plays an important role in smart governance as local governance affects most of citizens than by the upper layers of governance. The study tries to find out to what extent these e-government websites at district level in India are effective, simple, user-friendly and easy to use by the users. The aim of this analysis is to find whether the government fulfills the purpose of e-governance and to check whether they are follows the Web Content Accessibility Guidelines 2.0 (WCAG 2.0). The usability test has done by visiting the website of local level (district level) government i.e. [www.mcpanchkula.org](http://www.mcpanchkula.org) by the author personally and by the 10 other potential users of the website. The test was conducted with a group of potential users who have good knowledge of computer and internet. Ten Participants who are residents of Panchkula district are asked to check the online services and other facilities on websites. These participants of the different age group, from different sectors (3 from public sector, 2 from government sector, 3 from private company and 2

students of Graduation College) are volunteered for this domain.

Accessibility is an important idea behind various web standards. Designing accessible websites will help in creating a digital world. Accessibility compliance of this district level website was checked from <http://wave.webaim.org/>, which provides an automated tool called “WAVE”. Other tools used are HTML validator, W3C CSS validator and W3C Link Checker to find out broken links of e-government website according to WCAG. These tools are provided on the <http://guidelines.gov.in> website under Tools-and-Resources category to check the accessibility of Indian government websites.

## III. OBSERVATIONS

The corporation websites shows “Online Services” namely birth / death certificate, marriage registration certificate, property tax etc., but actually the user cannot avail these facilities online. The forms are available on the website in the PDF version. The user can take printouts of the form of the above service. User has to fill these forms and then submit physically in the corporation office which defeats the whole purpose of online service, it would actually be wrong to call these services online in the free sense of the word.

The services like Death / Birth Registration, Marriage registration, Public Grievances, Property Tax, Fire Application, Mobile Tower, Trade License, Tender, Building Plan are repeated under different headings like Online Services, Civic Services, Download which waste the space of websites where as some other important links/ information are missing from websites such as: Complaints, Online Electricity Bill payment, Online water bill payment, online OPD booking in hospitals etc.

The other services given under “Online Service : tab namely Fire Application, Trade License and Building Plan when clicked open the website of other concerned urban local bodies. Ideally, the user shall be provided all these services integrated on a single window.

There is no “Search” option provided in the website “[mcpanchkula.org](http://mcpanchkula.org)” which leads to a lot of time wastage and frustration for a new user of the website. “Property Tax” link is mentioned where “Search Option” supposed to be mentioned. A website does not seem to be designed in a user-friendly an interactive manner. The home page does not give any introductory information about the corporation. The website shall be bilingual while it is only in English. The website has broken link of “[www.India.gov](http://www.India.gov)” website, which is mentioned under the category of “USEFUL LINKS”.

The website can be developed in a much better way considering a large amount of approx. 60, 000 Rs. per month paid by government to maintain the websites.

MC Panchkula deactivated their “Twitter” account previously available on “www.mcpanchkula.org” because it was not updated from long time.

The website does not fare well in terms of updating. It is observed that the website is not regularly updated. The Facebook page of Municipal Corporation which is linked through “mcpanchkula.org” website displays the profile photo of Sh. Lalitsiwach as municipal commissioner even after Dr. Shaleen replaced him. This error was rectified only after a local newspaper highlighted it. Similarly, the Facebook page of Municipal Corporation was also not updated for around six months. No new post has been updated after 18<sup>th</sup> Dec. 2016.

The Facebook page was updated after the news got published in newspaper. The head ensures as first thing in the morning that the following points were updated on Facebook page in morning of 1<sup>st</sup> June. 2017 between 8:39 am to 8:50 am before the office starts.

- Website address of MC Panchkula Swach Baharat website
- MC Panchkula updated their phone numbers.
- MC Panchkula updated its profile picture
- Update only one new photo

The new commissioner posted two messages and 29 photos on 4<sup>th</sup> Jun. 2017 on the Facebook page only after the newspaper mentioned it in its report, which otherwise was not visited by any official for last six months. This shows an attitude of disinterest in government officials as far as website are concerned who cannot appreciate the huge inconvenience it causes to general public when they browse these websites for any service. The officials should consider it as an important part of their daily duty rather than doing a cover-up job after media highlights.

#### IV. FINDINGS

The websites do not provide online services in reality, social links are also not updated regularly, and enough services relevant to citizens’ convenience are not available on website. All these factors do not fulfill the purpose of E- Governance and also not provide benefits of e- services to citizens. Summary of accessibility of website compliance checked by HTML validator, CSS Validator, Link Checker and WAVE tools.

- 22 HTML validation Errors
- 5 HTML Validation Warnings

- 2 Link Errors
- 7 CSS Validation Errors
- 78 CSS validation Warnings
- 36 Color Contrast errors

The government websites still require regular efforts in their designs to make them fully usable and accessible

#### V. SUGGESTIONS

Municipal Corporation Panchkula must provide some more online services to the convenience of citizens. These suggestions help to improve the quality of website quality and also facilitate citizens for their routine activities. These suggestions’ regarding availability of online services improves the quality of e-government website and its services at local level/district level.

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1. **Electricity Bill:** It can provide the following online services regarding Electricity Bills, which help citizens to view and pay their electricity bills online.
  - Pay your electricity Bill
  - View Your Electricity Bill
  - E- Bill Registration
  - New Connection Registration
  - New Connection Status
2. **Water Bill:** Online Water bill payments help citizens to view or pay their pay online. Following services can be provided under this are:
  - Pay your Water Bill
  - View your Water Bills
  - E-bill Registration
  - New Connection Registration
  - Water Tariff Order
  - Monitor Water Quality
3. **E- Hospital:** Online OPD Booking helps citizens to fix their appointment with doctor online without any hassle.
  - Online Registration System
  - List of Hospitals
  - View Medicine Stock
4. **Connect with us:** Through different social connection mediums, citizens can connect to the services provided by M. C. website.
  - Facebook
  - Twitter

- YouTube
  - Email
  - Connect with WhatsApp
5. **Attendance Dashboard:** IT helps to find out the daily attendance of employees and helps in monitoring the stability of employee in office which in turns improves the work efficiency of employee and leads to quality in citizen services.



6. **Complaints:** There should be provision to register a complaint through different modes, so that citizen can register complaint any time regarding any problem.
- Register Online Complaints
  - Mobile App for Lodging Complaint
  - WhatsApp
  - E-mail
7. **Frequently asked questions:** There should be FAQ available on the website regarding the services provided to the citizens. It Helps the citizens in operating the services given on website.
8. **Search Option:** Search Option must be available on the website. It saves user time to find out the particular information available on the website.
9. **Multilingual :** Content of website can also be availability in national language which increase the usability of website to the local users.
10. **Adoption and Implementation of WCAG 2.0:** Government website must comply at least with WCAG level of AA.
11. **HTML error can be easily fixed:** errors like giving alternative text for images and links can be corrected.
12. **Set up of Accessibility cell :** Through this cell accessibility of websites can be checked at the Local/ district level.
13. **Online accessibility score card:** This score card is open to users/public which helps to government to maintain accessibility of website.

## VI. CONCLUSION

Accessibility and Usability test was conducted to measure the effectiveness of e-government website at the district level in India. A web site of Panchkula district of Haryana state was selected for this study. The website was tested manually to check usability and by a WAVE and other validation tools to check the accessibility. The result indicates that this e-government website have a serious usability drawback and it also not following the WCAG 2.0 website accessibility guidelines. There is an urgent need to improve the interface design, search and navigation, content of e-government website to be simpler, effective and more usable for the citizens.

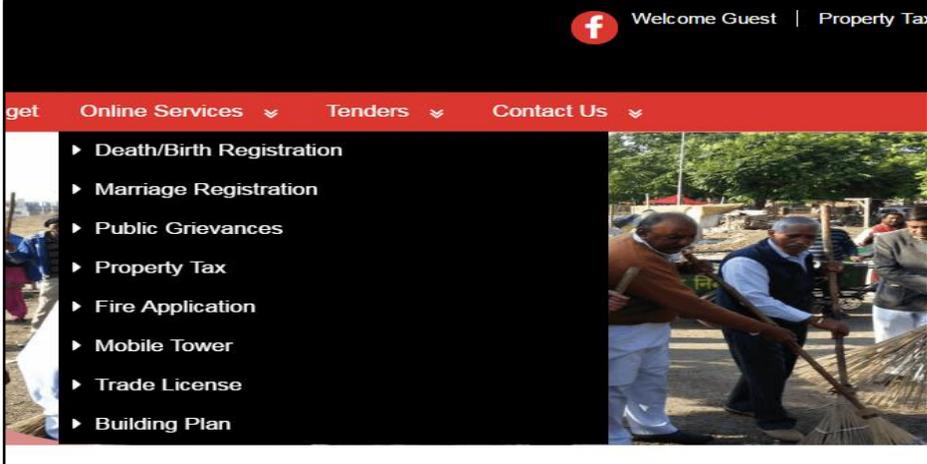
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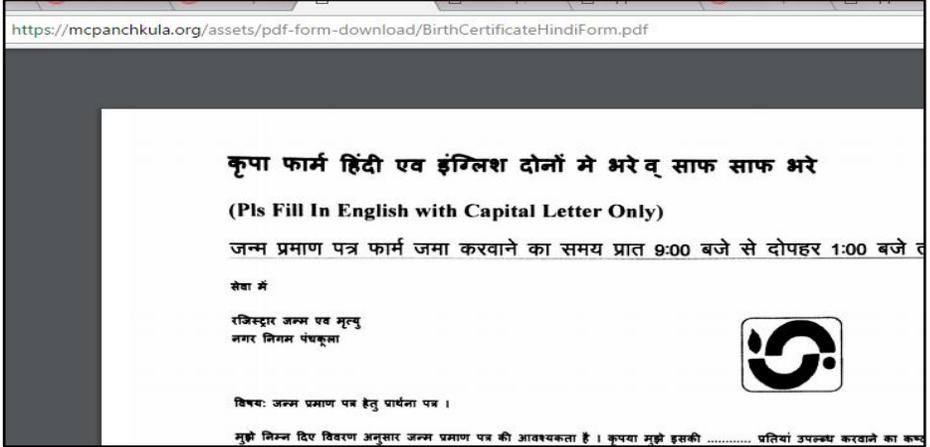
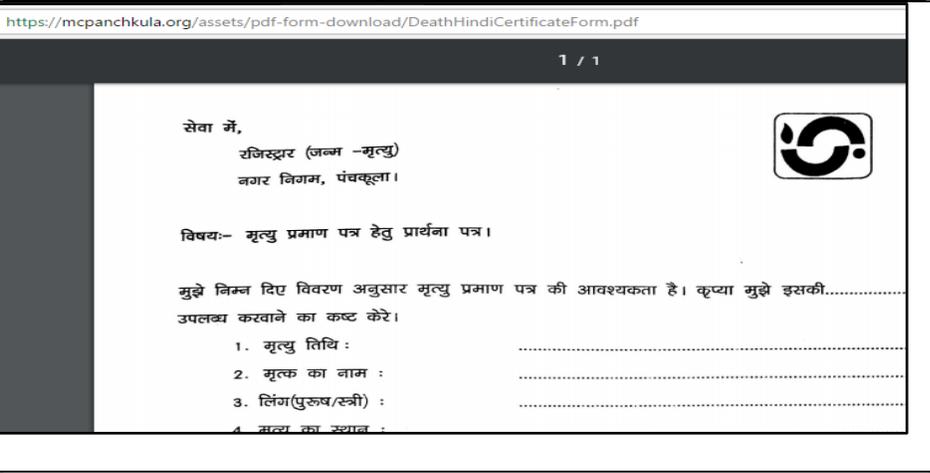
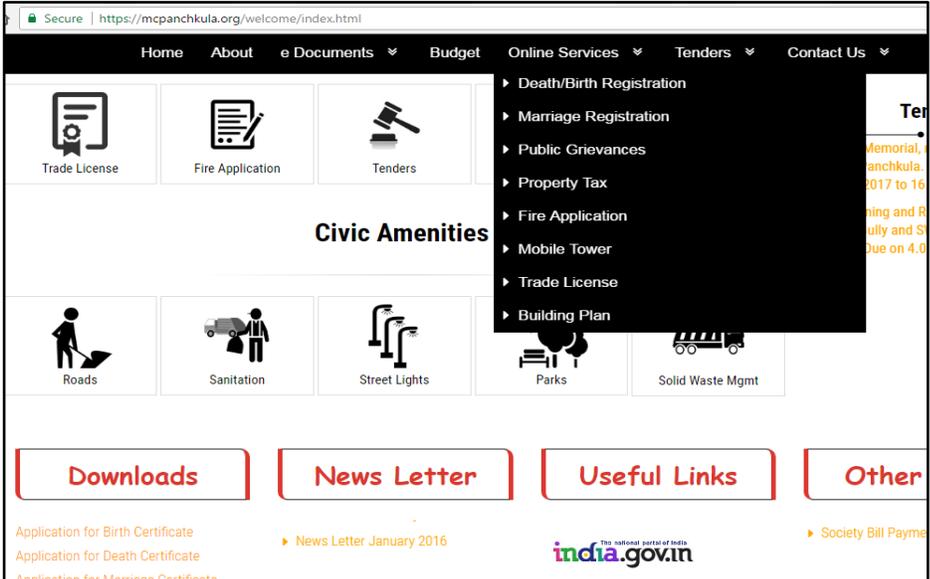
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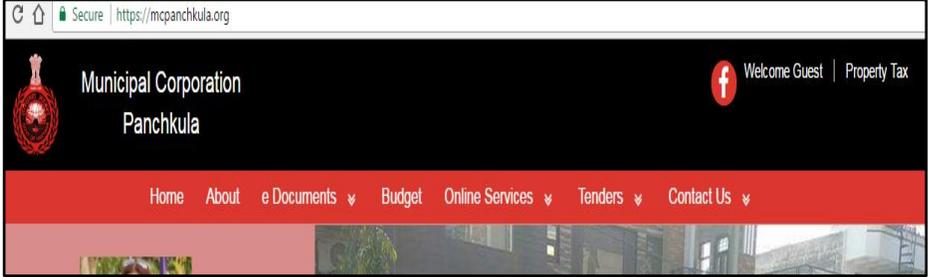
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**Appendix1:** Given below are the examples to illustrate that the online services mentioned in the website are not actually online and social media of this website are also not updated affects key area of daily life and put a question mark on the concept of e-governance/ digital India.

**VIII. APPENDICES**

S.No.	Usability and Updation of website	Relevant Image				
1.	<p>The websites shows “Online Services” namely birth / death certificate, marriage registration certificate, property tax etc., but actually the user cannot avail these facilities online.</p>					
2.	<p>This website provide the online facility of just downloading the Birth Certificate &amp; Death Certificate in pdf version but fee and filled form has to be submit at citizen service Centre (CSC) by visiting personally in the office of Municipal Corporation.</p>	 <p><b>PANCHKULA MUNICIPAL CORPORATION PANCHKULA</b></p> <p><b>Birth/Death Certificates</b></p> <p>In India, it is mandatory under the law (as per the Registration of Births &amp; Deaths Act, 1969) to register every Live Birth/ Still Birth within 21 days of its occurrence.</p> <p>You can download the Birth/Death Certificate Request Form below and can submit the same at the Citizen Service Centre (CSC) in the office of Municipal Corporation, Panchkula on any working day.</p> <p> <a href="#">Download Application for Birth Certificate</a> <a href="#">Download Application for Death Certificate</a> </p> <p><b>Fee To be Deposited While Applying For Birth/Death Certificate:</b></p> <table border="1"> <thead> <tr> <th>Process Description</th> <th>Amount To Be Deposited (Rs.)</th> </tr> </thead> <tbody> <tr> <td>Generation of The Certificate</td> <td>Rs. 25/- + Rs. 10/- + Rs. 10/-</td> </tr> </tbody> </table>	Process Description	Amount To Be Deposited (Rs.)	Generation of The Certificate	Rs. 25/- + Rs. 10/- + Rs. 10/-
Process Description	Amount To Be Deposited (Rs.)					
Generation of The Certificate	Rs. 25/- + Rs. 10/- + Rs. 10/-					

<p>3.</p>	<p>The pdf version of Birth Certificate available on website. No facility of depositing the form online.</p>	
<p>4.</p>	<p>The pdf version of Death Certificate available on website. No facility of depositing the form online.</p>	
<p>5.</p>	<p>Same services are repeated under different headings like Online Services ,Civic Services, Downloads .The website can have other important links regarding Complaints, Online Electricity Bill payment, Online water bill payment , online OPD booking in hospitals to facilitate citizens.</p>	

<p>6.</p>	<p>There is no “Search” option provided in the website which leads to time wastage of a new user of the website.</p>	
<p>7.</p>	<p>MC Panchkula deactivated their “Twitter” account which previously available on M.C. Website.</p>	<pre data-bbox="586 478 1515 720"> &lt;div class= social &gt; &lt;ul&gt; &lt;!--&lt;li class=twitter&gt;&lt;a href=“http://www.twitter.com/swachhpanchkula” target=“_blank”&gt;&lt;/a&gt;&lt;/li--&gt; &lt;li class=“facebook”&gt;&lt;a href=“https://www.facebook.com/municipalcorporation” target=“_blank”&gt;&lt;/a&gt;&lt;/li&gt; &lt;/ul&gt;                     </pre>
<p>8.</p>	<p>Facebook page of Municipals Corporation was not update for around pat six months. No new post has been updated after 18<sup>th</sup> Dec.2016.</p>	
<p>9.</p>	<p>After the news published in newspaper regarding the updation of Municipal Corporation website, MC Panchkula updates its“Website address on Facebook pagein morning of 1st June. 2017 at 8:39 am before the office starts.</p>	

<p>10.</p>	<p>MC Panchkula updated their phone numbers at 8: 45 am in morning.</p>	
<p>11.</p>	<p>Profile photo of Facebook page of MC Panchkula updated on 1<sup>st</sup> June 2017 at 8: 48 am i.e.after the 15 days of joining of new commissioner. Before that Facebook displays the profile photo of Sh. Lalitsiwach, previous commissioner of M.C. Panchkula</p>	
<p>12.</p>	<p>For the sake of updation of Facebook page only one new photo was posted on 1<sup>st</sup> June 2017 at 8:50 am. All this work of Facebook updation is done before the office hours starts.</p>	

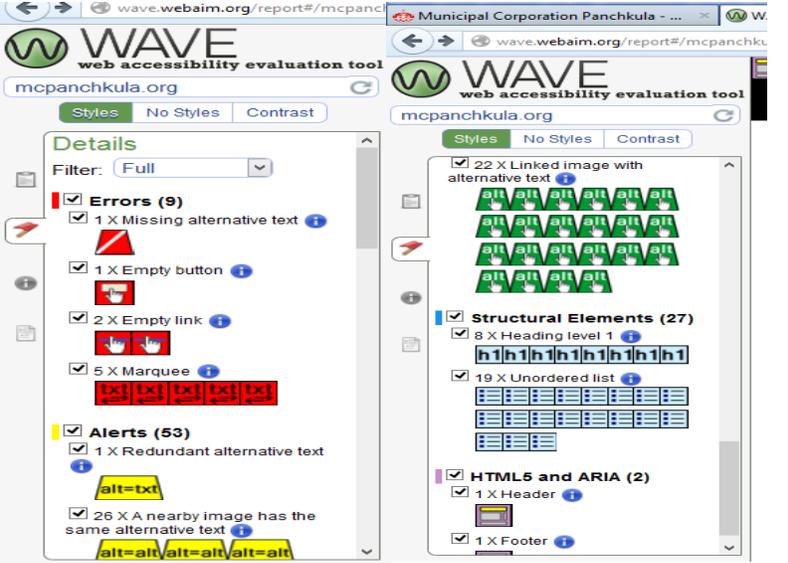
<p>13.</p>	<p>The new commissioner posted message to the citizen and 29 photos on 4<sup>th</sup> June.2017 on the Facebook page only after the 15 days of its joining.</p>	
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**Appendix2:** The accessibility guidelines are developed to make the website or service accessible to all persons in one way or another. For development of websites, the website Content Accessibility guidelines (WCAG) created by the W3C is the universally accepted standard. “WAVE” Validation tool is used to check the code for standards compliance for color contrast. Other tools used are HTML validator, W3C CSS validator and W3C link Checkerto find out broken links of e-government website according to WCAG. The “www.mcpanchkula.org” is checked for the accessibility errors. The table listed below gives the errors found in the website.

S. NO	Error Type	Error Code	Detail / Problem relevant to accessibility
1.	HTML Validation Error	<p><b>Guideline 3.1 – Readable</b>  <b>Success Criterion : 3.1.1 Language of Page (Level A)</b>  <b>Error: Using the meta element to specify the document-wide default language is obsolete. Consider specifying the language on the root element instead.</b>                      From line 11, column 2; to line 11, column 51                      a.org/"&gt;&lt;meta content="en" http-equiv="content-language"/&gt;&lt;/in                      From line 15, column 2; to line 15, column 51                      ollow"/&gt;&lt;meta content="en" http-equiv="content-language"/&gt;&lt;met</p>	<p>A meta tag with an attribute “http-equiv” having a value “content-type” and has related content attribute and value is to be in the encoding declaration state.</p>
2.	HTML Validation Error	<p><b>Guideline 2.4 Navigable:</b>  <b>Success criterion: 2.4.3 Focus Order (Level A)</b>  <b>Error: Saw “when expecting an attribute name. Probable cause: =missing immediately before.</b>                      At line 149, column 86,target="_blank"&gt;Death/Birth R                      At line 566, column 61,target="_blank"&gt;&lt;imgsrc="htt                      At line 567, column 63,target="_blank"&gt;&lt;imgsrc="htt</p>	<p>No extra Double courts must not be applied here e.g. target="_blank"&gt;</p>
3.	HTML Validation Error	<p><b>Guideline 2.4 Navigable:</b>  <b>Success criterion :2.4.2 Page Titled (Level A)</b>  <b>Error: Attribute " not allowed on element a at this point.</b>                      From line 149, column 13; to line 149, column 87                      &lt;li&gt;&lt;a href="http://crsorgi.gov.in/web/index.php/auth/signUp" target="_blank"&gt;Death/                      From line 566, column 10; to line 566, column 62                      &lt;/li&gt;&lt;a href="http://www.haryana.gov.in" target="_blank"&gt;&lt;img s                      From line 567, column 10; to line 567, column 64                      &lt;/li&gt;&lt;a href="http://cmharyanacell.nic.in" target="_blank"&gt;&lt;img s</p>	<p>Attributes for element &lt;a&gt; are href, target ,rel ,rev,type. This (") is nit attribute of element &lt;a&gt;</p>
4.	HTML	<p><b>Guide line 1.1 Text alternatives:</b></p>	<p>An alternate text must be</p>

	Validation Error	<p><b>Success Criterion 1.1.1 Non text content (A)</b>  <b>Error:</b> An img element must have an alt attribute, except under certain conditions.                  From line 308, column 1; to line 308, column 75                  s_right"&gt;&lt;img src="https://mcpanchkula.org/assets/images/slider-images/banner2.jpg"&gt;&lt;/div</p>	provided for any non- text Content so that it can be processed by screen reader and conveyed to the user of website.
5.	HTML Validation Error	<p><b>Guideline 1.3 Adaptable:</b>  <b>Success Criterion :1.3.1 Info and Relationships (Level A)</b>  <b>Error: End tag marquee seen, but there were open elements.</b>                  From line 528, column 5; to line 528, column 14&lt;/marquee&gt;&lt;br&gt; <b>Error: Unclosed element ul.</b>                  From line 500, column 1; to line 500, column 4&lt;start();"&gt;&lt;ul&gt;&lt;li&gt;&lt;&lt;br&gt;                 From line 530, column 5; to line 530, column 9&lt;/ul&gt;&lt;/div</p>	Some of the tags of markup language are open and some are close. <Marquee> is an open tag but here it is mentioned as a close tag. Here <UL > is not closed. Here <ul> is close unnecessarily
6.	HTML Validation Error	<p><b>Fatal Error: Cannot recover after last error. Any further errors will be ignored.</b>                  From line 644, column 2; to line 644, column 23                  Top --&gt;&lt;div id="back-to-top"&gt;&lt;a</p>	
7.	HTML Validation Error	<p><b>Guideline 4.1: compatible</b>  <b>Success Criterion 4.1.1 : Parsing (A)</b>  <b>Error: Element marquee not allowed as child of element section in this context.</b>                  From line 397, column 1; to line 397, column 142                  marquee"&gt;&lt;marquee scrollamount="6" style="overflow-y:hidden;" direction="left" behavior="scroll" onmouseover="this.stop();"onmouseout="this.start();"&gt;&lt;sp  <b>Error: Element marquee not allowed as child of element div in this context.</b>                  From line 465, column 5; to line 465, column 230                  From line 499, column 5; to line 499, column 230                  From line 553, column 5; to line 553, column 230                  From line 573, column 5; to line 573, column 230                  &lt;/h1&gt;&lt;marquee scrollamount="2" style="line-height: 22px; text-align: left; padding: 0px 5px; overflow-y: ...rection="up" height="170px" behavior="scroll" onmouseover="this.stop();" onmouseout="this.start();"&gt;</p>	<p>In markup languages elements are nested according to their specifications.</p> <p>If the html element is nested bydl element: one or more dt elements nested by one or more dd elements, optionally intermixed with script-supporting elements.</p> <p>If the element is not nested by dl element: <u>Flow content</u>.</p>
8.	HTML Validation Error	<p><b>Error:</b> Stray start tag div.                  From line 644, column 2; to line 644, column 23                  Top --&gt;&lt;div id="back-to-top"&gt;&lt;a</p>	
9.	HTML Validation Error	<p><b>Error: No space between attributes.</b>                  At line 149, column 86, target="_blank"&gt;Death/Birth R                  At line 566, column 61, target="_blank"&gt;&lt;imgsrc="htt                  At line 567, column 63 ,target="_blank"&gt;&lt;imgsrc="htt</p>	
10	HTML Validation Warning	<p><b>Warning: Attribute " is not serializable as XML 1.0.</b>                  From line 149, column 13; to line 149, column 87                  &lt;li&gt;&lt;a href="http://crsorgi.gov.in/web/index.php/auth/signUp" target="_blank"&gt;Death/                  From line 567, column 10; to line 567, column 64                  &lt;li&gt;&lt;a href="http://cmharyanacell.nic.in" target="_blank"&gt;&lt;img s                  From line 566, column 10; to line 566, column 62                  &lt;li&gt;&lt;a href="http://www.haryana.gov.in" target="_blank"&gt;&lt;img s</p>	Attribute " is not serializable as XML 1.0.Extra “ symbol is applied after target="_blank">
11.	HTML Validation Warning	<p><b>Guideline 2.4: Navigable</b>  <b>Success Criterion : 2.4.10 :Section Headings (AAA)</b>  <b>Warning: Section lacks heading. Consider using h2-h6 elements to add identifying headings to all sections.</b>                  From line 176, column 4; to line 176, column 32</p>	Section Headings may be used to organize the content of different sections of the page.

		header>↔<section class="home-slider">↔<div From line 396, column 1; to line 396, column 25 section>↔<↔<section class="marquee">↔<mar															
12.	Link Error	Line: 565 <a href="https://www.india.gov.in/">https://www.india.gov.in/</a> <b>Status:</b> 500 Can't connect to www.india.gov.in:443 (certificate verify failed)	This broken link is not allowing you to connect to the important Indian government website.														
13.	Link Error	Lines: 89, 98, 119, 138, 147, 159 <code>javascript:void(0);</code> Status: (N/A) Access to 'javascript' URIs has been disabled Line 89: <liclass="directory"><ahref="javascript:void(0);">e Documents</a> Line 98 : <liclass="directory"><ahref="javascript:void(0);">Online Services</a> Line 119: <liclass="directory"><ahref="javascript:void(0);">Tenders</a> Line 138: <li class="directory"><a href="javascript:void(0);">e Documents</a> Line 177 : <liclass="directory"><ahref="javascript:void(0);">Online Services</a> Line 159 : <liclass="directory"><ahref="javascript:void(0);">Tenders</a>	These links must be changed because people using a browser without JavaScript support will <i>not</i> be able to follow this link.														
14.	CSS Validator Errors.	URI : <a href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.6.3/css/font-awesome.min.css">https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.6.3/css/font-awesome.min.css</a> <table border="1"> <tr> <td>4</td> <td>.fa</td> <td>Property text-rendering doesn't exist : auto</td> </tr> <tr> <td>4</td> <td></td> <td>Sorry, the at-rule @-webkit-keyframes is not implemented.</td> </tr> </table> URI : <a href="https://mcpanchkula.org/assets/css/style.css">https://mcpanchkula.org/assets/css/style.css</a> Error in following line no. 634, 1528,1916,2114,2298 <table border="1"> <tr> <td>.four-section</td> <td>.four-div</td> <td>.tender</td> <td>Property font-family doesn't exist : 'MeriendaOne',cursive</td> </tr> <tr> <td>h1</td> <td></td> <td></td> <td></td> </tr> </table>	4	.fa	Property text-rendering doesn't exist : auto	4		Sorry, the at-rule @-webkit-keyframes is not implemented.	.four-section	.four-div	.tender	Property font-family doesn't exist : 'MeriendaOne',cursive	h1				Property font-family doesn't exist : 'MeriendaOne',cursive
4	.fa	Property text-rendering doesn't exist : auto															
4		Sorry, the at-rule @-webkit-keyframes is not implemented.															
.four-section	.four-div	.tender	Property font-family doesn't exist : 'MeriendaOne',cursive														
h1																	
15.	WAVE Tool	 <p>The screenshot shows the WAVE (Web Accessibility Evaluation Tool) interface. On the left, a 'Summary' panel lists detected issues: 9 Errors, 53 Alerts, 32 Features, 27 Structural Elements, 2 HTML5 and ARIA, and 36 Contrast Errors. The main area displays a preview of the 'Municipal Corporation Panchkula' website, which includes a navigation menu, a logo, and a banner for 'Smt. Upinder Kaur Ahluwalia, Con Mayor'. The WAVE tool has highlighted several accessibility issues on the page, such as missing alt text for images and contrast errors.</p>	WAVE tool mention different errors , warnings, features, contrast errors in <a href="http://www.mcpanchkula.org">www.mcpanchkula.org</a>														

<p>16.</p>	<p>WAVE Tool</p>		<p>Detail view of errors and warnings find by WAVE tool.</p>															
<p>17.</p>	<p>WAVE Tool</p>	<p><b>Guideline: 1.1 : Text Alternatives</b>  <b>Success Criteria: 1.1.1: Non Text Content (A)</b></p> <p><b>Civic Services</b></p> <table border="1" data-bbox="410 892 1198 1228"> <tr> <td> Birth/Death Registration</td> <td> Marriage Registration</td> <td> Public Grievances</td> <td> Property Tax</td> <td> Mobile Tower</td> </tr> <tr> <td> Trade License</td> <td> Fire Application</td> <td> Tenders</td> <td> Building Plan</td> <td></td> </tr> </table> <p><b>Civic Amenities</b></p> <table border="1" data-bbox="410 1333 1198 1522"> <tr> <td> Roads</td> <td> Sanitation</td> <td> Street Lights</td> <td> Parks</td> <td> Solid Waste Mgmt</td> </tr> </table> <p><b>Downloads</b>   <b>News Letter</b>   <b>Useful Links</b></p>	 Birth/Death Registration	 Marriage Registration	 Public Grievances	 Property Tax	 Mobile Tower	 Trade License	 Fire Application	 Tenders	 Building Plan		 Roads	 Sanitation	 Street Lights	 Parks	 Solid Waste Mgmt	<p>Same value of all “alt” attribute is mentioned against different images which does not serves the equivalent purpose of image. “Birth” text is mentioned against all images.</p>
 Birth/Death Registration	 Marriage Registration	 Public Grievances	 Property Tax	 Mobile Tower														
 Trade License	 Fire Application	 Tenders	 Building Plan															
 Roads	 Sanitation	 Street Lights	 Parks	 Solid Waste Mgmt														
<p>18.</p>	<p>WAVE Tool</p>	<p><b>Guideline: 1.1 : Text Alternatives</b>  <b>Success Criteria: 1.1.1: Non Text Content (A)</b></p>	<p>Text alternatives are not self-explanatory. ”alt” attribute of image tag has “alt” as its value which doesn’t clearly define the images of different websites .</p> <p>Text fails on color contrast</p>															

			<p>criteria. Front Color and background color are not in good contrast.</p>
<p>19.</p>	<p>WAVE Tool</p>	<p><b>Guideline 1.4: Distinguishable</b>  <b>Success Criteria: 1.4.3 : Contrast (Minimum) (AA)</b></p> 	<p>The text should have a contrast ratio of at least 4.5:1. Here this text fails on this criteria</p>