

# Enhancements in Web Accessibility

## Introduction:-

One of the first questions that strikes everyone about “Web Accessibility” is, what the key elements in accessibility are. As we move further, other questions could include ‘why usability testing, what are the factors to be taken care of under accessibility testing’. The main aim of web accessibility testing is to ensure the software implementation takes care of users with disabilities – such as the blind or visually impaired (low vision), color blindness, deaf or hard of hearing, motor impairments, cognitive impairments or people who use assistive devices.

## Accessibility Standards:-

- Section 508 compliance
- WCAG (Web Content Accessibility Guidelines) conformance - WCAG 1.0 and 2.0

These are two guiding standards for websites to follow to allow for effective access for the disabled. There are many assistive technologies to help the disabled users use the software/application in a more constructive manner. Few such assistive technologies which are commonly used are as follows:-

1. **Screen Readers (JAWS, NVDA):** The primary users are the visually challenged or people with low visibility, as this tool translates the text on the web page into audio format
2. **Screen magnification software:** The primary users of this software are people with low vision. It enlarges the selected content/component on the screen
3. **Head Pointers:** The principal users here are people with mobility disabilities. Head pointers take the place of the mouse and allow individuals without fine motor control to move a mouse pointer around the screen
4. **Voice recognition software:** It translates speech into text and allows for control of a web browser utilizing only voice commands. People with hearing disabilities are the key users of this category of software

## Standard Guidelines for Accessibility testing:-

There are several standard guidelines for accessibility testing that are mentioned in section 508 and in the WCAG conformance. I do not have any disabilities myself but based on my work experience and research working with other accessibility testers, I have experienced that although a website is section 508 compliant and believed to be fully accessible, there may still be a few hurdles which prevent the website from being totally usable for the disabled. So I would like to propose a few enhancements to make websites and applications more accessible. Seen below are such proposals:

- **Volume control of audio/ video/ captcha:** In most websites, it is noticed that for any audio/video player, the audio / video controls are not labeled; also these are not accessible through keyboards. It is a recommendation that these controls should be labeled properly and controlled through a keyboard for the benefit of the visually impaired
- **Horizontal and Vertical Scrolling:** It would be problematic for the visually impaired people if horizontal and vertical scrollbars are being used in any web page without an equivalent keyboard implementation. If they have been implemented, they must be made accessible via the keyboard as well
- **Duplicate Heading:** Page headings and labels for interactive controls and forms must be informative. While designing web pages with these controls, duplicate headings should be avoided. Such redundancy creates confusion for the visually impaired users
- **Captcha:** Sometimes provided captcha would not be clear for people with low visibility. While creating captcha for any website/web application, it should be designed with such an approach and style that it should be accessible for low visibility users too

- **Instructions:** If a visually challenged person fills in fields available in a form using the tab key, it sometimes is designed such that the website does not allow the screen reader to read out the instructions to fill them. Websites should be designed such that instructions provided in the form field should be accessible through the tab key
- **Clickable items:** Sometimes it becomes a challenge for the visually impaired users to identify clickable items on the web page; to overcome this difficulty; it is suggested to include clickable items as links wherever possible

**Conclusion:-**

As per the enhanced Rehabilitation act that US congress amended in 1998, all federal agencies are required to make their electronic and information technology accessible to users with disabilities. Although both accessibility standards i.e. Section 508 compliance and WCAG serve the purpose of making web applications more accessible for the disabled there is still room for improvement/enhancements as mentioned above, which if incorporated, the website will be very useful to the entire user base.