

## LAB 8: Accessibility in UX Design

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### Accessibility in UX Design

**Accessibility** is an essential aspect of UX design that ensures that people, even with disabilities, can access and use digital products. Making a design accessible means that all the members of the target audience group have equal access to the product or service.

In this lab, students will learn about:

- The importance of creating inclusive user experiences for people with disabilities, including those with visual, auditory, motor, or cognitive impairments. **Motor cognition** encompasses how we understand our own movement, and how movement helps us to understand the world.
- Gain an understanding of accessibility guidelines, such as the **WCAG (Web Content Accessibility Guidelines)**, and techniques for designing and evaluating accessible user interfaces. Web Content Accessibility Guidelines (**WCAG**) are part of a series of web accessibility guidelines, which defines how to make web content more accessible to people with disabilities. Accessibility involves a wide range of disabilities, including visual, auditory, physical, speech, cognitive, language, and learning disabilities.
- Students will learn about the legal suggestions/allegations of accessibility, along with, how to ensure that their digital products meet accessibility standards. They will learn about the different accessibility features and techniques that can be implemented, such as keyboard navigation, alternative text for images, color contrast, and assistive technologies. **Assistive technology (AT)** is a term for assistive, adaptive, and rehabilitative devices for people with disabilities and the elderly. **AT** is any item, piece of equipment, software program, or product system (even walkers and wheelchairs) that is used to increase, maintain, or improve the functional capabilities of persons with disabilities.
- Learn how to test the accessibility of their products and evaluate them for compliance with accessibility standards. **ACTF aDesigner**: Eclipse powers ACTF (Accessibility Tools Framework) aDesigner, a well-known disability simulator that

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tests a website's ease of access for vision-impaired visitors. With the combined application of a voice browser and screen reader, the text on a web page is easy to read. Some other are, SortSite evaluation tool, Tenon (online accessibility software), Remediate.co etc.

- Provide recommendations for improving accessibility based on the evaluation results, which will help ensure that their digital products are inclusive and accessible to everyone

### **Types of accessibility software**

People with disabilities may use assistive technology to help them access software products. Here are a few examples of the different types of software available:

- 1) Special keyboard software: This benefits people with motor control issues.
- 2) Screen magnification software: This increases the monitor and make reading easier for individuals with low vision.
- 3) Screen reader software: This narrates the content on the screen.
- 4) Speech recognition software: This helps convert speech into text.

### **Accessibility guidelines for UX designers**

- 1) Create user personas.
- 2) Design for all platforms and devices.
- 3) Organize the content logically.
- 4) Ensure consistency in design.
- 5) Use accessible fonts.
- 6) Choose appropriate color contrast.
- 7) Include alt-text for media content.
- 8) Provide transcriptions and subtitles.

### **Designing for Web Accessibility**

- 1) Provide sufficient contrast between foreground and background
- 2) Don't use color alone to convey information
- 3) Ensure that interactive elements are easy to identify

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- 4) Provide clear and consistent navigation options
- 5) Ensure that form elements include clearly associated labels
- 6) Provide easily identifiable feedback
- 7) Use headings and spacing to group related content
- 8) Create designs for different viewport sizes
- 9) Include image and media alternatives in your design
- 10) Provide controls for content that starts automatically

Some examples include smartphone's split keyboard, automatic doors, large-grip kitchen utensils, e-readers with adjustable print sizes, and everyday voice assistants.

### Tasks

In this lab, students will

- 1) Review and analyze accessibility guidelines and standards relevant to their target platform or context. They will then design and implement accessibility features in a website or app, incorporating the recommended accessibility techniques.
- 2) Students will conduct accessibility-testing using to evaluate the user interface for compliance with the accessibility guidelines. Based on the evaluation results, they will provide recommendations and make necessary improvements to enhance the accessibility of the interface.
- 3) By achieving these objectives, students will develop a deep understanding of the importance of accessibility in UX design and the impact it has on user experience. They will gain knowledge of accessibility guidelines and standards, allowing them to design interfaces that are inclusive and comply with legal requirements. Through practical application and evaluation, students will develop skills in implementing and testing accessible user interfaces, making them better equipped to create digital experiences that are accessible to all users.