**Study Material**

**“Access Aid Auction”:** The "Access Aid Auction" prototype aims to empower disabled individuals by enabling accessible exchanges of goods, services, and support through an auction-style platform.

**1.Introduction:** Access Aid Auctions is an innovative online marketplace specifically designed for auctioning gently used accessibility aids, including wheelchairs, walkers, hearing aids, and various other mobility or sensory devices. The platform is meticulously crafted to offer a safe and trustworthy environment for individuals to both buy and sell these crucial aids. Access Aid Auctions is dedicated to addressing the unique needs of people with disabilities and seniors who rely on such equipment, ensuring they have access to essential aids in an efficient and reliable manner.

**2.Disability Analysis:**

**Importance of Accessibility in Design:** Accessibility in design is crucial for platforms like AccessAid Auctions, which cater to individuals with disabilities and seniors who rely on accessibility aids. By ensuring that the website is accessible, it enables these users to navigate, buy, and sell essential aids effectively. Accessibility features such as screen reader compatibility, keyboard navigation, and alternative text for images can significantly enhance the user experience for individuals with disabilities, making the platform more inclusive and user-friendly.

**Discussion on Theoretical Models of Disability:** In the context of AccessAid Auctions, it's essential to consider various theoretical models of disability to inform the design process effectively. The social model of disability, for instance, emphasizes the role of society in creating barriers for individuals with disabilities, rather than viewing disability as a purely medical issue. By adopting this model, the platform can focus on removing societal barriers by providing accessible features and accommodations, thereby empowering users with disabilities to participate fully in the online marketplace.

**Research on Disabled Users' Experiences with Assistive Technologies and Digital Systems:** Understanding the experiences of disabled users with assistive technologies and digital systems is crucial for designing an inclusive platform like AccessAid Auctions. Research shows that many individuals with disabilities face challenges when accessing digital platforms due to barriers such as inaccessible interfaces, lack of alternative input methods, and limited support for assistive technologies. By conducting user research and incorporating feedback from individuals with disabilities, the platform can identify and address these barriers, ensuring a more accessible and user-friendly experience for all users.

In summary, by prioritizing accessibility in design, considering theoretical models of disability, and understanding the experiences of disabled users, AccessAid Auctions can create a more inclusive online marketplace that caters effectively to the needs of individuals with disabilities and seniors.

**3.User Requirements(Personas and Scenarios):** Four scenarios focus around the personas for their suitable requirements.

Personas:

1. Physical Impairment - Sarah

- Description: Sarah is a 45-year-old woman with limited mobility due to a spinal cord injury. She relies on a wheelchair for mobility.

- Needs: Sarah requires a user-friendly interface that allows her to easily navigate through the website using keyboard shortcuts and compatible with screen readers.

- Goals: Sarah wants to find a lightweight wheelchair that suits her specific mobility needs and budget.

2. Visual Impairment - James

- Description: James is a 60-year-old man who has lost most of his vision due to macular degeneration. He uses a screen reader and relies on high contrast and large font sizes.

- Needs: James needs an accessible website with clear and concise descriptions of products, compatible with screen readers, and adjustable font sizes.

- Goals: James aims to purchase a magnifying glass with LED lights to aid his reading and daily activities.

3. Hearing Impairment - Emma

- Description: Emma is a 55-year-old woman who is profoundly deaf. She communicates primarily through sign language and relies on visual cues.

- Needs: Emma requires a platform with visual notifications for bids and messages, as well as closed captions for any video content.

- Goals: Emma wants to sell her old hearing aid and purchase a newer model with advanced features.

4. Cognitive Impairment - Michael

- Description: Michael is a 70-year-old man living with early-stage dementia. He experiences difficulty with memory and processing complex information.

- Needs: Michael needs a simple and intuitive interface with clear instructions and minimal distractions.

- Goals: Michael hopes to sell his unused walker and purchase a mobility scooter for outdoor activities.

Scenarios:

1. Sarah's Scenario:

- Sarah logs into AccessAid Auctions and uses keyboard shortcuts to browse through categories of wheelchairs. She finds a suitable lightweight wheelchair within her budget and proceeds to place a bid using the keyboard. She receives a confirmation message and awaits the auction result.

2. James's Scenario:

- James accesses the website using his screen reader and adjusts the font size for better readability. He explores the magnifying glasses category, reads product descriptions, and selects a suitable one with LED lights. He adds it to his watchlist and later places a bid on the item.

3. Emma's Scenario:

- Emma receives visual notifications on her device about bids and messages. She uploads clear images and descriptions of her old hearing aid for sale. She communicates with potential buyers through messaging, using text-based communication. Upon finding a suitable buyer, she confirms the sale and arranges for shipping.

4. Michael's Scenario:

- Michael navigates through the website, guided by clear instructions and minimal distractions. He uploads images of his walker for sale and sets a starting bid price. He receives a notification when there's a bid on his item and can easily track the auction progress. Eventually, he successfully sells his walker and uses the proceeds to purchase a mobility scooter.

**4.Paper Prototype:** In this section, we present the initial conceptualization and design ideas for the AccessAid Auctions website through paper prototypes. These prototypes serve as the foundational sketches for the subsequent development of the high-fidelity interactive prototype.

**Interface/Concept Ideas**

[Include photos or scans of the paper prototypes depicting various interface and concept ideas for the AccessAid Auctions website. These sketches should showcase different aspects of the website layout, such as homepage, product listings, search functionality, user profile, and checkout process.]

**Annotated Sketches for Tasks/Pages**

1. **Homepage**
   * Sketch: [Attach annotated sketch of the homepage layout, highlighting key elements like search bar, featured listings, and navigation menu.]
   * Annotation: The homepage aims to provide a welcoming and intuitive interface for users to navigate through different categories of accessibility aids.
2. **Product Listings**
   * Sketch: [Attach annotated sketch of the product listings page, showing how items are displayed with relevant information and filtering options.]
   * Annotation: Each product listing includes essential details such as product name, image, price, and condition, allowing users to make informed decisions.
3. **Search Functionality**
   * Sketch: [Attach annotated sketch demonstrating the search functionality, including search bar placement and filtering options.]
   * Annotation: The search bar is prominently positioned to enable users to quickly find specific accessibility aids based on their requirements, with additional filters for refining search results.
4. **User Profile**
   * Sketch: [Attach annotated sketch of the user profile page, indicating sections for account information, purchase history, and saved items.]
   * Annotation: The user profile section offers personalized features for managing account details, tracking past purchases, and saving favorite listings for future reference.
5. **Checkout Process**
   * Sketch: [Attach annotated sketch outlining the checkout process, including steps for reviewing cart items, entering shipping details, and completing the purchase.]
   * Annotation: The checkout process is designed to be streamlined and accessible, with clear instructions and minimal steps to facilitate a seamless transaction experience.

**5.High Fidelity Prototype**

For the High Fidelity Prototype of AccessAid Auctions, our aim is to create an interactive desktop experience that not only facilitates the buying and selling of accessibility aids but also prioritizes accessibility for users with diverse needs. Here's how we've incorporated accessibility best practices:

1. **Color**:
   * We've chosen a color palette with high contrast to ensure readability for users with visual impairments.
   * Color schemes are also customizable to accommodate users with color vision deficiencies.
2. **Form Design**:
   * Input fields, buttons, and other interactive elements have ample spacing and clear labels for ease of use and navigation.
   * Forms are designed to be easily navigable via keyboard inputs, catering to users who may rely on keyboard navigation.
3. **Animation**:
   * Animations are used sparingly and purposefully to avoid distractions for users who may be sensitive to motion.
   * Transitions are smooth but adjustable, allowing users to control animation preferences based on their needs.
4. **Keyboard Interaction**:
   * All interactive elements are accessible via keyboard shortcuts, enhancing usability for users who may have difficulty using a mouse.
   * Keyboard focus states are clearly indicated to assist users in navigating through the interface.
5. **Linked to Personas**:
   * Each accessibility feature implemented in the prototype is directly linked to the personas developed earlier in the report.
   * For example, users with visual impairments benefit from high-contrast color schemes, while users with mobility impairments find keyboard navigation options helpful.

By offering these key features, Access Aid Auctions strives to create a user-friendly and reliable marketplace for individuals to buy and sell gently used accessibility aids, ultimately improving access to essential equipment for people with disabilities and seniors.

Wheelchairs, Mobility Scooters, Walkers, Crutches, Canes ,Transfer Aids, Stair Lifts ,Ramps, Lift Chairs, Hospital Beds, Patient Lifts, Adaptive Clothing, Hearing Aids, Assistive Listening Devices (ALDs), Communication Aids, Vision Aids, Orthotics and Prosthetics, Assistive Technology Devices, Adaptive Kitchen and Dining Aids, Home Modifications.

**6.Multi-Platform Accessibility:** Provide example screenshots of how your design will work on phones and tablets with a particular emphasis on highlighting how your concept will be made accessible for touch interactions on different devices.

**7. Evaluation**

For the usability test, we recruited a diverse group of participants representing both potential buyers and sellers on AccessAid Auctions. This included individuals with various disabilities and seniors who may require accessibility aids. The test sessions were conducted in a controlled environment where participants were given specific tasks to perform on the website. Tasks were designed to cover key functionalities such as browsing listings, placing bids, and managing auctions.

**8. Updated Designs:** The feedback received from the usability tests highlighted several areas for improvement. Users with disabilities expressed concerns regarding the clarity of navigation pathways, the readability of text, and the intuitiveness of certain features. Additionally, there were suggestions for improving the overall aesthetic appeal to create a more inviting and inclusive atmosphere for users.

Improvements made to the Access Aid Auctions prototype:

1. **Improved Navigation Structure:** The updated navigation menu now features clear categories and labels, providing users with easy access to different sections of the platform.
2. **Enhanced Text Readability:** Text size and contrast have been adjusted to improve readability, ensuring that all users, including those with visual impairments, can easily comprehend the content.
3. **Keyboard Navigation Optimization:** Interactive elements such as buttons and form fields have been optimized for keyboard navigation, allowing users to navigate through the platform efficiently without relying solely on a mouse or touch input.

Example Template: