

## SOFTWARE MAINTENANCE ASSIGNMENT - SA2

### A. Web Pages -

#### 1. USPS - <https://www.usps.com/>

| NO. | ISSUE  | ASSISTIVE TECHNOLOGY USED | PROBLEM IDENTIFICATION   | ISSUES WITH ACCESSIBILITY   |
|-----|--|---------------------------|--|---|
| 1   | Doesn't read dropdown description unless physically hovered over | Narrator                  | Used Caps Lock + W to read the whole website and TAB to select each item | Screen reader users cannot perceive the purpose or context of dropdowns without mouse interaction, which excludes non-mouse users and violates WCAG 1.3.1 and 4.1.2.    |
| 2   | Cannot read the description of some links                        | Narrator                  | Used TAB to navigate through images and links                            | Missing or vague link text prevents screen reader users from understanding where the link leads, creating confusion and violating WCAG 2.4.4 Link Purpose (In Context). |
| 3   | Doesn't highlight the content while navigating the website       | Keyboard Shortcuts        | Used TAB and Shift + TAB to navigate the website                         | Users navigating by keyboard alone cannot see which element is focused, making interaction difficult and violating WCAG 2.4.7 Focus Visibility.                         |
| 4   | ESC key does not exit the modals                                 | Keyboard Shortcuts        | Pressed ESC to attempt to close modal windows                            | Inaccessible modals trap users inside overlays without an exit method, violating WCAG 2.1.2 No Keyboard Trap and impacting usability for keyboard-only users.           |

2. NIH - <https://www.nih.gov/>

| NO. | ISSUE  | ASSISTIVE TECHNOLOGY USED | PROBLEM IDENTIFICATION                            | ISSUES WITH ACCESSIBILITY   |
|-----|--|---------------------------|---|---|
| 1   | Does not change image and description in the carousel when using voice command                                 | Narrator                  | Used Tab key to move to the next option           | The carousel content is not updated dynamically for screen reader users, preventing access to important information and violating WCAG 4.1.2 Name, Role, Value.               |
| 2   | Cannot open the dropdown menu when reading unless hovered with a mouse; descriptions don't match dropdown tags | Narrator                  | Used Tab and mousepad to test interactions        | Inconsistent labels and reliance on hover-only interaction create confusion for screen reader and keyboard-only users, violating WCAG 1.3.1 and 2.1.1 Keyboard Accessibility. |
| 3   | Carousel does not move without using the touchpad button   | Keyboard Shortcuts        | Used Tab key and arrow keys to attempt navigation | Lack of keyboard operability means content is not accessible to users without a mouse, failing WCAG 2.1.1 Keyboard and hindering independent navigation.                      |

## B. Mobile Apps

### 1. Gotify

| NO. | ISSUE   | ASSISTIVE TECHNOLOGY USED        | PROBLEM IDENTIFICATION  | ISSUES WITH ACCESSIBILITY   |
|-----|---|----------------------------------|---|---|
| 1   | Poor color contrast in UI elements                    | TalkBack, Touchscreen Navigation | Visually inspected screen content.  | Low contrast between text and background makes content hard to read for users with low vision, violating WCAG 1.4.3 Contrast (Minimum).             |
| 2   | Reads "logs" as "login"                               | TalkBack                         | Tapped on the logs section and TalkBack mispronounced it as "login"       | Mispronunciation creates confusion for screen reader users and affects comprehension. Violates WCAG 3.1.5 Reading Level / Pronunciation (Advisory). |
| 3   | App exits when Enter is pressed on "Check URL" button | Touchscreen, TalkBack            | Activated button via virtual keyboard (Enter) while focused on URL field  | Unexpected behavior causes task disruption and disorientation, violating WCAG 3.2.2 On Input.   |
| 4   | Settings button is unlabeled                          | TalkBack                         | Focused on the settings icon; TalkBack reads "Button" with no description | Missing content description makes the button unusable for screen reader users. Violates WCAG 4.1.2 Name, Role, Value.                               |

## 2. Zeus

| NO. | ISSUE   | ASSISTIVE TECHNOLOGY USED        | PROBLEM IDENTIFICATION  | ISSUES WITH ACCESSIBILITY  |
|-----|---|----------------------------------|---|--|
| 1   | TalkBack reads "54m" (54 mins) as "54 metres" | TalkBack                         | Focused on media durations like "54m" in list items                         | Incorrect pronunciation alters the meaning, confusing users. Violates WCAG 3.1.5 Reading Level / Pronunciation (Advisory). |
| 2   | Sort button is unlabeled                      | TalkBack, Touchscreen Navigation | Clicked on the sort icon; TalkBack announces it as "button" without context | Users can't determine the function of the button. Violates WCAG 4.1.2 Name, Role, Value.                                   |
| 3   | Search button not read aloud                  | TalkBack                         | Clicked on the search icon; TalkBack is silent or reads incorrect role      | The button is not exposed to accessibility services properly. Violates WCAG 1.3.1 Info and Relationships and 4.1.2.        |