# **Lab 5: Accessibility testing: tools and strategies**

## Question 1: Three issues from automated accessibility testing (browsers extensions)

| **Name the failure** | **Name of tools used** | **WCAG 2.1 AA Success criteria(s) failing** | **Description of Issue** | **[Sample of compliant code]** |
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| Issue #1 | Wave | 1.1.1 Non-text Content | **What is the issue**  Informative images lack alternative text.  **Code snippet**  <img src="images/horizontal-line.png"> | **The recommendation to fix the issue**  Add descriptive alt attributes to informative images.  **Sample of compliant code**  <img src="images/horizontal-line.png" alt="Horizontal line graphic"> |
| Issue #2 | Axe Dev tools | 1.4.3 Contrast (Minimum) | **What is the issue**  Text has insufficient color contrast against its background.  **Code snippet**  <p style="color: #777777;">Welcome to Accessible University! </p> | **The recommendation to fix the issue**  Ensure a contrast ratio of at least 4.5:1 between text and background.  **Sample of compliant code**  <p style="color: #333333;">Welcome to Accessible University! </p> |
| Issue #3 | Accessibility insights>Fastpath | 4.1.2 Name, Role, Value | **What is the issue**  Interactive elements lack accessible names, making them unusable for screen reader users.  **Code snippet**  <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarSupportedContent">  <span class="navbar-toggler-icon"></span>  </button> | **The recommendation to fix the issue**  Add aria-label attributes to interactive elements to provide accessible names.  **Sample of compliant code**  <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarSupportedContent" aria-label="Toggle navigation">  <span class="navbar-toggler-icon"></span>  </button> |

## Question 2: Manual accessibility testing on rendered web pages.

| **Name the failure** | **Manual testing strategy used** | **WCAG 2.1 AA Success criteria(s) failing** | **Description of Issue** | **[Sample of compliant code]** |
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| Issue #1 | Keyboard checks | 2.1.1 Keyboard | **What is the issue**  The dropdown navigation menu is not accessible via keyboard. Users cannot access submenu items using only the keyboard.  **Code snippet**  <li class="nav-item dropdown">  <a class="nav-link dropdown-toggle" href="#" data-toggle="dropdown">  About  </a>  <ul class="dropdown-menu">  <li><a class="dropdown-item" href="#">News</a></li>  <li><a class="dropdown-item" href="#">Governance</a></li>  <li><a class="dropdown-item" href="#">Diversity</a></li>  <li><a class="dropdown-item" href="#">Contact Us</a></li>  </ul>  </li> | **The recommendation to fix the issue**  Add keyboard accessibility by allowing navigation through arrow keys and Enter or Space to open the dropdown.  **Sample of compliant code**  <li class="nav-item dropdown" tabindex="0" aria-haspopup="true" aria-expanded="false">  <a class="nav-link dropdown-toggle" href="#" data-toggle="dropdown" aria-expanded="false">  About  </a>  <ul class="dropdown-menu">  <li><a class="dropdown-item" href="#">News</a></li>  <li><a class="dropdown-item" href="#">Governance</a></li>  <li><a class="dropdown-item" href="#">Diversity</a></li>  <li><a class="dropdown-item" href="#">Contact Us</a></li>  </ul>  </li> |
| Issue #2 | Visual checks | 1.4.3 Contrast (Minimum) | **What is the issue**  Text elements, especially links, have low contrast against the background, making them difficult to read.  **Code snippet**  <p style="color: #777;">Click here to learn more about our accessibility efforts. </p> | **The recommendation to fix the issue**  Ensure a minimum contrast ratio of 4.5:1 for normal text and 3:1 for large text.  **Sample of compliant code**  <p style="color: #333;">Click here to learn more about our accessibility efforts. </p> |
| Issue #3 | Content checks | 1.1.1 Non-Text Content | **What is the issue**  Informative images lack alt attributes, making them inaccessible to screen readers.  **Code snippet**  <img src="logo.png"> | **The recommendation to fix the issue**  Add a descriptive alt attribute for all meaningful images.  **Sample of compliant code**  <img src="logo.png" alt="Accessible University Logo"> |
| Issue #4 | Accessibility Insights >Assessment (any sub step from steps 2-24). | 3.3.2 Labels or Instructions | **What is the issue**  The search form lacks an accessible label, making it hard for screen reader users to understand its purpose.  **Code snippet**  <input type="text" id="search"> | **The recommendation to fix the issue**  Add a label element explicitly associated with the input field.  **Sample of compliant code**  <label for="search">Search the site:</label>  <input type="text" id="search"> |