Software Maintenance, Evolution & Re-engineering
Spring 2025
Individual Software Accessibility Assignment 3:
Automated Testing

Assignment due date: **May 5**

1. Goal of the assignment

In this assignment, you will use the same two web pages, and two mobile applications selected for the previous assignment and use automated tools to detect accessibility issues. **This is an individual assignment**; therefore, you are NOT to discuss your answers with other classmates.

2. Automated Testing: Webpages

In class, you learned how to use Ma11y, a framework for automated testing accessibility tools. For this part of the assignment, you can decide whether you want to use Ma11y or any of the individual accessibility tools Ma11y integrates:

- Ma11y: https://github.com/mahantaf/web-a11y-tool-analyzer
- A11yLite: https://a11ywatch.com
- Access Continuum: https://www.levelaccess.com/access-continuum/
- axe: https://github.com/dequelabs/axe-core
- IBM Equal Access: https://github.com/IBMa/equal-access
- QualWeb: https://qualweb.di.fc.ul.pt/evaluator
- WAVE: https://wave.webaim.org

Using the **two websites chosen in the previous assignment**, you will have to use **two of the automated accessibility tools listed above** to detect accessibility issues.

Note: If you decide to use Ma11y, remember to edit the config/default.js file to enable at least two of the accessibility tools it integrates and to only focus on the **Original Issues**.

For each website, you will answer the following questions:

1) For each accessibility issue found in the previous assignment, was it detected by any of the two automated tools chosen? Why or why not?
2) For each automated tool, mention and explain (i.e., issue type, location, etc.) no more than three accessibility issues found by the tool **that you think is not feasible/possible to be found with manual testing**. Why do you think the accessibility issue cannot be found with manual testing? On the other hand, if no accessibility issue was found by the automated tool, explain why you think that is.
3) For each automated tool, choose no more than five issues detected that were not found manually in the previous assignment, and state whether you agree that it is an accessibility issue. Explain why or why not.

3. Automated Testing: Mobile Applications

In class, you learned how to use MotorEase, an automated mobile testing accessibility tool. For this part, you will run MotorEase on the data given for the two mobile applications chosen in the previous assignment, found in the following folder: MotorEase Data.

For each mobile application, you will answer the following questions:

1) For each accessibility issue found in the previous assignment, was it detected by MotorEase? Why or why not?
2) Mention and explain (i.e., issue type, location, etc.) no more than three accessibility issues found by MotorEase **that you think is not feasible/possible to be found with manual testing**. Why do you think the accessibility

issue cannot be found with manual testing? On the other hand, if no accessibility issue was found by the MotorEase, explain why you think that is.
3) Choose no more than five issues detected that were not found manually in the previous assignment, and state whether you agree that it is an accessibility issue. Explain why or why not.

4. Resources

- Web Page Downloader Extension: https://chromewebstore.google.com/detail/web-page-downloader/aeojmgngnebhbjpncamiplkimkbnmpmk

5. Deliverables

There is one deliverable for this assignment:

1. **PDF file:** It should include the name of the automated tools used, and the answers to Sections 2 and 3. (**Note:** If Ma11y was used, mention which two web accessibility tools you decided to enable; otherwise, mention which individual web accessibility tools you decided to use).
2. **Zip file:** It should consist of the accessibility reports for each website and application evaluated, produced by the automated tools.

Grading

Item	Points
Answers to Section 2	40
Answers to Section 3	40
Accessibility Reports	20
Total	**100**

You will receive points off if:

- There are missing answers

- Your document contains typos and writing errors