CSE 565 – Software Verification and Validation

Project #3 Graphical User Interface Testing Project

Assignment

This assignment requires you to use graphical user interface (GUI) testing technique and tool for a software which has a graphical user interface.

Task 1

- Select any application of your own or an open source which has a graphical user interface.
- The application can be coded in any programming language
- The application should have at least **three GUI pages** and the there should be flow from one page to another
- Each page is required for have the GUI elements including:
    - one or more images, buttons, labels, text boxes and
    - any two of the following: a scrollbar, checkboxes, radio button, slider, list, drawing elements
- You are supposed to have two versions of the same application with **minimum 3 changes** in the GUI.
    - Acceptable changes are changes in the size, location, orientation of the GUI elements. Note that **a change in the text or wording in a GUI element is not acceptable.**
- **One additional change** should be made in the flow of pages, the link from one page to another.

Task 2

- Select any GUI test automation tool to record your test cases and report out the test results
- Create and record test cases for testing version one of the GUI.

- Test cases should be developed to test the existence of a GUI element, correctness of its location, the size of the element, content of the GUI element and the correctness of the link (flow from page to another).

- There is no specification for a minimum or maximum number of test cases.

- Execute the same set of test cases for the second version of the GUI

- Report out how many of the test cases passed or failed when used for the second version of the GUI

- Provide an assessment of the tool in your own words in terms of
    - set of features and functionalities provided
    - type of coverage
    - reuse of test cases
    - test results produced
    - ease of usage
    - type of GUI elements that can be tested

Submission

You will submit **three (3) different files** to the Project 3 submission space:

1. A **ZIP file** containing source code of two versions of your application.

2. **Test cases** created using the tool you selected (submit them in their original format).

3. A **proofread report in PDF** format using APA/MLA style which has the following

    a. Description of the application with screenshots for the GUIs (one GUI for version 1 and other one for version 2)

    b. Description of the tool selected for GUI testing explaining its features, scope and area of usage

    c. Description of the test cases developed by the student explaining the coverage of the test cases

    d. Explain the test results after test execution. Explain pass/failed test cases by referencing to screenshots in the report. (Do not only insert screenshot, and expect us to make sense out of it. Explain what that screenshot is showing)

    e. Assessment of the tool (in your own words) in terms of its usability, coverage and tool's features
    f. List references used

4. **DO NOT Submit the tool you used** (including any executables or installation files) Refer to the web site where you downloaded in your report.

Assessment

Your assignment will be scored based on the following criterion:

1. Presentation of the two GUI designs as per requirements, with proper description, and screenshots of design and source code for both versions
2. Description of tool selected, development of Test Cases, including screenshots of its results
3. Assessment of the GUI test tool
4. Submission of required files

Project #3 is worth 90 points.