**GINA CODY School of Engineering and Computer Science**

**Department of Computer Science and Software Engineering**

**Concordia University**

**SOEN 345--- Winter 2021**

# Assignment #4: report

Student number: Jonathan Zlotnik
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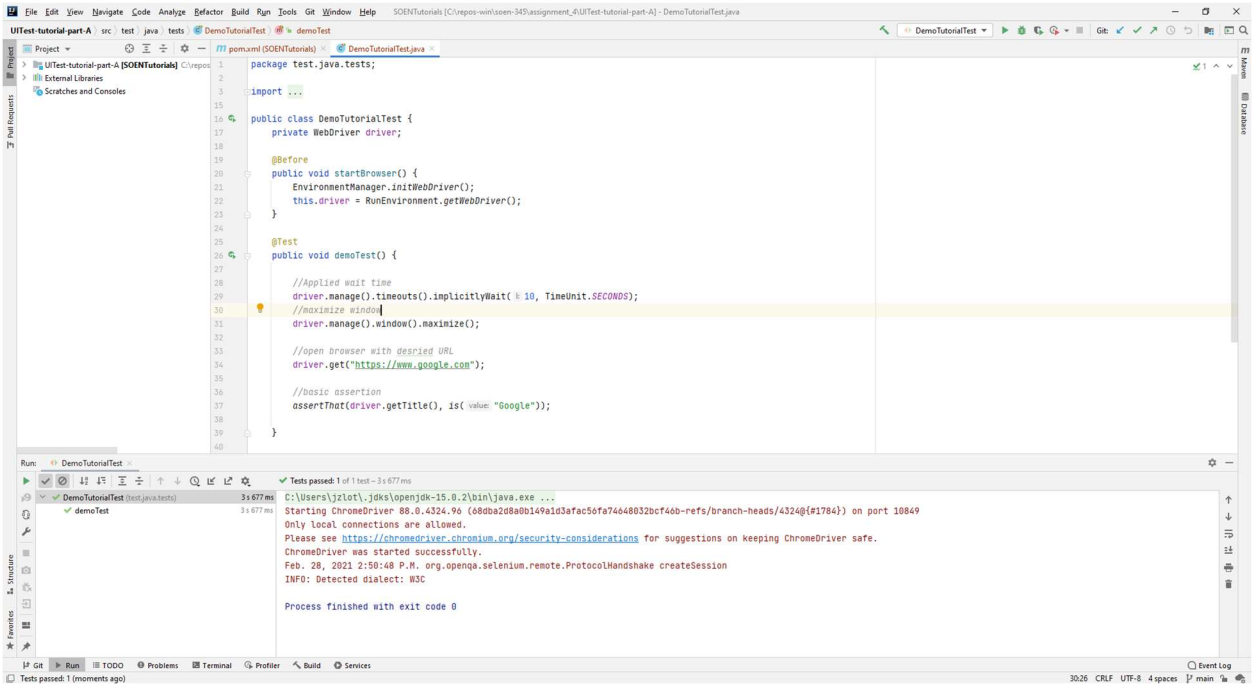
**Please answer the questions with corresponding screenshots and upload the corresponding source code to support your answer.**

**Question 1, Part A.** What does the test “DemoTutorialTest” from part A do? (describe step by step and provide a screenshot of the test passing in Maven). 0.5% of your final grade

The test “DemoTutorialTest” does the following:

1. Initializes the web driver using the Environment manager we setup to use the chrome driver we downloaded.
2. Gets the driver object and saves it in a local member variable.
3. Uses the driver to wait 10 seconds, maximize the window, and open google.com
4. I then asserts that the title is Google
5. Then it shuts down the driver



**Question 2, Part B.** How did you test the specified functionality in part B? What did you have to modify to get the test to pass as part of the Maven test suite?
Provide your modified/new EnvironmentManager.java file, your modified test file and your Selenium .*side* file. 1.5% of your final grade

I set the correct driver path in the system property in EnvironmentManager.java.
I copied and pasted the unit test generated by selenium for the specified test requirements/assertions.

**Question 3, Part C.** Which two elements (UI/visual differences) did you identify as different between the mobile and web versions of the Wikipedia page? Provide your two test cases (SIDE files and Java files). *1.5*% of your final grade.

I identified the actions panel and the watch button. Both are present in mobile but not in the desktop version of the website.

**Question 4**. Indicate in a few lines, why it is important to consider UI testing, in addition to other blackbox testing approaches. Does UI testing duplicates or reduce the overall testing effort? Provide some examples to justify your comments. 1.5% of your final grade

It is important to consider UI testing as it is difficult to test high level user experience and visual requirements in standard unit and functional tests.
It does duplicate some testing effort as UI tests will effectively be testing the artifacts of code that should already be covered by unit tests.
However, UI testing provides the ability to confidently affirm the existence or nonexistence of elements and behaviors directly visible to the end user in realistic runtime environments like a web browser or a mobile OS's app view.
This is very difficult to achieve with other kinds of tests.
For example, you can write unit tests that ensure you've included code to display a button, but those unit tests can't tell you whether or not your expectations of the runtime display environment are correct. Certain browsers or Android implementations might behave differently.

**Total 5% of your final grade**

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| Graduate attribute | Description | Score out 100% | Comments |
|---|---|---|---|
| [PA-4] Analysis (uncertainty and incomplete knowledge) | Students analyze a problematic situation and propose solutions in scenarios that differ from those seen in class | | |
| [UET-1] Ability to use appropriate engineering tools, techniques and resources | Students demonstrate their ability to use a well known UI testing tool for web apps | | |
| [ITW-4] Delivering results | Deliver results in time and according to instructions | | |
| [CO-3] Documentation | The report follows the template proposed. The answer to the questions are well written and the conclusions obtained are well documented | | |