Testing applications during development is key to a successful product delivery. Testing before each sprint demo and before a release to production is essential, however testing is also essential after each bug fix and enhancement is added to ensure the entire product continues to function correctly. Most agile development projects adopt some form of automated testing to streamline the testing process. We will use Selenium WebDriver to test the interface of our applications in this class. http://www.seleniumhq.org/. This is the tool of choice when you are developing and presenting working code every 2 to 3 weeks to your product owners in future classes in the MIS program.

Objectives of this assignment:

1) Demonstrate your ability to develop test cases to test a user interface.
2) Demonstrate your ability to use Python, Selenium WebDriver, and the unittest function in Python to create automated, functional tests.

Tasks:

1) Complete the testing tutorial posted with this assignment (**CMS Clients Automated Testing Tutorial.docx**) on Canvas to add 2 test scripts to your previously created application from Assignment 1 in this class either CMS_Clients or LocalLibrary.
2) After completing the tutorial, write **3** additional test scripts for the application you created for Assignment 1. Alternatively, you can create tests for the Maverick Food Services application you created for Assignment 2 if you prefer. Your 3 tests should be different than the tests written for the provided tutorial.

   Your test scripts should test some portion of the web interface of the interface for the application. Example tests for the application include but are not limited to:
   a) Validating that if a username or password are invalid, the software does not allow the user to log on.
   b) Validating that when the 'Show All Clients' button is clicked, the client list screen opens. You should add at least one client before running this test.
   c) Validating that when the Edit button is clicked on the client list screen, the 'Edit' screen appears.
   d) Validating that when the Delete button is clicked on the client list screen, the 'Delete' confirmation screen appears.
   e) Validation of Admin features on the Admin screen to add a client.

3) Complete the Test Case Spreadsheet for each of your 3 new tests. See the '**TestCase Document – with sample test case .xls**' file posted with this assignment.

4) Create a video presentation demonstrating the execution of your 3 new test cases in the video describing what is happening as each of your tests executes.
   a) Use a free screen capture tool to develop this tutorial. Vid-Grid is provided on the course Canvas page – see the link in the left panel of the course Canvas page for '**VidGrid Portal**'. You may also use other free recording software, including Screencast-O-Matic http://www.screencast-o-matic.com/.

5) In a word-processor document, answers the following questions:

a) Selenium is one of several testing tools available today. Some are commercial tools and some are open source. Find information about one other functional automated testing tool. Briefly describe the tool and provide a website link to the tool. Compare the functionality of the new tool to what you have experienced with selenium.

b) Based on your experience with Selenium WebDriver, identify the kind of skills needed to be a successful member of a test automation team.

Deliverables

Please submit the following items:

1. The spreadsheet from Step 3 above posted to Canvas for Assign3.
2. The video you created in Task 4 above submitted to Canvas for this assignment.
3. The document file containing your responses to the questions from Task 5 above.
4. The updated CMS application with the unit test Python files created for this assignment pushed to the GitHub repo for Assign 3.

Resources

Click here for link to SeleniumHQ site for the Selenium Webdriver and documentation

Grading Criteria : See Rubric posted to Canvas for this assignment.