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Senior Software Development Engineer in Test

Skill Assessment

Assessment overview

One of the main purposes of a Senior Software Development Engineer in Test (SDET) is to design and build the tests required to make sure the products we develop are up to spec and of a high quality.

The objective of this assessment is to allow a prospective candidate to demonstrate development skills required to carry out the role of a Senior SDET by adopting a QA mindset that is in ensuring in finding defects before the client does.

Assessment delivery

Once you conclude all the tasks, please send us your artefacts. You can share a link of the repository (GitLab or GitHub) where your project is saved or send us the complete folder.

Include in the solution/s any documentation required and the tests written for this solution.

Testing a RESTful API Service

APIs are a big chunk of how modern systems communicate with one another. The first part of the task focuses on consuming and testing out a RESTful API. You can find the Pet Store APIs documented in a swagger file via the following link.

https://petstore.swagger.io/#/

Task Deliverables

In this task you are expected to develop tests of the Pet Store APIs as illustrated above to ensure they are working as expected or we know of any defects that might arise. The following items need to be outlined:

1. A Test Plan with Positive and Negative Test cases to test the Pet Store API.
2. A C# Test project consisting of the Integration Tests of the tests outlined in point 1. Kindly choose NUnit as the Test Framework.
3. Optionally, you may want to create a Wrapper for the RESTful API and create unit tests using a mocking service of your choice to test your Wrapper.

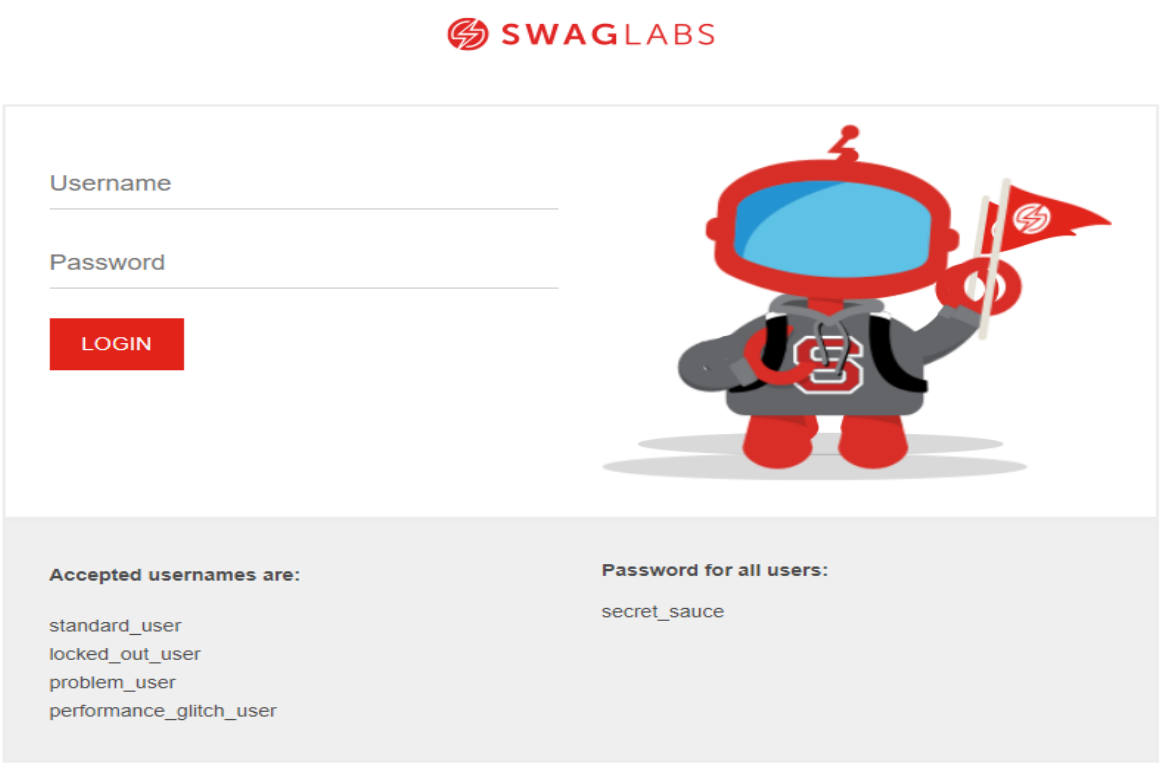
Please note that you may investigate RestSharp to develop the API calls to hit the Pet Store API.

Automation Testing for Front-end components

The second part of the assessment will focus on developing tests for an existing website using Selenium Web Driver. To try and re-use the code for generic steps, you will need to use Specflow in your framework. Apart from improved test case readability, the use of Gherkin syntax will also be a good way to document the test cases.

Website under test

The website that you will need to develop and execute test cases against is saucedemo.com. It is an e-commerce mock website where one can purchase items. It has a shopping cart that keeps track of the items that the user would like to purchase.



Objective

Identify core test cases that will need to be part of the Regression automated test suite so that they can be executed whenever required to reduce the effort in executing the test cases manually. Adhere to best practices as much as possible when it comes to developing a framework to automate the testing of saucedemo.com especially so that you may want to re-use the framework to test another website or application.

Deliverables:

1. A test plan of the tests you intend to execute.
2. Write the automated test in C# code (using .NET core) to regress the functionality of the website under test.
3. Make use of the Page Object Model to be able to re-use them accordingly where applicable.
4. Adopt a technique where step definitions (with the user of Specflow) are to be re-used as much as possible for all page objects.
5. You need formalize the test execution in a report so the findings and statuses can be communicated in an effective way.