TISTA Science and Technology Corporation – Automation Engineer Mid / Sr.

Prescreen Assessment

Expected Completion time of 30-60 minutes depending on experience.

(If you don’t know how to solve any of the problems, feel free to leave them empty.)

Section A

1. How do you handle switching between multiple windows in Selenium WebDriver?
2. How do you handle pop-ups using Selenium WebDriver?
3. Is there any way to verify the color change of the element using Selenium WebDriver? For example, there is the map of the US and when you select the state of Maryland, the Maryland will become red in the map (other parts are still gray).
4. What is the different between Scenario and Scenario Outline in Cucumber?
5. Given these contents of the Customers table:

Id   Name                       ReferredBy

1    John Doe                 NULL

2    Jane Smith              NULL

3    Anne Jenkins         2

4    Eric Branford         NULL

5    Pat Richards           1

6    Alice Barnes           2

7    Jane Smith             3

8    Anne Jenkins         2

Here is a query written to return the list of customers not referred by Jane Smith:

      SELECT Name FROM Customers WHERE ReferredBy <> 2;

What will be the result of the query? Why? What would be a better way to write it?

Write a query that returns the unique names.

Section B

1. Add a method which takes a string and returns a version without the first and last char. For example, "Hello" should return "ell". The string length will be at least 2.
2. Add a method which takes a list of integers, return a list of the integers, omitting any that are less than 0.

Section C

1. Write a method or functions in the major programming language of your choice that returns the longest word in a sentence and its length. For example, “The quick brown fox jumped over the lazy dog.” should return “jumped” and 6.
2. Write unit tests, reworking code as needed.
3. Add a method that returns the shortest word and length with unit tests.
4. Create a README documenting any assumptions you made and including instructions on how to build and execute your tests.
5. Share your code and answers using GitHub or similar.

**Section A Answers**

1. How do you handle switching between multiple windows in Selenium WebDriver?  
   Save current window reference   
   String parentWindow= driver.getWindowHandle();  
   Add all windows in the list and switch between windows using loop  
   List<String> allWindows = driver.getWindowHandles();  
   for(String curWindow : allWindows){  
   driver.switchTo().window(currentWindow);  
   }  
   You can switch to specific window using   
   driver.switchTo().window(windowName);
2. How do you handle pop-ups using Selenium WebDriver?

There are several ways you can interact with pop-ups:

1. Click ok button driver.switchTo().alert().accept();
2. Click cancel button driver.switchTo().alert().dismiss();
3. Get pop-up message driver.switchTo().alert().getText();
4. Input text driver.switchTo().alert().sendKeys("your text");
5. Is there any way to verify the color change of the element using Selenium WebDriver? For example, there is the map of the US and when you select the state of Maryland, the Maryland will become red in the map (other parts are still gray).

Find css color attribute value

String MdColorRGB = driver.findElement(By.xpath(“xpath”)).getCssValue(“color”);

Convert to HEX value   
String MdColorHEX= Color.fromString(MdColorRGB).asHex();  
Assert that color is red  
Assert.assertEquals(“hexColorValue”, MdColorHEX);

1. What is the different between Scenario and Scenario Outline in Cucumber?

Scenario Outline is used to run tests with different data sets. It runs once for each line in example table when Scenario runs once.

1. Given these contents of the Customers table:

Id   Name                       ReferredBy

1    John Doe                 NULL

2    Jane Smith              NULL

3    Anne Jenkins         2

4    Eric Branford         NULL

5    Pat Richards           1

6    Alice Barnes           2

7    Jane Smith             3

8    Anne Jenkins         2

Here is a query written to return the list of customers not referred by Jane Smith:

      SELECT Name FROM Customers WHERE ReferredBy <> 2;

What will be the result of the query? Why? What would be a better way to write it?

I would filter out null values because those ppl are not customers

SELECT Name FROM Customers WHERE ReferredBy <> 2 AND ReferredBy IS NOT NULL;

|  |
| --- |
| John Doe |
| Jane Smith |
| Eric Branford |
| Pat Richards |
| Jane Smith |

Write a query that returns the unique names.

SELECT DISTINCT Name FROM Customers;