Test Automation

* How would you select which automation tool is best for a project?

There are a lot of things to look at before choosing an automation tool. The main aim of automated testing is to save time and efforts. A tool that supports parallel test execution is one of the things first thing to look at. Then you can look at support across various operating systems, multi-browser support if you project is a web application, and also looking to see if it supports all major languages like Java, Python, JavaScript, C# etc.

* How will you go about testing the movement of the drone?

I would first declare a string variable that holds the values of the x, y and f and make them equal to “0,0,NORTH”. Then declare another variable, make it equal to the output element text by using find element by and get text. Then find the place button, i.e, find element by id, and call the click function on it. I would perform the same action on the move button several times. Then check if my two variables match, if not then I know the drone moved.

* How will your automation confirm that the drone has moved successfully to the correct location?

I would declare two variables one for the inputs and one for the expected result. Call the necessary commands clicks based on the input values. Then use get element by to get the output element and get its text. Then check if the output text is equal to the expected result.

* How will you automate and confirm that not other sequence of commands can be used before the place command has been executed?

I would declare two bool variables to hold the values that check if the place button is enabled, the other with will hold the value of all other buttons being disabled. I would find the place button with find element by and call the isEnabled function on it and make its result equal to my first variable. Then I would loop through the other button reassigning my second value every time while I call the isEnabled fuction. At the end of the loop I would check if my variables are equal. If not then I know no other command can be performed before the place command.

* How will you go about automating and verifying that the drone does not go out of the boundry?

I would place the drone. Click the move button 11 times by using get element by and calling the click function on it, use a loop here. Get the output text and check if it contains a value more than 10, or less than 0.

* Based on the Assesment reqirement and the solution, automatable test scenarios can you identify?

Test that the game does not allow invalid x, y and f values.

Test that the Left and Right rotates the drone in the specified direction without changing the position of the drone.

Test that attack will launch a projectile two units to to direction of the drone.

Test that move will move the drone one unit on the direction of the drone.

Test that place places the drone in the correct point that the user specified.

Test that place faces the drone to the direction the user specified.

Test that if the user did not specify x and y then the game defaults them to 0 and 0.