**Assignment Answers:**

1. **Create TEST SCENARIOS for the registration form on Etherscan website (**[**https://etherscan.io/register**](https://etherscan.io/register)**)**

**Test Scenarios:**

1. Validate that page with url i.e <https://etherscan.io/register> is up and displaying properly.
2. Validate that when all the fields entered, the registration is getting successful.
3. Validate if all fields are not given (considering all are mandatory) and user clicks on ‘create an account’, the validation message should be shown individually.
4. Validate the links available on the page i.e ‘Term and Conditions’ and ‘unsubscribe’ are not broken and navigates to the corresponding page on link when clicked.
5. Validate if incomplete information is given and the user clicks on ‘Create an account’ button, then only the remaining unfilled fields should show the validation message.
6. Validate after successfully registration of a user, the data is getting stored in the database (if any). – (This is not automated as further information would be required for this)
7. Validate without completing the captcha the user is not able to register to etherscan form registration and the validation message is shown correctly for captcha.

**Important NOTE**: Since captcha cannot be automated. There are certain we can try avoiding this part during testing:

1. We should disable the captcha section in our testing environments.
2. Or we can stub/mock the captcha part so that it always passes during validation.
3. We can increase the sleep time in the automation script and can manually complete the captcha part.

In short captcha validate is meant for not to be automated. And if one can automate it, then that can be considered as bug or issue.

**In this above case**, how I have proceeded with the automation of registering the user with captcha is, I have used chromeOptions and using ‘add extensions’ method for adding the extension while chrome browser loads in automation scripts (Extension- ‘Buster- Captcha solver for humans’) and by packing the extension on chrome browser and using app.crx file to bypass the captcha. (Which gets created once the pack extension is done on chrome browser), In this case registration gets successful if cookies are clear on chrome.

But in Ideal case captcha automation is not possible.

1. **Explain what type of tools you would use to enable an automatic testing system for the task above and how they would be utilized.**

For automating this I would be using **selenium webdriver** (with java) tool as its open sources and portable and works across different platform with different languages Like java, c#, python.

I have created a **maven project** and used a **hybrid driven framework**, wherein I will be maintaining each object repository page separately for each page of application and will be maintaining the test data separately. Along with that I will be maintaining the test files, business logic and common lib in separate packages/folders.

And maven would be able to download all the library automatically from internet. So going forward if I am going to use and further lib just need to add the dependencies in **pom.xml** and we should be good to go.

And then my using **TESTNG** unit testing framework I will be able to create the test scripts and can run those via **testing.xml** file.

1. **Create E2E browser tests that will cover all test scenarios**

Added in the git repo i.e - <https://github.com/Meena-khan/Assignment>