Last updated: Jun 30, 2021

Selenium Java Training - Session 29 - Cucumber and BDD (Part 1)

Cucumber and BDD (Part 1)

1. What is Cucumber?

    1. Cucumber is a framework which supports Behavior Driven Development (BDD).

2. What is a BDD?

    1. BDD stands for Behavior Driven Development

    2. Difference between Traditional Development and Behavior Driven Development

- In **traditional development projects**, there will be a <u>communication gap between Customers, Developers & Testers</u>
    - Developers misunderstand the Business requirements provided by Customers and build wrong products - [View here](#)
    - BDD can be used to overcome this problem
- In BDD, development is driven by the behavior of the required Software.
    - Development focuses on what to be developed instead of how to develop
    - Behavior of the required Software will be communicated in a plain English language using which the Business, Developers and Tester will be on the same page
    - Example (Amazon.com) - [View here](#) to find out how the behavior of the software can be communicated in a plain English language.

3. What is Cucumber ?

    1. Cucumber is a framework which supports the implementation of BDD in Selenium Automation by doing the below:

- Allows us to create Feature Files in plain English language.
- Understands the Gherkin language which is used for writing the scenarios inside Feature Files in plain English language.
- Connects the steps inside the Feature Files with the automation code written in Selenium Java language and executes.

4. Install **Cucumber Eclipse Plug-in**

- Launch Eclipse IDE and select 'Help' Menu > 'Install New Software' option
- Click on 'Add' button and provide Name as 'Cucumber'
- Search for 'Cucumber Eclipse IDE' and find the github page for Cucumber and find the eclipse update site for Cucumber
- You will see the instructions for installing
- Select to install the 'Cucumber Eclipse Plugin'
- Alternative Plugin - Natural in Eclipse IDE Marketplace

5. Create Maven Project and Configure with Cucumber & Selenium

- Create a new Maven Project by Right clicking on the Package Explorer and selecting 'New' > 'Other'
- Filter Maven and select 'Maven Project' option
- Select 'Create a simple project' option

- Select 'Create a simple project' option
- Provide the artifact ID as Project Name and Group ID as Package name (Say CBProj and cbPack)
- Google 'Cucumber Maven Dependency' and click on the link https://mvnrepository.com/artifact/info.cukes which got appeared in our Search Results
  - Copy the dependency tags for 1.2.5 versions of both Cucumber JVM: JUnit and Cucumber JVM : Java in between the dependencies tags of pom.xml file and save the Project
  - Google 'JUnit Maven Dependency' and click on the link https://mvnrepository.com/artifact/junit/junit which got appeared in our Search Results
  - Copy the dependency tag for 4.11 version of JUnit in between the dependencies tags of pom.xml file and save the Project
  - Google 'Selenium Maven Dependency' and click on the link https://mvnrepository.com/artifact/org.seleniumhq.selenium which got appeared in our Search Results
  - Copy the dependency tags for 2.53.1 of Selenium Java in between the dependencies tags of pom.xml file and save the Project
  - Make the project ready for execution in different browsers by downloading and pasting the required drivers under 'drivers' folder of the project

6. Creating Feature File
  - Create a package say 'cbPack'
  - Right click on the 'bcPack' and select 'New' > 'File'
  - Provide the file name as 'search.feature'
  - Clear all the stuff which got auto-generated in the feature file
  - Create a Feature File with various keywords like **Feature**, **Scenario**, **Given**, **When**, **And**, **Then** and **But** keywords - View File Details Here
  - Convert the Project to Cucumber Project
    - Right Click on Project > Configure > Convert to Cucumber Project

7. Create Step definitions class
  - Right click on the 'bcPack' and select 'New' > 'Class'
  - Provide step-definitions for all the steps that are provided in feature file - View Code here
  - Google chrome plugin to auto-generate the step definitions for the given feature file
    - Tidy Gherkin plugin

8. Run the individual feature using Run As > Cucumber Feature

By,
Arun Motoori