Cucumber

It is more often seen during Traditional Automation practices that Automation Engineers focus more on Test Cases that are developed by using more technical language which is understandable only to technical Team Members either by Automation engineer or developer.

During Automation Test there are some questions like :-

1) Is it possible to write a test that anybody can understand

   Regardless of their technical knowledge ?

2) Is it possible to create Test Scenario or acceptance Test from end user point of view and then Automation Engineers develop Test?

3) Is it possible to write a Test in human understandable such as English language ?

Cucumber Tool is used to achieve all above including many other features which will be discussed further.

What is a Cucumber Tool ?

Cucumber is a testing tool which supports

Behavior Driven Development (BDD).

It explains the behavior of the application.

Cucumber tool is as Cool as a Cucumber and easy to understand.

What is Behavior Driven Development ?

BDD is based on TDD and business domain and this framework is developed in plain text but it has its own syntax based on tools.

BDD is supported by many tools :-

1) Cucumber

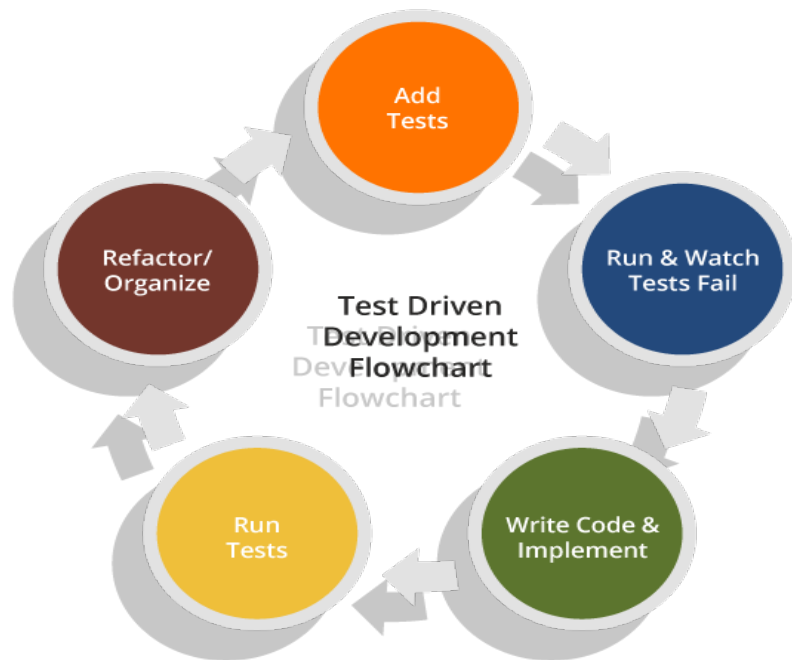2) Jbehave

3) Nbehave

4) SpecFlow

All the above tools has one language in common which is Gherkin. It is the format for cucumber specification.

Gherkin is a Plain Text English language easily understandable by any non technical person.

Before understanding BDD a glance on TDD .

What is Test Driven Development ?

TDD is also called as Test First Approach is a software development process that relies on the repetition of a very short development cycle: first the developer writes an (initially failing) automated test case that defines a desired improvement or new function, then produces the minimum amount of code to pass that test, and finally refactors the new code to acceptable standards.

Test Driven Development Flowchart

- Add Tests
- Run & Watch Tests Fail
- Write Code & Implement
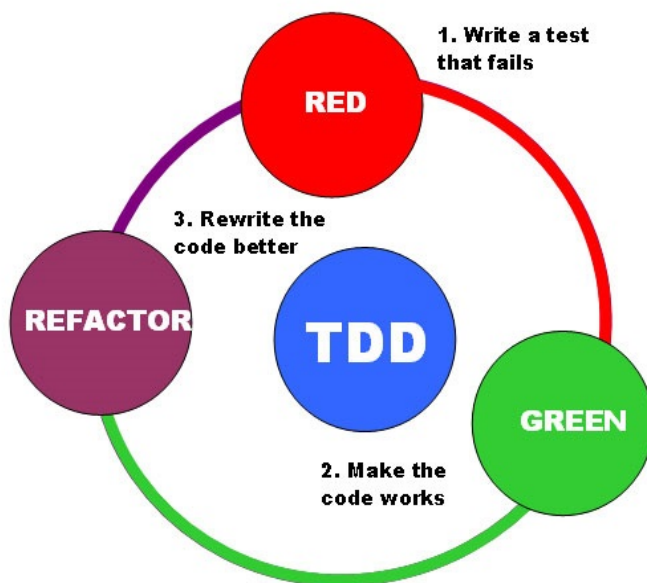- Run Tests
- Refactor/ Organize

The following sequence of steps is generally followed:

- Add a test
- Run all tests and see if the code fails
- Write some code
- Run tests
- Refactor code
- Repeat

Refactoring means altering its internal structure without changing its external behavior.

➢ Test Driven Development is done by Developer.

➢ Test Driven Development majorily focuses on Unit Test

➢ Objective of TDD is to increase Code Coverage so that Test Case Coverage can be improved.

For each iteration Test suites are created and as a result with each iteration automated regression test suite is generated .

This ensures that earlier features are working fine and less defect in application.

Increases TestCases as each functionality is tested.

Hence Increases Maintenance Cost.

Why To Use Cucumber Tool with BDD?

Cucumber is one of the most popular and trending Automation testing tools.

Cucumber is written using Ruby, it can be used to test the code written in JAVA, c#, Python,Ruby and other programming languages.

Cucumber tool is based on the Behavior Driven Development framework that **acts as the bridge between different Team Members.**

Team Members Include.

Developers, Testers, Business analyst,Product owners to collaborate and write the acceptance tests that express the outcome of the application behavior.

Cucumber tool also **benefits the client to understand the application code** with **Business functionality.**

Thus allows to achieve customer goals.

CUCUMBER INTEGRATION WITH SELENIUM

Cucumber and Selenium are two popular technologies.

Most of the organizations use Selenium for functional testing. These organizations which are using Selenium want to integrate Cucumber with selenium as Cucumber makes

it easy to read and to understand the application flow.

Cucumber uses Gherkin language which is in Plain Text.

Cucumber Allows Tester To Create :-

1) Write Business Functionality

2) Define PreCondition

3) Write Test Scenario

4) Define Action to Perform

5) And Also Define Expected Result

Following Syntax is used to generate Steps in Cucumber

1) Feature
2) Given
3) When
4) Then
5) And
6) But
7) Scenario Outline
8) Scenario Template
9) Examples

Cucumber uses Gherkin language which is in Plain Text.

Cucumber Allows Tester To Create :-

1) Write Business Functionality("Feature" which is from Use Case)

2) Define PreCondition (Given)

3) Write Test Scenario (Scenario)

4) Define Action to Perform(When)

5) And Also Define Expected Result(Then)

Given A Scenario :

Scenario

1) Customer must be Logged in

2) Customer must add product for discount making it to total of 5000 or more limit is (25,000)

3) Provide 2% discount for above criteria.

4) More Than that and less than(50,000) provide voucher.

5) No discount below this.

Example #1 with scenario

Feature : To calculate Total and provide discount.

Given   : Customer must be logged in with
valid credentials.

When   : Total is more than or equal to <5000>

And   :   less than <25,000>.

Then   :   Discount is <2%>

When   :   Total is more than <25,000>

 And   :   less than <50,000>.

Then   :   Provide Voucher.

Example #2 with Scenario

Feature   : To calculate Total and provide discount.

@positiveScenario

Scenario : To Test with valid Total

 Given   :   Customer must be logged in with
valid credentials.

  When   :   Total is more than or equal to <5000>

  And   :   less than <25,000>.

  Then   :   Discount is <2%>

 When   :   Total is more than <25,000>

 And   :   less than <50,000>.

Then   :   Provide Voucher.

Test Scenario #3 with Scenario

Feature   : To calculate Total and provide discount.

@negativeScenario

Scenario : To Test with Invalid Total

 Given   : Customer must be logged in with
valid credentials.

 When   : Total is less than <5000> or greater than 50,000

 Then   :   No Discount