

```

1
2 Given: Preconditions are mentioned in the Given keyword. The Steps of the
   Given keyword put the system in to a known state, which is necessary for the
   user action. Avoid talking about user interaction in Given Steps.
3
4 When: The purpose of the When Steps is to describe the user action.
5
6 Then: The purpose of Then Steps is to observe the expected output. The
   observations should be related to the business value/benefit of your Feature
   description.
7
8 And: This is used for statements that are an addition to the previous
   Steps and represent positives statements.
9
10 But: This is used for statements that are an addition to previous Steps
    and represent negative statements.
11
12 In a Step Definitions file, And and But are listed as Given/When/Then, the
    keyword that they appear after. There are no And and But keywords in Step
    Definitions.

```

We can use whatever keyword (GIVEN, WHEN, THEN, AND, BUT) we want in feature file.

We can write all scenarios with one keyword only like we can write entire feature file using GIVEN, but not a good practice and not readable.

GIVEN mainly contains the pre-conditions for a test.

THEN is to compare the actual output with expected output. Validation step. Testing step.

AND/BUT can be used with GIVEN or WHEN or THEN. When we want to write multiple conditions for (GIVEN or WHEN or THEN) then use AND/BUT. AND is for positive statement, like, for example after "login" it should display "welcome naven".

BUT is for negative case, for example, after login, it should show "welcome Naveen" but it should not show "sign in link".

AND/BUT does not have annotations.

[See this code below-](#)

This is correct but so many GIVEN/WHEN/THEN and sometimes difficult to read.

```

AmazonLogin.feature  AmazonHomePage.feature
1 Feature: login Page
2   In order to test login page
3   As a Registered user
4   I want to specify the login conditions
5
6
7 Scenario: Amazon Login Page
8   Given user is on Amazon landing page
9   Given Sign in button is present on screen
10  When user clicks on Sign in button
11  Then user can see login screen
12  When user enters "naveen@gmail.com" in username field
13  When user enters "test@123" in password field
14  When user clicks Sign in button
15  Then user is on home page
16  Then title of home page is "Amazon"
17
18
19

```

We can have any number of GIVEN, WHEN, AND, THEN, BUT in a single scenario.

Example, ONE GIVEN and TWO AND etc.

Better formatted code-

```

18
19 Scenario: Amazon Login Page
20   Given user is on Amazon landing page
21   And Sign in button is present on screen
22   When user clicks on Sign in button
23   Then user is displayed login screen
24   When user enters "naveen@gmail.com" in username field
25   And user enters "test@123" in password field
26   And user clicks Sign in button
27   Then user is on home page
28   And title of home page is "Amazon"
29   But Sign in button is not present
30

```

How to comment in feature file –

Select everything and press “Control + forward slash”.

In step def we won't get annotations for AND/BUT, but we will be getting the annotation for GIVEN/WHEN/THEN with which the AND/BUT is associated-

Here AND is associated with GIVEN, hence GIVEN is the annotation.

```

15
16- @Given("Sign in button is present on screen")
17   public void sign_in_button_is_present_on_screen() {
18       // Write code here that turns the above into actual steps
19
20
21   }
22
23 Scenario: Amazon Login Page
24   Given user is on Amazon landing page
25   And Sign in button is present on screen
26   When user clicks on Sign in button

```

One feature file should contain features related to that.

Example, “login.feature” will contain scenarios only related to login.

Every scenario within a feature file should be independent.

Every scenario will have a GIVEN, WHEN, THEN. [18.21]

Sample feature file-

```

1=Feature: Amazon Home Page
2  In order to test Amazon Home Page of application
3  As a Registered user
4  I want to specify the features of home page
5
6= Scenario: Home Page Top Panel Section
7  Given user is on Amazon home page
8  Then user gets a Amazon search field
9  And username is also displayed next to search field
10 And Amazon logo is also displayed
11 And Cart link is also displayed
12
13= Scenario: Amazon Todays Deals section
14 Given user is on Amazon home page
15 When user scrolls down to Todays Deals section
16 Then user gets the list of multiple products
17 And user gets product image and price details
18 And user can see more products by clicking on carousel
19
20= Scenario: Amazon Footer Links section
21 Given user is on Amazon home page
22 When user scrolls down to footer of the page
23 Then user gets all Country links
24 |Australia|
25 |Brazil|
26 |China|
27 And user gets all amazon services links
28 |Amazon Business|
29 |Amazon Web Services|
30 And User gets all privacy policy links
31 |Privacy Notice|
32 |Use & Sale|

```

Sample step def created for the above feature-

```

51
52= @Then("user gets all Country links")
53 public void user_gets_all_country_links(DataTable dataTable) {
54
55     List<List<String>> countryList = dataTable.asLists();
56     System.out.println(countryList);
57 }
58
59= @Then("user gets all amazon services links")
60 public void user_gets_all_amazon_services_links(DataTable dataTable) {
61     List<List<String>> servicesList = dataTable.asLists();
62     System.out.println(servicesList);
63 }
64
65
66= @Then("User gets all privacy policy links")
67 public void user_gets_all_privacy_policy_links(DataTable dataTable) {
68     List<List<String>> policyList = dataTable.asLists();
69     System.out.println(policyList);
70 }
71 }

```

Run the feature and see output-

```

Scenario: Amazon Footer Links section
  Given user is on Amazon home page
  When user scrolls down to footer of the page
  [[Australia], [Brazil], [China]]
  Then user gets all Country links
  [[Amazon Business], [Amazon Web Services]]
  And user gets all amazon services links
  [[Privacy Notice], [Use & Sale]]
  And User gets all privacy policy links

# src/test/resources/AppFeatures/AmazonHomePage.feature:20
# stepdefinitions.AmazonHomePage.user_is_on_amazon_home_page()
# stepdefinitions.AmazonHomePage.user_scrolls_down_to_footer_of_the_page
# stepdefinitions.AmazonHomePage.user_gets_all_country_links(io.cucumber
# stepdefinitions.AmazonHomePage.user_gets_all_amazon_services_links(io.c
# stepdefinitions.AmazonHomePage.user_gets_all_privacy_policy_links(io.c

3 Scenarios (3 passed)
15 Steps (15 passed)
0m0.475s

View your Cucumber Report at:
https://reports.cucumber.io/reports/0300b7cd-3c16-4936-b1d1-003eab1c3cd1
This report will self-destruct in 24h.

```

Selenium is just a library.

We can use cucumber for api, mobile, web, any product.

Cucumber is just bdd approach for testing.

Advantage of all scenario being independent inside single feature file-

We can easily run in parallel.

Maintenenance is easy.

Readability is more.

If dependency is there, then parallel runs becomes difficult. This is because one thread may run tc1 , another thread may run tc2 which is dependent on tc1 and hence it will fail.