

23. Data Driven Testing

- **WHEN:** Whenever a functionality or a module in an app requires testing with multiple sets of data (Parametrization), Multiple inputs then we need to perform data driven testing and automation.
- These scenarios are one of the things That must be automated.
- **HOW:** Test data is separated from code and stored into external sources: Cucumber Examples table, Excel files, CSV files, Database.
- **BENEFIT:** More organized, Data centralized, Collaboration on test data - it can come from BA, MTsetc

24. How can we create data driven framework using TestNG?

- By using @DataProvider annotation, we can create a Data Driven Framework

```
@DataProvider(name="getData") Public Object[][] getData(){ Object [][] data = new Object[2][2];
Data[0][0] = "firstUid"; Data[0][1] = "FirstPWD";
Data[1][0] = "SecondUid";
Data[1][1] = "SecondPWD"; Return data; }
```

25. How to create Group of Groups in TestNG?

- These groups are called metagroups.
- Example: you might want to define a group all that includes smokeTest and FunctionalTest.
Let's modify our testing.xml file:

```
<groups>
  <define name="all">
    <include name ="smoke Test"/>
    <include name = "functionalTest"/>
  </define>
  <run>
    <include name = "all"/>
  </run>
</groups>
```

26. How to run test cases in parallel using TestNG?

- We can use "parallel" attribute in testng.xml to accomplish parallel test execution in TestNG
- The parallel attribute of suite tag can accept four values:
 - Classes → All the test cases inside a java class will run parallel
 - Methods → All the methods with @Test annotation will execute parallel
 - Instances → Test cases in same instance will execute parallel but two method of two different instances will run in different thread. <suite name="softwaretestingmaterial" parallel="methods">

27. How to ignore a test case in testNG?

- To ignore the test case, we use the parameter enabled = false to the
- @Test annotation @Test(enabled=false)

28. How to exclude a particular test method from a test case execution?

- By adding the exclude tag in the testing.xml

```
<classes>
  <class name="TestCaseName">
    <methods>
      <exclude name="TestMethodNameToExclude"/>
    </methods>
  </class>
</classes>
```