

TestNG Framework design

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It is a Java unique framework specially designed for test classes.

Advantages

1. It generates HTML report of execution
2. We can run all test cases automatically by using test suite
3. Test cases can be prioritised more easily
4. Data parameterization is possible

TestNg framework includes annotations and keywords

Annotations

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All of this annotations are used for test methods as follows:

1. **@BeforeClass**
 - a. This annotation is used to execute the method only once in a class at the start of the class
2. **@AfterClass**
 - a. This annotation is used to execute the method only once in a class at the end of the class
3. **@BeforeMethod**
 - a. This annotation is used to execute the method before every test method.
4. **@AfterMethod**
 - a. This annotation is used to execute the method after every test method.
5. **@Test**
 - a. This annotation is used to execute the test cases

Keywords in testng

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1. **Priority**
 - a. To change the execution order of the test cases we use priority keyword.
2. **Invocation count**
 - a. To execute the single test multiple times we use the invocation count keyword.

3. Enabled = false

- If the class contains multiple tests and the user wants to skip one of the test cases then we use enable = false keyword.

4. DependsOnMethod

- If the class contains multiple methods and any test depends on another test then we use depends on method keyword

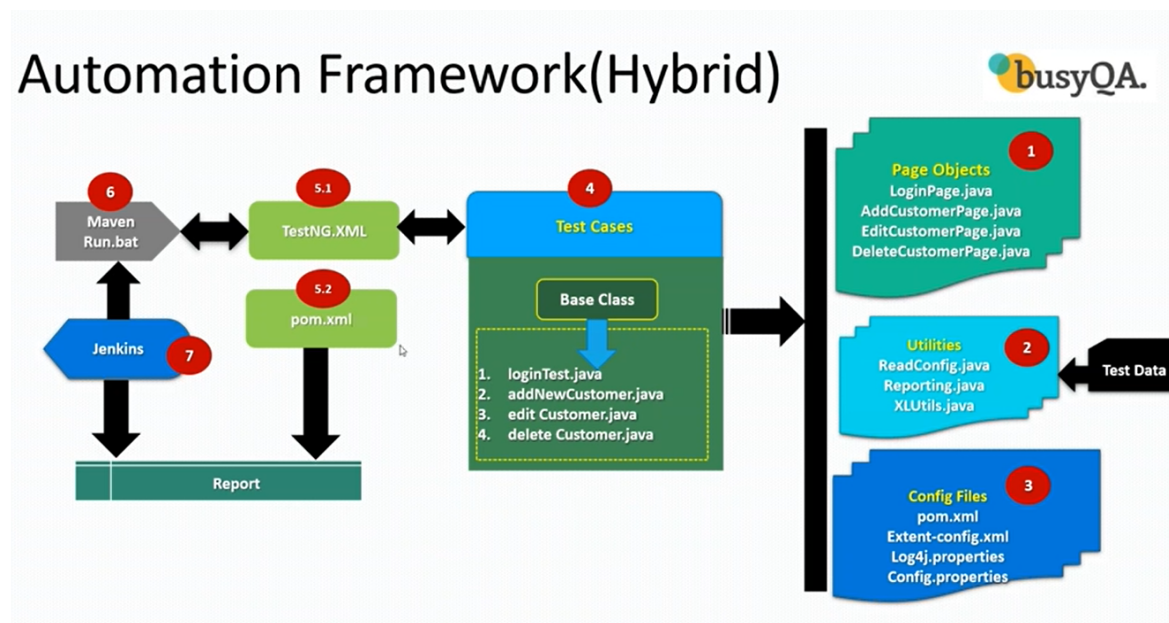
5. Timeout

- If any method takes more time to execute at that time we use the timeout keyword.

Basic Automation framework

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Below is the basic framework design



This framework is divided into three different phases

1. Implementation
 2. Execution
 3. Maintenance
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Implementation

- Create maven project
- Update pom.xml file
- Create page object class
- Create basic test case
- Add logs to test case
- Read common value from properties file
- Run test case on desired browser
- Add extent report
- Create data driven test case
- Adding new test cases

Execution

- Run test cases with Maven pom.xml
- Run test cases using Jenkins

Maintenance

- Creating repository in GITHUB
- Commit the project code in local repository
- Push the project code to GITHUB remote repository from local GIT repository

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What is Maven project

- Maven is one of the plugins which is available in eclipse.
- Till now we created java projects where we imported all jar files for various execution of programs.
- Instead of this if we create a maven project then it includes one pom.xml file by default.
- In this we can add some dependencies (url), this added dependencies will automatically download all the required latest jar files and keep that into the maven project.
- We can also able to execute our project without eclipse by using jenkins

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