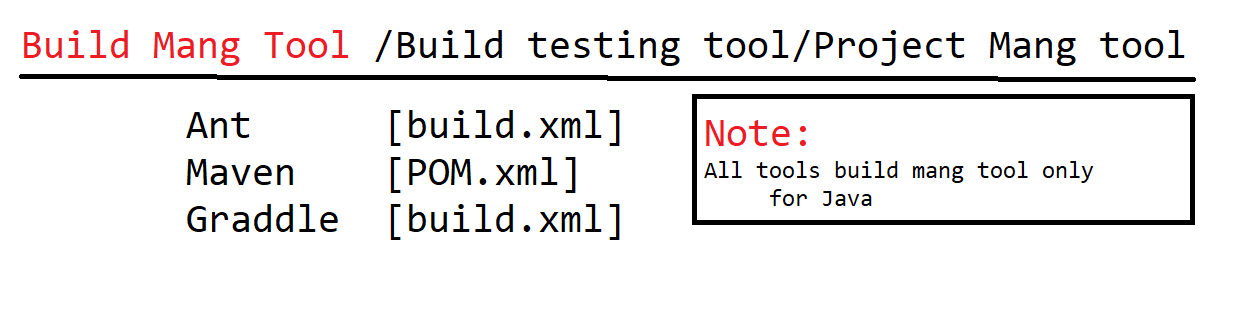
****

**Maven**

1. Why Maven used in Development?

In case of development, maven will be used for build testing & build creation & deployment processes.

Build testing: testing compilation issue in entire project & provide message called build successful if no compilation issue, or else build failure (broken)

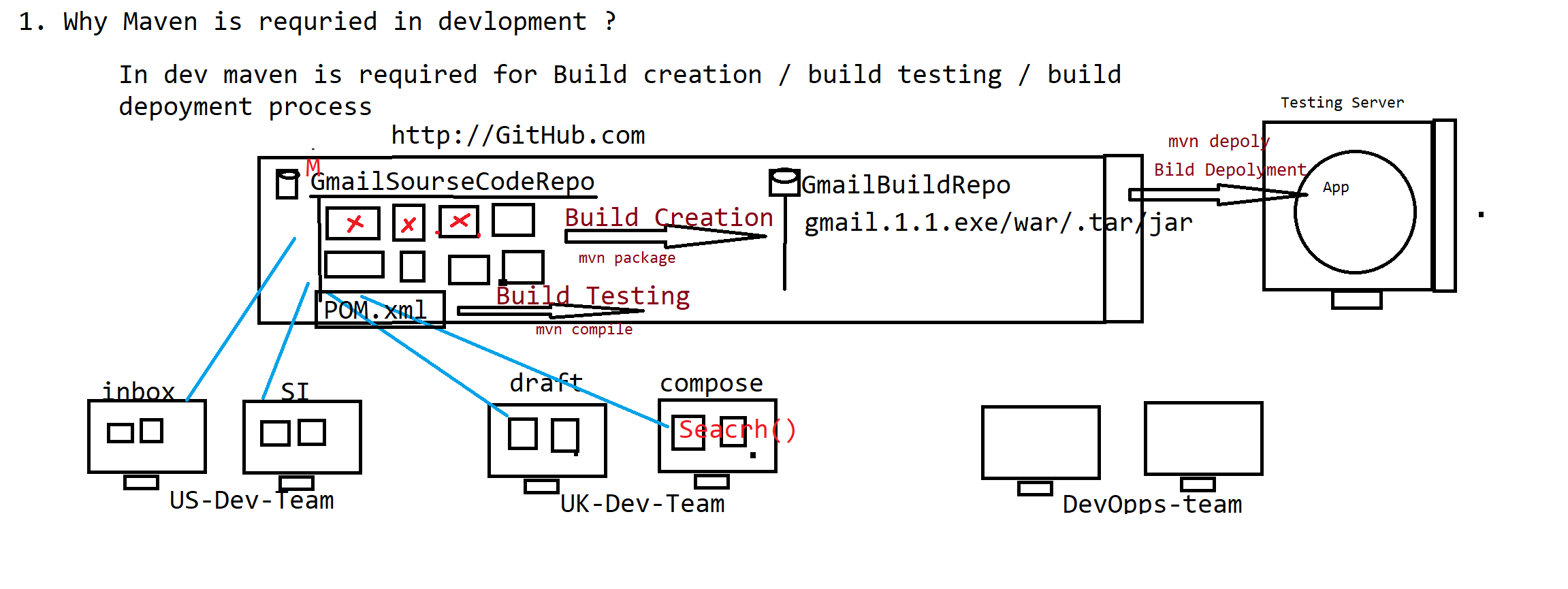
EG: Cmd: mvn compile

Build creation process: processes of converting source Code format in to executable format like .jar, .war, .tar, .exe, .msi

EG: Cmd: mvn package

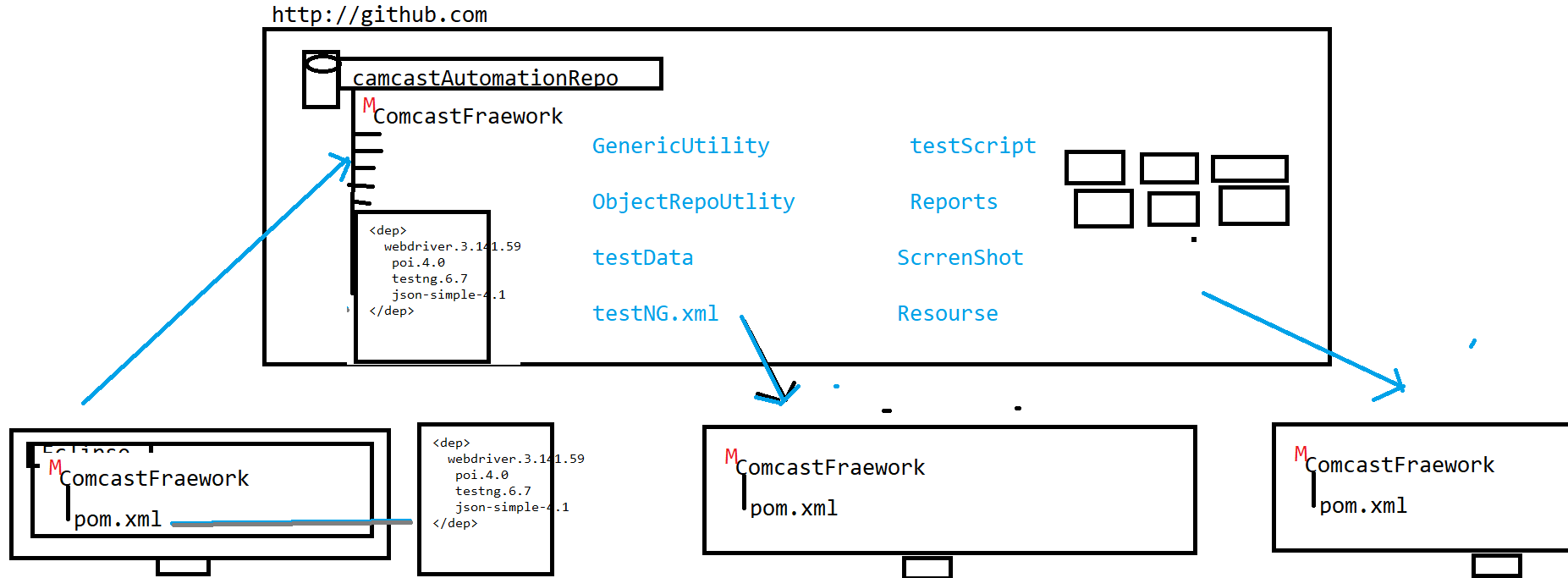
Build Deployment: processes of installing the build in to testing Server/ Staging Environment / Production environment.

EG: mvn deploy, mvn install



1. Why maven is required in Selenium Automation testing?

When multiple engineers working with the same framework, their might be chances one engineer’s modification might affect entire framework, in order to avoid this kind, issue we go for Maven

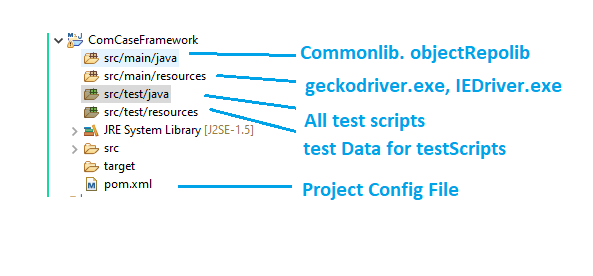


1. Advantages of Maven
2. Check the integration & compilation issue between the framework component whenever modification, addition deletion happened in the framework
3. handle dependencies jars
4. create framework configuration quick setup for new engineers (because all the required dependencies jar. & jar Versions declared in POM.xml, you just to get the framework from the GIT & save the POM file
5. provide framework folder structure
6. We can run the test script in command Line without Eclipse
7. Which is used to check framework build is broken or not?
8. Maven majorly support in Jenkins for CD/CI[Jenkins]
9. Maven also support Profiling (we can have multiple testing.xml file in one Project, so that we go for Profile to execute specific xml file via CMD)
10. Maven also support Command Line parameters
11. What all the Maven Software required to handle maven Project in real time?

* Two software available in Maven

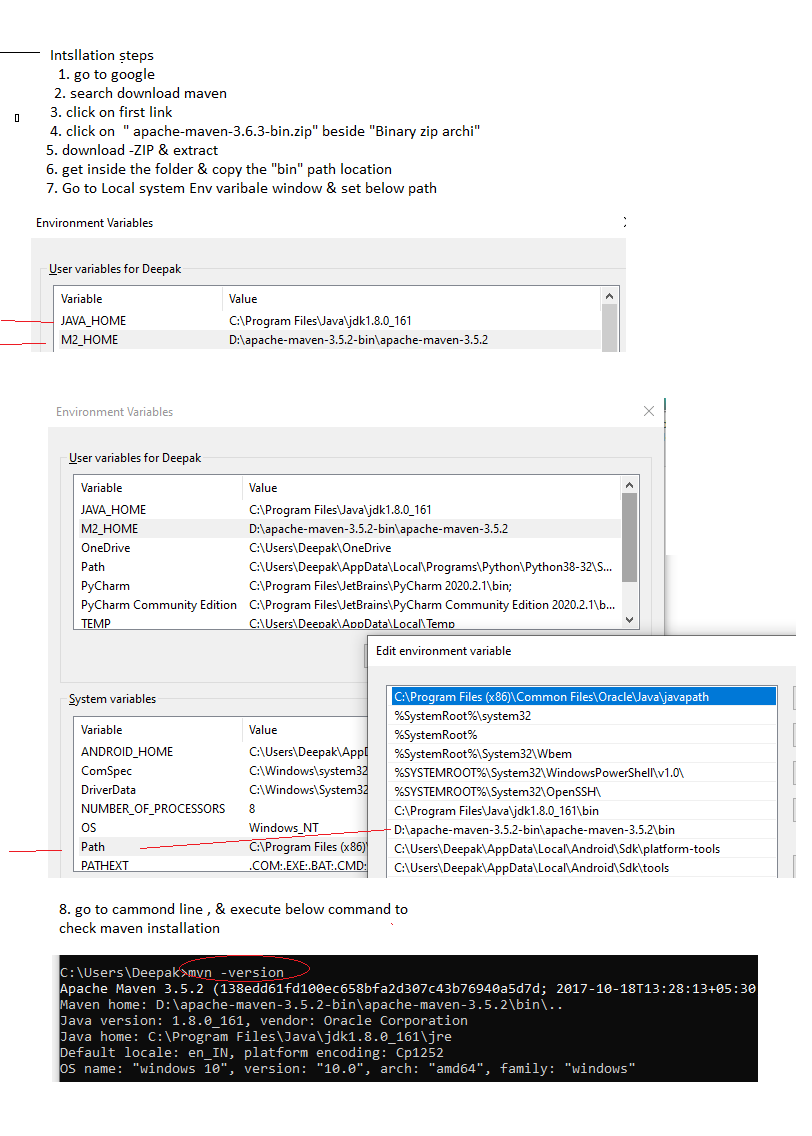
1. Maven Ellipse Plugin

🡺 Maven Ellipse Plugin: it’s a default plugin available in Eclipse Ide, used to create maven project in Eclipse



1. Maven Command Line Plugin

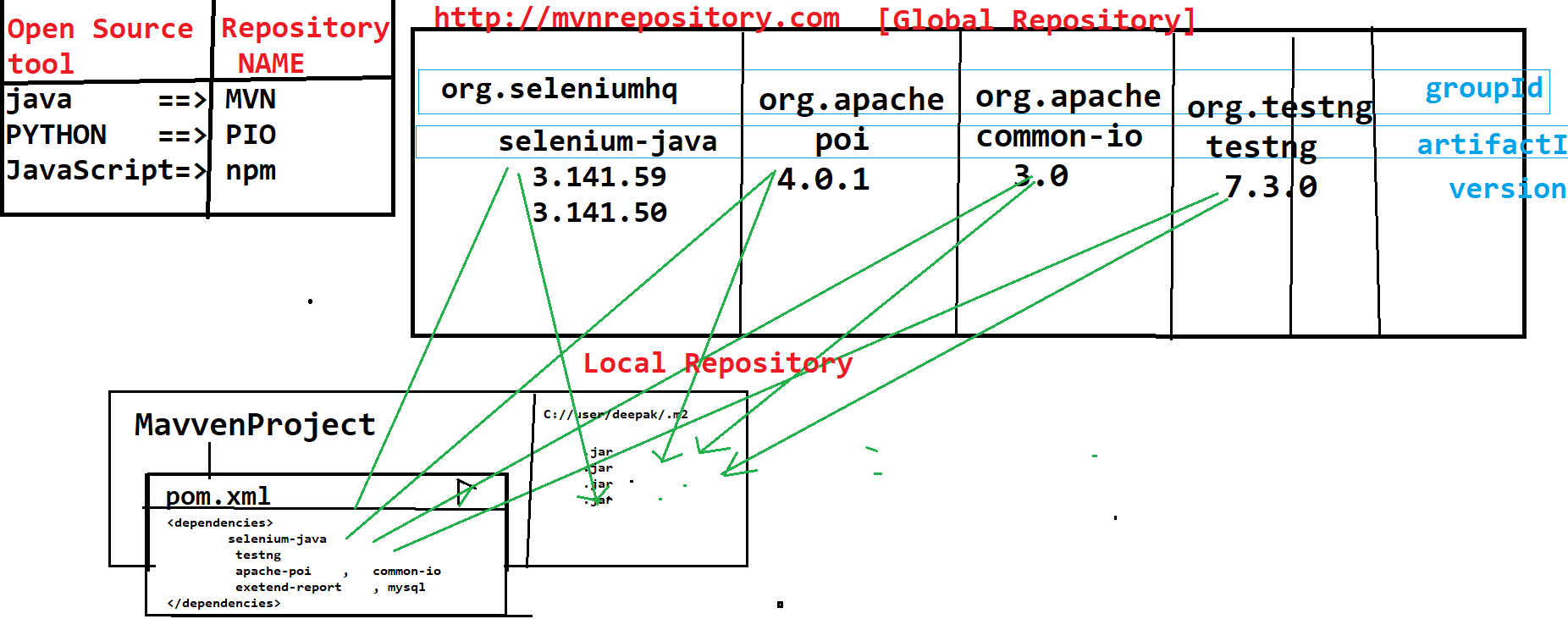
🡺Maven Command Line Plugin: It should be installed explicitly in all local computers, used to handle the Maven project in CMD line.



1. What is dependency in Maven?

Dependency is an advanced feature in maven which is used to get all the required jars from the Global repository(http://mvnrepository.com) in to Local repository(C://user/.m2) & attach all jars to the project automatically.

1. How to handle Dependencies?
2. Create maven project
3. Go to POM.xml
4. Inside the Pom.xml, insert <dependencies> tag
5. Go to global repository [http://mvnrepository.com]
6. Search for required tools like “selenium-java” & “TestNG” & “apache-poi”, “apache-poi-ooxml” & “mysql-connector”, “common-io”, “extend-report”.
7. copy the dependency code for all above tools
8. paste the dependency code inside POM.xml
9. save the file



EG :

<project xmlns=*"http://maven.apache.org/POM/4.0.0"* xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"* xsi:schemaLocation=*"http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd"*>

<modelVersion>4.0.0</modelVersion>

<groupId>SDET\_20\_SeleniumFramework</groupId>

<artifactId>SDET\_20\_SeleniumFramework</artifactId>

<version>0.0.1-SNAPSHOT</version>

<dependencies>

<!-- https://mvnrepository.com/artifact/org.seleniumhq.selenium/selenium-java -->

<dependency>

<groupId>org.seleniumhq.selenium</groupId>

<artifactId>selenium-java</artifactId>

<version>3.141.59</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.apache.poi/poi -->

<dependency>

<groupId>org.apache.poi</groupId>

<artifactId>poi</artifactId>

<version>4.0.0</version>

</dependency>

<dependency>

<groupId>org.apache.poi</groupId>

<artifactId>poi-ooxml</artifactId>

<version>4.0.0</version>

</dependency>

<!-- https://mvnrepository.com/artifact/commons-io/commons-io -->

<dependency>

<groupId>commons-io</groupId>

<artifactId>commons-io</artifactId>

<version>2.11.0</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.testng/testng -->

<dependency>

<groupId>org.testng</groupId>

<artifactId>testng</artifactId>

<version>7.4.0</version>

<scope>test</scope>

</dependency>

</dependencies>

</project>

What is group ID & ArtifactID?

Group Id: name of the org or name of the Open source community.

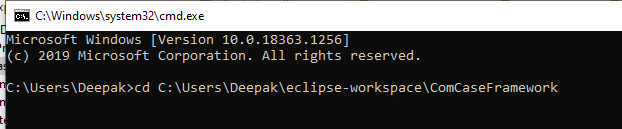
ArtifactID: name of the project inside the Group

Version: version of the project which you need to download

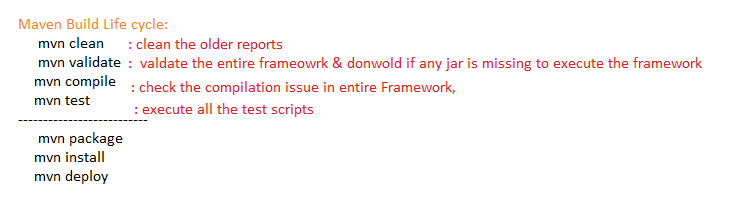
1. How to execute testscripts in CMD
2. Go to MavenProject🡺 Right Click🡺 properties 🡺 copy the Project location

EG: C:\Users\Deepak\eclipse-workspace\ComCaseFramework

1. Open CMD & type cd and then paste the location.



1. Execute Maven life cycle commands
2. Explain maven Build Life Cycle.



1. How to execute TESTNG.xml file via POM.xml?

In order to execute TESTNG.xml file via pom.xml, we have to insert **sure-fire** plugin inside the POM.xml, via sure-fire plugin we can invoke TESTNG.xml

<project xmlns=*"http://maven.apache.org/POM/4.0.0"* xmlns:xsi=*"http://www.w3.org/2001/XMLSchema-instance"* xsi:schemaLocation=*"http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd"*>

<modelVersion>4.0.0</modelVersion>

<groupId>SDET\_20\_SeleniumFramework</groupId>

<artifactId>SDET\_20\_SeleniumFramework</artifactId>

<version>0.0.1-SNAPSHOT</version>

<dependencies>

<!-- https://mvnrepository.com/artifact/org.seleniumhq.selenium/selenium-java -->

<dependency>

<groupId>org.seleniumhq.selenium</groupId>

<artifactId>selenium-java</artifactId>

<version>3.141.59</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.apache.poi/poi -->

<dependency>

<groupId>org.apache.poi</groupId>

<artifactId>poi</artifactId>

<version>4.0.0</version>

</dependency>

<dependency>

<groupId>org.apache.poi</groupId>

<artifactId>poi-ooxml</artifactId>

<version>4.0.0</version>

</dependency>

<!-- https://mvnrepository.com/artifact/org.testng/testng -->

<dependency>

<groupId>org.testng</groupId>

<artifactId>testng</artifactId>

<version>7.4.0</version>

</dependency>

<!-- https://mvnrepository.com/artifact/commons-io/commons-io -->

<dependency>

<groupId>commons-io</groupId>

<artifactId>commons-io</artifactId>

<version>2.11.0</version>

</dependency>

</dependencies>

<build>

<plugins>

[...]

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-surefire-plugin</artifactId>

<version>3.0.0-M5</version>

<configuration>

<suiteXmlFiles>

<suiteXmlFile>testng.xml</suiteXmlFile>

</suiteXmlFiles>

</configuration>

</plugin>

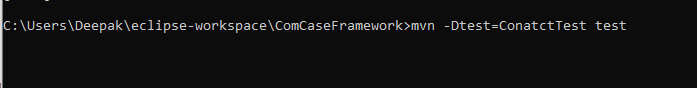
[...]

</plugins>

</build>

</project>

1. How to execute only one test using maven Cmd



1. What is Maven Parameter & Why its Required?

Maven Parameter helps us to pass the Parameter from the command line without eclipse,

So that all the test scripts can be executed based on run time parameter, which is also used in Jenkins.

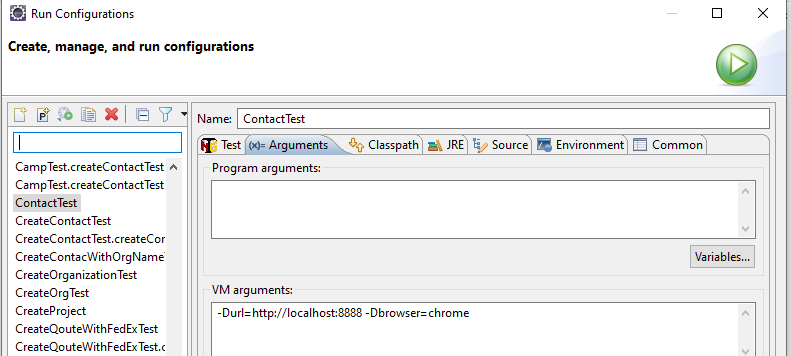
-Dkey = value

Usage in java/Selenium Code

String var = system.getProperty(“Key”)

Eclipse Usage

Right Click on testing File -> Run Configuration 🡺



1. What is Maven Profiling & why it’s Required?

Profiling help us to execute specific testing.xml via POM File, when we have multiple

testing.xml available in same Project

