

**maven:** is a dependency management and a build Automation tool primary used for java application

pre-requisite:

jdk

maven package from internet

set environment variable path MAVEN\_HOME

set PATH="c:\program files\apache-maven-3.8.1\bin";%PATH%

maven will helps us to do below:

-----

configure

downloading the src code

initialization

compile

package

unit test

deployment

document

reports

clean

dependency management

-----

maven can do variety of tasks

1. compiling source code
2. packaging binaries
3. running automated test
4. deploying to system
5. creating documents

based on pom(project object model) maven can manage project build ,reporting and documentation

java build automation tools:

- 1.Ant
- 2.maven
- 3.gradle

mvn help:effective-pom

continuous integration and devops tools setup and tips  
<https://www.cidevops.com/>

<https://maven.apache.org/pom.html>

how to run maven in cmd  
cmd---> mvn archetype:generate  
generated project in C:\Users\Alex\dev

portno: 8888  
mvn compile  
mvn test  
mvn package  
mvn install  
mvn clean  
mvn site

TO DEPLOY PROJECT FROM MAVEN TO TOMCAT USE BELOW COMMANDS  
mvn tomcat7:deploy  
mvn tomcat7:undeploy  
mvn tomcat7:redploy

<https://github.com/skillrary/maven-helloworld>

```

<project>

  <groupid>skillrary</groupid>
  <artifactID>test</artifactID>
  <version>1.1</version>
  <packaging>jar</packaging>

  <description>This is a test project </description>
  <name>PilotProject</name>

  <properties></properties>

  <dependencies>
    <dependency>
      <groupid>skillrary</groupid>
      <artifactID>test1</artifactID>
      <version>1.1</version>
    </dependecy>

    <dependency>
      <groupid>skillrary</groupid>
      <artifactID>test2</artifactID>
      <version>1.1</version>
    </dependecy>
  </dependencies>

  <build>
    <plugins>
      <plugin>
        #What is this plugin -- Define -- GAV
        <groupid>skillrary</groupid>
        <artifactID>projectx</artifactID>
        <version>1.8</version>

        <executions>
          <execution>
            #When should i use this plugin -- TEST, COMPILE
            <phase>compile</phase>
            <configuration>
              #What does this plugin do -- Executes/Performs
              <goals><task></task>< </goals>
            </configuration>
          </execution>

        </executions>

      </plugin>

      <plugin>
      </plugin>

      <plugin>
      </plugin>
    </plugins>
  </build>
</project>

```

NOW FROM MAVEN HOW TO CONNECT FOR **JACOCO**----->THIS IS USED FOR MAVEN CODE COVERAGE

> FOR THIS WE HAVE TO PUT MAVEN JACOCOC PLUGIN NSIDE POM.XML FILE  
NOW PASTE THE BELOW PLUGIN TO POM AND IN CMD TYPE MVN TEST.

```
<plugin>
  <groupId>org.jacoco</groupId>
  <artifactId>jacoco-maven-plugin</artifactId>
  <version>0.7.6.201602180812</version>
  <executions>
    <execution>
      <id>prepare-agent</id>
      <goals>
        <goal>prepare-agent</goal>
      </goals>
      <configuration>
        <propertyName>jaCoCoArgLine</propertyName>
      </configuration>
    </execution>
    <execution>
      <id>post-unit-test</id>
      <phase>test</phase>
      <goals>
        <goal>report</goal>
      </goals>
    </execution>
  </executions>
</plugin>
```

## **TOMCAT**-MAVEN PLUGIN:

```
-----  
<plugin>  
  <groupId>org.apache.tomcat.maven</groupId>  
  <artifactId>tomcat7-maven-plugin</artifactId>  
  <version>2.2</version>  
  <configuration>  
    <url>http://localhost:8888/manager/text</url>  
    <username>admin</username>  
    <password>admin</password>  
  </configuration>  
</plugin>
```

## SONARQUBE:

-----

TO UPLOAD PROJECT FROM MAVEN TO SONARQUBE FIRST DOWNLOAD PLUGIN  
AND THIS COMMAND IS USE TO DEPLOY

```
plugin:
<plugin>
  <groupId>org.sonarsource.scanner.maven</groupId>
  <artifactId>sonar-maven-plugin</artifactId>
  <version>3.3-SNAPSHOT</version>
</plugin>
```

```
mvn sonar:sonar -Dsonar.login=admin -Dsonar.password=mithun
```

TO STOP -> CTRL+C

## MAVEN **MULTI** PROJECT :

FIRST CREATE ONE FOLDER EXAMPLE LIKE MULTI INDISE MULTI  
PLACE TWO OR MORE PROJECTS BY MANUALLY OR BU USING  
MVN ARCHETYPE:GENERATE , PROJECT NAME ARE PROJECT1 AND PROJECT2 INSIDE  
THIS PROJECT

WE HAVE POM BUT NOW U HAVE COMBINE THIS 2 PROJECT CREATE LIKE WHEN U OPEN  
MULTI FOLDER==U HAVE PROJECT1

PROJECT2

NOW CREATE POM FILE BELOW PROJECT1 AND PROJECT2 NOW IT LOOK LIKE

MULTI--> PROJECT1

PROJECT2

POM.XML-->INSIDE THIS WRITE MODULE PART <modules>

```
<module>project1</module>
```

```
<module>project2</module>
```

```
</modules> and below GAV write
```

```
<packaging>pom</packaging>
```

now open project1-->pom-->write <parent>

here u write

```
gav of multi
```

```
pom file
```

```
</parent>
```

now open project2-->pom-->write <parent>

here u write

```
gav of multi
```

```
pom file
```

```
</parent>
```

NOW TYPE FROM MULTI ---> mvn compile  
mvn test

which command u want