

# MAVEN ASSIGNMENT

## 1. Shell command to list out all maven goals

Command: **mvn help:describe -Dcmd=compile**

```
(base) abinash@Abinashs-MBP publicis2.0 % mvn help:describe -Dcmd=compile
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.abinash:date-time-calculator >-----
[INFO] Building date-time-calculator 0.0.1-SNAPSHOT
[INFO] [ jar ]-----
[INFO]
[INFO] --- mvn-help-plugin:3.2.0:describe (default-cli) @ date-time-calculator ---
[INFO] 'compile' is a phase corresponding to this plugin:
org.apache.maven.plugins:maven-compiler-plugin:3.1:compile

It is a part of the lifecycle for the POM packaging 'jar'. This lifecycle includes the following phases:
* validate: Not defined
* initialize: Not defined
* generate-sources: Not defined
* process-sources: Not defined
* generate-resources: Not defined
* process-resources: org.apache.maven.plugins:maven-resources-plugin:2.6:resources
* compile: org.apache.maven.plugins:maven-compiler-plugin:3.1:compile
* process-classes: Not defined
* generate-test-sources: Not defined
* process-test-sources: Not defined
* generate-test-resources: Not defined
* process-test-resources: org.apache.maven.plugins:maven-resources-plugin:2.6:testResources
* test-compile: org.apache.maven.plugins:maven-compiler-plugin:3.1:testCompile
* process-test-classes: Not defined
* test: org.apache.maven.plugins:maven-surefire-plugin:2.12.4:test
* prepare-package: Not defined
* package: org.apache.maven.plugins:maven-jar-plugin:2.4:jar
* pre-integration-test: Not defined
* integration-test: Not defined
* post-integration-test: Not defined
* verify: Not defined
* install: org.apache.maven.plugins:maven-install-plugin:2.4:install
* deploy: org.apache.maven.plugins:maven-deploy-plugin:2.7:deploy

[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 0.750 s
[INFO] Finished at: 2020-08-23T14:57:59+05:30
[INFO] -----
(base) abinash@Abinashs-MBP publicis2.0 %
```

## 2. Shell command to demonstrate leveraging a local copy of maven and its benefits.

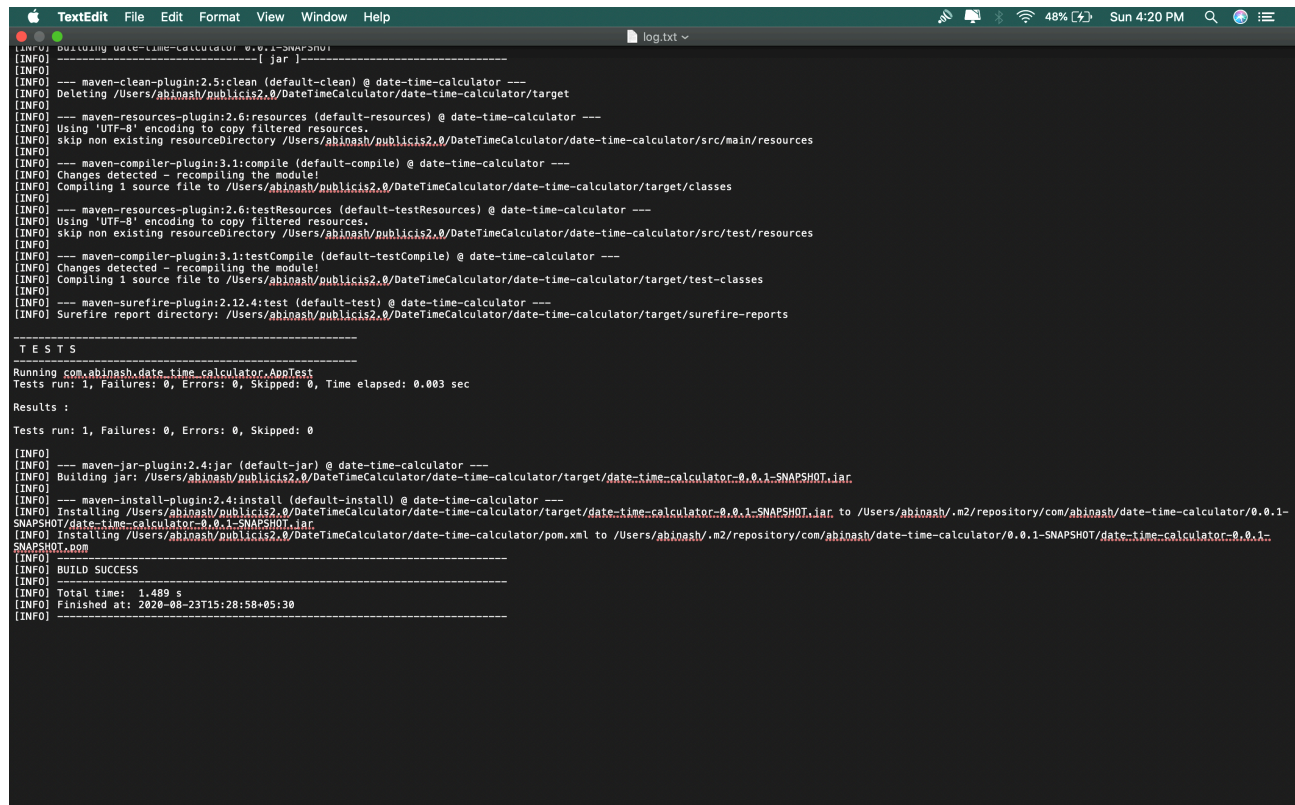
Command: **mvn -Dmaven.repo.local=~/.m2/repository clean install**

```
...rjansl.path=/Users/abinash/maven/apache-maven-3.6.3/lib/jansi-native-Dmaven.multiModuleProjectDirectory=/Users/abinash/publicis2.0 org.codehaus.plexus.classworlds.launcher.Launcher -Dmaven.repo.local=~/.m2/repository clean install
pom.xml src target
(base) abinash@Abinashs-MBP publicis2.0 % mvn -Dmaven.repo.local=~/.m2/repository clean install
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.abinash:date-time-calculator >-----
[INFO] Building date-time-calculator 0.0.1-SNAPSHOT
[INFO] [ jar ]-----
[INFO]
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.pom (3.9 kB at 1.0 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/22/maven-plugins-22.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/22/maven-plugins-22.pom (13 kB at 9.3 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/21/maven-parent-21.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/21/maven-parent-21.pom (26 kB at 22 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/10/apache-10.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/10/apache-10.pom (15 kB at 17 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.jar (25 kB at 27 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-resources-plugin/2.6/maven-resources-plugin-2.6.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-resources-plugin/2.6/maven-resources-plugin-2.6.jar (8.1 kB at 8.0 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/23/maven-plugins-23.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/23/maven-plugins-23.pom (9.2 kB at 7.5 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/22/maven-parent-22.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/22/maven-parent-22.pom (30 kB at 25 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/11/apache-11.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/11/apache-11.pom (15 kB at 14 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-resources-plugin/2.6/maven-resources-plugin-2.6.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-resources-plugin/2.6/maven-resources-plugin-2.6.jar (30 kB at 24 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-compiler-plugin/3.1/maven-compiler-plugin-3.1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-compiler-plugin/3.1/maven-compiler-plugin-3.1.pom (10 kB at 8.4 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-compiler-plugin/3.1/maven-compiler-plugin-3.1.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-compiler-plugin/3.1/maven-compiler-plugin-3.1.jar (43 kB at 30 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-surefire-plugin/2.12.4/maven-surefire-plugin-2.12.4.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-surefire-plugin/2.12.4/maven-surefire-plugin-2.12.4.pom (10 kB at 9.2 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-2.12.4/surefire-2.12.4.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-2.12.4/surefire-2.12.4.pom (14 kB at 20 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-2.12.4/maven-surefire-plugin-2.12.4.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-2.12.4/maven-surefire-plugin-2.12.4.jar (30 kB at 39 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-jar-plugin/2.4/maven-jar-plugin-2.4.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-jar-plugin/2.4/maven-jar-plugin-2.4.pom (5.8 kB at 8.4 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-jar-plugin/2.4/maven-jar-plugin-2.4.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-jar-plugin/2.4/maven-jar-plugin-2.4.jar (34 kB at 43 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/2.4/maven-install-plugin-2.4.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/2.4/maven-install-plugin-2.4.pom (6.4 kB at 5.0 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/2.4/maven-install-plugin-2.4.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/2.4/maven-install-plugin-2.4.jar (27 kB at 35 kB/s)
[INFO]
[INFO] --- mvn-clean-plugin:2.5:clean (default-clean) @ date-time-calculator ---
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/2.0.6/maven-plugin-api-2.0.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/2.0.6/maven-plugin-api-2.0.6.pom (1.5 kB at 1.4 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven/2.0.6/maven-2.0.6.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven/2.0.6/maven-2.0.6.pom (9.0 kB at 6.9 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/5/maven-parent-5.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/5/maven-parent-5.pom (15 kB at 12 kB/s)
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/3/apache-3.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/3/apache-3.pom (3.4 kB at 2.2 kB/s)
```

The benefits of having a local copy of the maven repo helps in network usage reduction and moreover the offline dependency management is also possible.

3. Shell command to ouput console results to a log file.

Command : **mvn clean install >log.txt**



```
Building date-time-calculator 0.0.1-SNAPSHOT
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ date-time-calculator ---
[INFO] Deleting /Users/abinash/publicis2.0/DateTimeCalculator/date-time-calculator/target
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ date-time-calculator ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory /Users/abinash/publicis2.0/DateTimeCalculator/date-time-calculator/src/main/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ date-time-calculator ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to /Users/abinash/publicis2.0/DateTimeCalculator/date-time-calculator/target/classes
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ date-time-calculator ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory /Users/abinash/publicis2.0/DateTimeCalculator/date-time-calculator/src/test/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ date-time-calculator ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to /Users/abinash/publicis2.0/DateTimeCalculator/date-time-calculator/target/test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ date-time-calculator ---
[INFO] Surefire report directory: /Users/abinash/publicis2.0/DateTimeCalculator/date-time-calculator/target/surefire-reports

T E S T S
Running com.abinash.date_time_calculator.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.003 sec
Results :
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ date-time-calculator ---
[INFO] Building jar: /Users/abinash/publicis2.0/DateTimeCalculator/date-time-calculator/target/date-time-calculator-0.0.1-SNAPSHOT.jar.
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ date-time-calculator ---
[INFO] Installing /Users/abinash/publicis2.0/DateTimeCalculator/date-time-calculator/target/date-time-calculator-0.0.1-SNAPSHOT.jar to /Users/abinash/.m2/repository/com/abinash/date-time-calculator/0.0.1-SNAPSHOT/date-time-calculator-0.0.1-SNAPSHOT.jar
[INFO] Installing /Users/abinash/publicis2.0/DateTimeCalculator/date-time-calculator/pom.xml to /Users/abinash/.m2/repository/com/abinash/date-time-calculator/0.0.1-SNAPSHOT/date-time-calculator-0.0.1-SNAPSHOT.pom
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 1.489 s
[INFO] Finished at: 2020-08-23T15:28:05:30
[INFO]
```

4. Shell command to prevent maven from downloading dependencies every time /  
Make maven work without internet

Command : **mvn dependency:go-offline**  
**mvn -o install**