

Q1. Maven command to display all goals

`mvn help:describe -Dplugin=compiler`

```
raveena@RaveenaSahithi MINGW64 ~/my-app
$ mvn help:describe -Dplugin=compiler
[INFO] Scanning for projects...
[INFO] -----< com.mycompany.app:my-app >-----
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- maven-help-plugin:3.2.0:describe (default-cli) @ my-app ---
[INFO] org.apache.maven.plugins:maven-compiler-plugin:3.8.0

Name: Apache Maven Compiler Plugin
Description: The Compiler Plugin is used to compile the sources of your
project.
Group Id: org.apache.maven.plugins
Artifact Id: maven-compiler-plugin
Version: 3.8.0
Goal Prefix: compiler

This plugin has 3 goals:

compiler:compile
  Description: Compiles application sources

compiler:help
  Description: Display help information on maven-compiler-plugin.
  Call mvn compiler:help -Ddetail=true -Dgoal=<goal-name> to display
parameter details.

compiler:testCompile
  Description: Compiles application test sources.

For more information, run 'mvn help:describe [...] -Ddetail'

[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 3.449 s
[INFO] Finished at: 2020-08-26T03:40:45+05:30
[INFO] -----

raveena@RaveenaSahithi MINGW64 ~/my-app
$
```

Q2. Leveraging local copy of maven within the project

`mvn -Dmaven.repo.local=~/.m2/repository clean install`

Creates a local repository within the project in specified location. Creating a local repository within the project keeps all the dependencies of the project together.

Maven stores all the local dependencies locally, which is in the Maven local repository.

The local repository of Maven is a folder location on the developer's machine, where all the project artifacts are stored locally.

When maven build is executed, Maven automatically downloads all the dependency jars into the local repository from remote repository.

Usually this folder is named `.m2`.

The default path to this folder-based on OS is:

Windows: `C:\Users\<User_Name>\.m2`

Linux: `/home/<User_Name>/.m2`

Mac: /Users/<user_name>/m2

It helps to avoid references to dependencies stored on remote machine every time a project is build.

A README is like the face of the project. It is the first file a person should read when encountering a source tree, and it should be written as a very brief and giving very basic introduction to the software.

Q3. To extract & save the build logs to a file instead of console output
`mvn help:describe -Dplugin=compile --log-file log.txt.`



```
log - Notepad
File Edit Format View Help
[INFO] Scanning for projects...
[INFO]
[INFO] -----< org.apache.maven:standalone-pom >-----
[INFO] Building Maven Stub Project (No POM) 1
[INFO] -----[ pom ]-----
[INFO]
[INFO] --- maven-help-plugin:3.2.0:describe (default-cli) @ standalone-pom ---
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/mojo/maven-metadata.xml
[INFO] Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-metadata.xml
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/mojo/maven-metadata.xml (20 kB)
[INFO] Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-metadata.xml
[INFO]
[INFO] BUILD FAILURE
[INFO]
[INFO] Total time: 5.726 s
[INFO] Finished at: 2020-08-25T11:49:08+05:30
[INFO]
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-help-plugin:3.2.0:describe (default-cli) on project
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/MojoExecutionException
```

Q4. To prevent maven from downloading dependencies every time /
Make maven work without internet.

Open a project that you want to build offline.

`mvn dependency:go-offline`

`mvn -o clean package`

The go-offline goal of the Maven Dependency plugin downloads all the required dependencies and plugins for the project, based on the pom file. The -o option tells Maven to work offline.