What Is Maven?

Maven is a project management tool for developers to manage build lifecycle of a project.

Maven manages standard directory layout and a default build lifecycle. So developer need not configure developments build lifecycle.

Maven provides developers ways to manage following:

* Builds
* Documentation
* Reporting
* Dependencies
* SCMs (Source code management)
* Releases
* Distribution
* mailing list

### How Do You Know The Version Of Mvn You Are Using?

mvn --version

### What Is Pom?

POM stands for Project Object Model. It is fundamental Unit of Work in Maven. It is an XML file. It always resides in the base directory of the project as pom.xml. It contains information about the project and various configuration details used by Maven to build the project(s).

**POM contains the some of the following configuration information −**

* project dependencies.
* plugins.
* goals.
* build profiles.
* project version.
* developers.
* mailing list.

### What Is Maven Artifact?

An artifact is a file, usually a JAR that gets deployed to a Maven repository. A Maven build produces one or more artifacts, such as a compiled JAR and a "sources" JAR

### What Is Maven Build Lifecycle?

A Build Lifecycle is a well defined sequence of phases which define the order in which the goals are to be executed. Here phase represents a stage in life cycle.

Following are the phases:−

* validate − validate the project is correct and all necessary information is available.
* compile − compile the source code of the project.
* test − test the compiled source code using a suitable unit testing framework. These tests should not require the code be packaged or deployed
* package − take the compiled code and package it in its distributable format, such as a JAR.
* integration-test − process and deploy the package if necessary into an environment where integration tests can be run.
* verify − run any checks to verify the package is valid and meets quality criteria.
* install − install the package into the local repository, for use as a dependency in other projects locally.
* deploy − done in an integration or release environment, copies the final package to the remote repository for sharing with other developers and projects.

### What Is Build Profile?

A Build profile is a set of configuration values which can be used to set or override default values of Maven build. Using a build profile, you can customize build for different environments such as Production v/s Development environments.

### What Is A Maven Repository?

A repository is a place i.e. directory where all the project jars, library jar, plugins or any other project specific artifacts are stored and can be used by Maven easily.

### What Types Of Maven Repository?

Maven repository are of three types:

1. local
2. central
3. remote

### What Is Local Repository?

Maven local repository is a folder location on your machine. It gets created when you run any maven command for the first time. Maven local repository keeps your project's all dependencies (library jars, plugin jars etc).

### What Is The Default Location For Your Local Repository?

~/m2./repository.

### What Is Central Repository?

It is repository provided by Maven community. It contains a large number of commonly used libraries. When Maven does not find any dependency in local repository, it starts searching in central repository using following URL: http://repo1.maven.org/maven2/.

### What Is Remote Repository?

Sometimes, Maven does not find a mentioned dependency in central repository as well then it stops the build process and output error message to console. To prevent such situation, Maven provides concept of Remote Repository which is developer's own custom repository containing required libraries or other project jars.

### What Is Snapshot In Maven?

SNAPSHOT is a special version that indicates a current development copy. Unlike regular versions, Maven checks for a new SNAPSHOT version in a remote repository for every build.

### What Is A Project's Fully Qualified Artifact Name?

<groupId>:<artifactId>:<version>

### What Is Difference Between Apache Ant And Maven?

Ant is simply a toolbox whereas Maven is about the application of patterns in order to achieve an infrastructure which displays the characteristics of visibility, reusability, maintainability, and comprehensibility. It is wrong to consider Maven as a build tool and just a replacement for Ant.