**Maven**

Maven is a Project Management Tool.

**Build Tool:**

Maven is a build tool,

Typical build actions :

- Generate documentation of source code

- Compile source code

- Package the compiled code as jar/war/ear

- Deploy the artifact on to a server

Standard Directory Layout of a Maven Project:

|  |  |
| --- | --- |
| src/main/java | Application/Library sources |
| src/main/resources | Application/Library resources |
| src/main/filters | Resource filter files |
| src/main/webapp | Web application sources |
| src/test/java | Test sources |
| src/test/resources | Test resources |
| src/test/filters | Test resource filter files |
| src/it | Integration Tests (primarily for plugins) |
| src/assembly | Assembly descriptors |
| src/site | Site |
| LICENSE.txt | Project's license |
| NOTICE.txt | Notices and attributions required by libraries that the project depends on |
| README.txt | Project's readme |

**Dependency management:**

Dependency management is one of the features of Maven that is best known to users and is one of the areas where Maven excels. There is not much difficulty in managing dependencies for a single project, but when you start getting into dealing with multi-module projects and applications that consist of tens or hundreds of modules this is where Maven can help you a great deal in maintaining a high degree of control and stability.

Example: Project ‘A’ Depends on project ‘B’. That means project ‘B’ needs to be compiled first before project ‘A’. So that, project ‘A’ can access class files in ‘B’. In such case, maven is smart enough to know which one to compile first.

**Extensible with plugins:**

All the goals (Equal to tasks in ‘Ant) in maven are executed with the help of plugins. Maven provides us plugin that are needed in a typical Java project but we can also use our own. Hence, we can extend the functionality of Maven.

**Versioning:**

A proper versioning is required in real world projects. Maven makes our job easy in maintaining versions of Projects/sub-projects/artifacts etc.

**Performance:**

Maven helps in building the project in efficient manner, by incorporating parallel execution of independent tasks.