Build Tools

What is Build Tool ?

The build tool is used to set up everything which is required to run your java code independently. This can be applied to your entire java project. It generates source code, compiling code, packaging code to a jar etc. Maven provides a common platform to perform these activities which makes programmer’s life easier while handling the huge project.

What is Maven?

Apache Maven is an advanced build tool to support the developer at the whole development process of a software project. **Maven is based on****POM (project object model)**.

What is Maven? Maven is implemented in Java which makes it platform-independent. Maven allows you to automate the process of the creation of the initial folder structure for the Java application, performing the compilation and testing and the packaging and deployment of the product.

Issue with Build Project Manually

There are many problems that developers face during the project development. Like –

* Adding the set of Jars in each project: In the case of struts,  hibernate frameworks, you need to add the set of jar files in each project. It must include all the dependencies of jars also.
* Creating the right project structure: You must create the right project structure in servlet, struts etc, otherwise, it will not be executed.
* Building and Deploying the project: We must have to build and deploy the project so that it may work.

Features of Maven

The key features of Maven are –

* Convention over configuration: Maven tries to avoid as much configuration as possible, by choosing real world default values and supplying project templates (archetypes).
* Dependency management: it is possible to define dependencies to other projects. During the build, the Maven build system resolves the dependencies and, if needed, it also builds the dependent projects.
* Repository: Project dependencies can be loaded from the local file system, from the Internet or public repositories. The company behind the Maven project also provides a central repository called Maven Central.