**Maven**

Ø It is a build automation tool. And it is used for project management hence it is also known as project management tool. It is open source tool.

Ø It is a software program that automates the process of transforming the source code into a deployable and executable format.

Ø Maven was developed by Apache company.

Ø Maven is used for java based projects or applications.

**Build tools:**

1.Java:Apache Maven, Apache ANT

2.Python:Pybuilder

3..NET:MSbuild(Microsoft build engine)

4.nodejs:Gulp,Grunt,Gradle Web pack

**Process:**

It converts Source code into war/ear/jar by maven

waràweb applications

jaràjava application

earàEnterprise application

copying packages(ear/jar/war) to the tomcat is called deployment.

Developers will develop the code and they push into the GitHub then we need to build (maven) then it generate packages(ear/jar/war) then copying all the packages onto the web server. Then we will tell details to the end users

Maven works with POM.XML(Latest version)/POM.XML2(Older version)

POM(Project object model) is used for managing the application.

It contains all the dependency libraries

POM.XML should be unique.

Each project contains one POM.XML file

POM.XML is written by developers.

POM.XML has super POM/parent POM.

Maven consists plugins (Installing the dependencies is known as plugins).

Dependencies are external features adding to our project.

Added plugins are reusable

Maven has life cycle.

**It has 3 Repositories’:**

1.Local repo:own laptops/systems

2.Central repo:repo which is available online

3.Remote repo:organizational repo

**Maven in devops should be utilized in 3 scenarios:**

1.If the initiative has number of significant depencies.

2.If the dependency version needs to be up graded frequently.

3.The task which involves rapid documentation,compilation and building of source code as jar or zip files.

**Apache ANT:aa**

Ø It is developed by apache company.

Ø It can build any kind of projects

Ø It doesn’t has life cycle.

Ø Build.xml is written by developers.

Ø Junit test cases not there in ANT.

Ø Scripts are not reusable