

## Maven

Maven →

- i) Maven is inbuilt tool which is provided by Apache Software Foundation & it is open source.
- problem →
  - ii) There are so many libraries we need to add in our project for that we need to go each & every website & download first & then we can use use. <sup>3rd party libraries</sup>
  - iii) Suppose if you want to upgrade the project in latest version. If then we want latest version of 3rd party library, then we have to remove all existing libraries from project & again need to add

problem ⇒ ① we need to download all 3rd party libraries from diff websites & then attached to project. Many times.

② 2nd problem is upgradation. Upgrade 3rd party libraries with the latest version. You need to remove existing one & add latest one.

To overcome this problem we used maven features.

maven ⇒ ① It is build tool.

② whenever you created maven project by default you get pom.xml

③ whole maven project will control by pom.xml file.

④ By default whenever the folder structure we needed will maintain in the project by default will be provided by that maven.

⑤ It will also provide pom.xml, In which, we <sup>can</sup> add something called dependencies & plugins.

plugins will have some configuration stuff like related to project. Compiling the project, running the project.

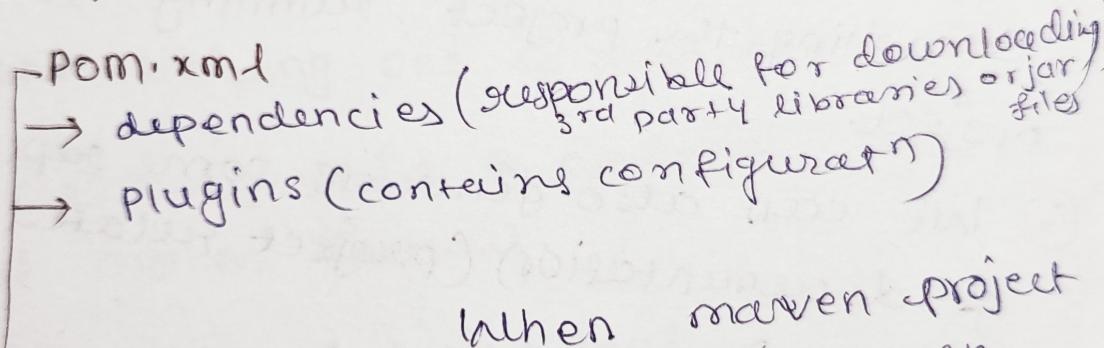
⑥ We can also generate some reports & documentation (project related document)

⑦ We can package the project.

Packaging → Once you done your project you don't need to submit provide entire project (hard code) project to client so, we need to packaging & submit the project using maven.

There are lot of uses of maven but in automation, ~~we can~~ we have maven, to upgrade 3rd party libraries automatically clean load 3rd party library.

→ we need to download all  
→ so in future, you need to add library when in maven  
there is dependencies who will download the library  
just we need to change the latest version no. in dependencies.

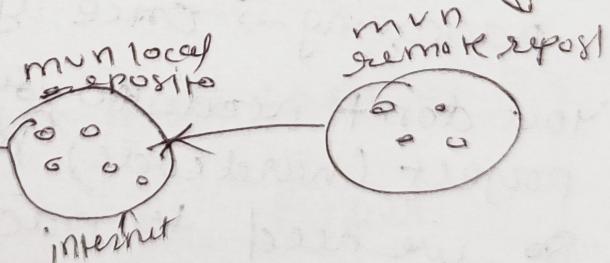


### POM.XML

① <dependencies>  
contains all libraries

When maven project is created, maven local repository created internally.

2 <dependencies>  
mvn repository  
remote repository



try to collect all libraries present here  
from maven remote repository.

## ② plugins

<plugins>  
project generated configuration  
</plugins> for eg. compile whole  
project then we need  
to add plugins

③ if you want to start  
or stop <sup>server</sup> over web based  
application then add plugin

## Cucumber

### ① Explain Cucumber

- Cucumber is a tool that is based on Behaviour Driven Development (BDD) methodology.
- the main aim of BDD framework is to make various project roles such as BA, Quality Assurance, developers etc, understand the application without diving deep into the technical aspect.

### ② What language is used by Cucumber?

- Gherkin is the language that is used by the Cucumber tool.
- It is a simple English representation of the application behaviour.
- Gherkin language uses several keywords to describe the behaviour of application such as feature, scenario, scenario outline, Given, When, Then etc.
- It provides the facility to write tests in human readable language called Gherkin.

- What is mean by a feature file?
- A feature file must provide a high level description of an application Under Test (AUT). The first line of the feature file must start with the keyword 'feature' following the description of the application under test.
- A feature file may include multiple scenarios within the same file.

A feature file has the extension .feature

Given → It represent precondition  
when, ~~and~~ and → It represents steps or flow

Then → ex. represent expected condn

- ④ what are the various keywords that are used in Cucumber for writing a scenario? The keywords are Given, When, Then, And
- ⑤ What is the purpose of Scenario Outline in cucumber?
- Scenario outline is a way of parameterization of scenarios.
  - This is ideally used when the same scenario needs to be executed for multiple sets of data, however, the test steps remain the same.
  - Scenario outline must be followed by the keyword 'Examples', which specify the set of values for each parameter.
- ⑥ what programming lang is used by Cucumber?
- Cucumber tool provides support for multiple programming languages such as Java, .Net, Ruby etc. It can also be integrated with multiple tools such as selenium.

⑦ What is the purpose of step definition file in Cucumber?

- A step definition file in cucumber is used to segregate the feature files from the underlying code.
- Each step of the feature file can be mapped to a corresponding method on the step definition file.
- While feature files are written in an easily understandable language such as Gherkin, step definition files are written in programming languages such as Java, .Net, Ruby etc.

⑧ What are the major advantages of Cucumber framework?