Maven Life Cycle

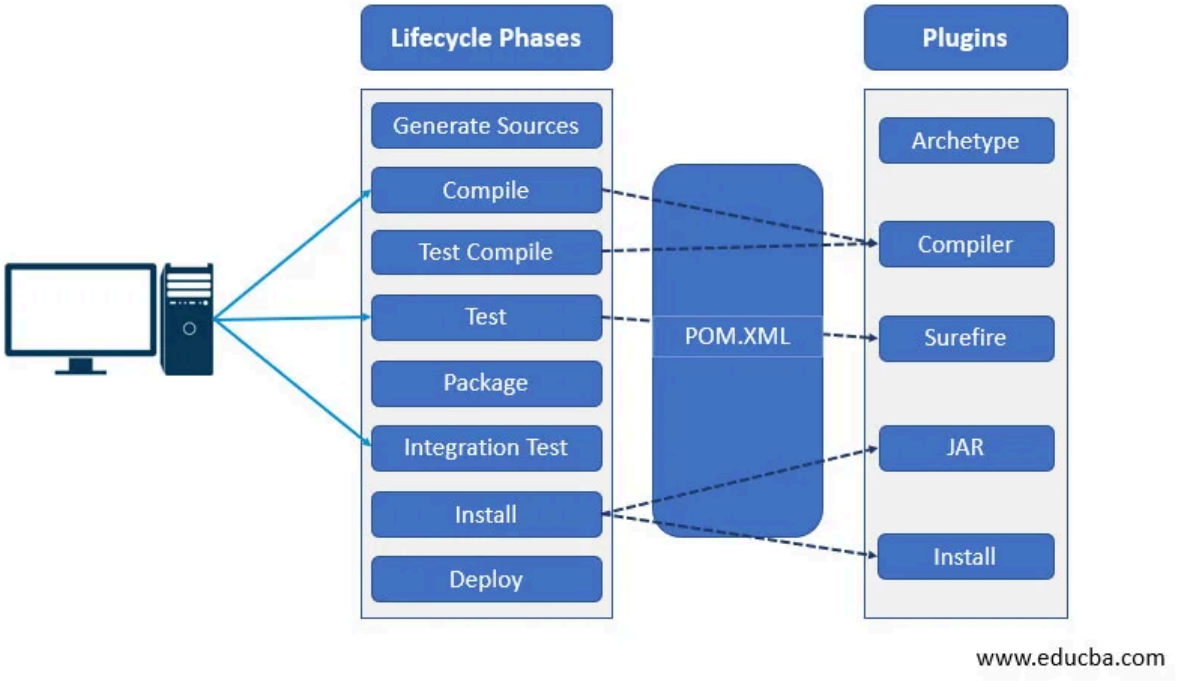
1.What is maven:

Maven is like a project manager for software development. Maven is an open-source build automation and project management tool widely used for Java applications. As a build automation tool, it automates the source code compilation and dependency management.

2.What is maven life cycle:

Maven is built around the concept of a build lifecycle. The default Maven lifecycle consists of 8 major phases:

1. **Validate**
2. **Compile**
3. **Test**
4. **Package**
5. **Integration Test**
6. **Verify**
7. **Install**
8. **Deploy**



2.Setting up a Maven project:

Step 1: Install Java JDK:

first we need to have jdk in our local pc and java servers plays and required environment plays a major role in building the life to our project.

Step 2: Download Maven:

We need to have the maven software in our local pc.

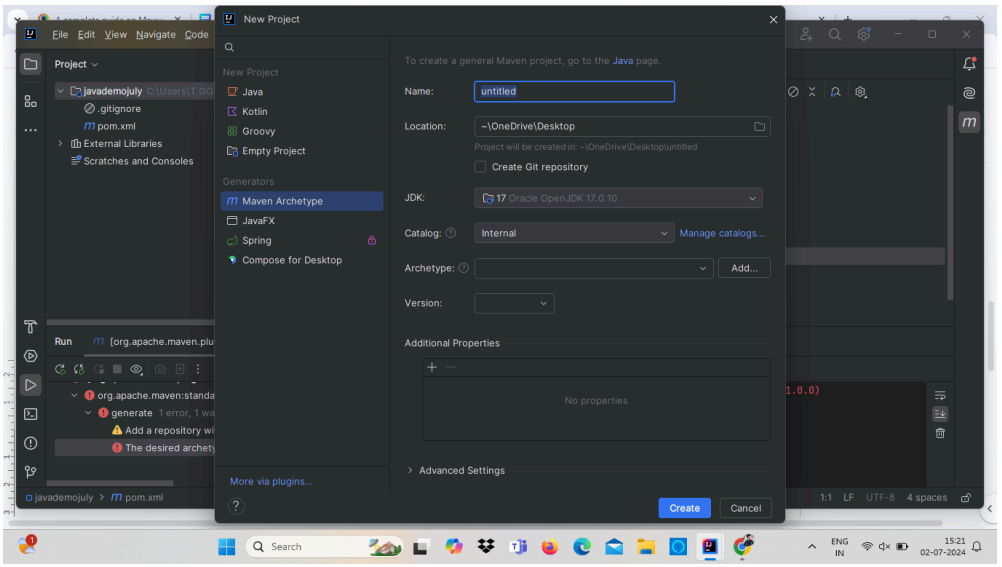
Step 4: Check if Maven is Installed properly:

We need to check weather the maven is installed in our local pc or not.There is a command to check weather the maven is present or not

- **mvn -version**

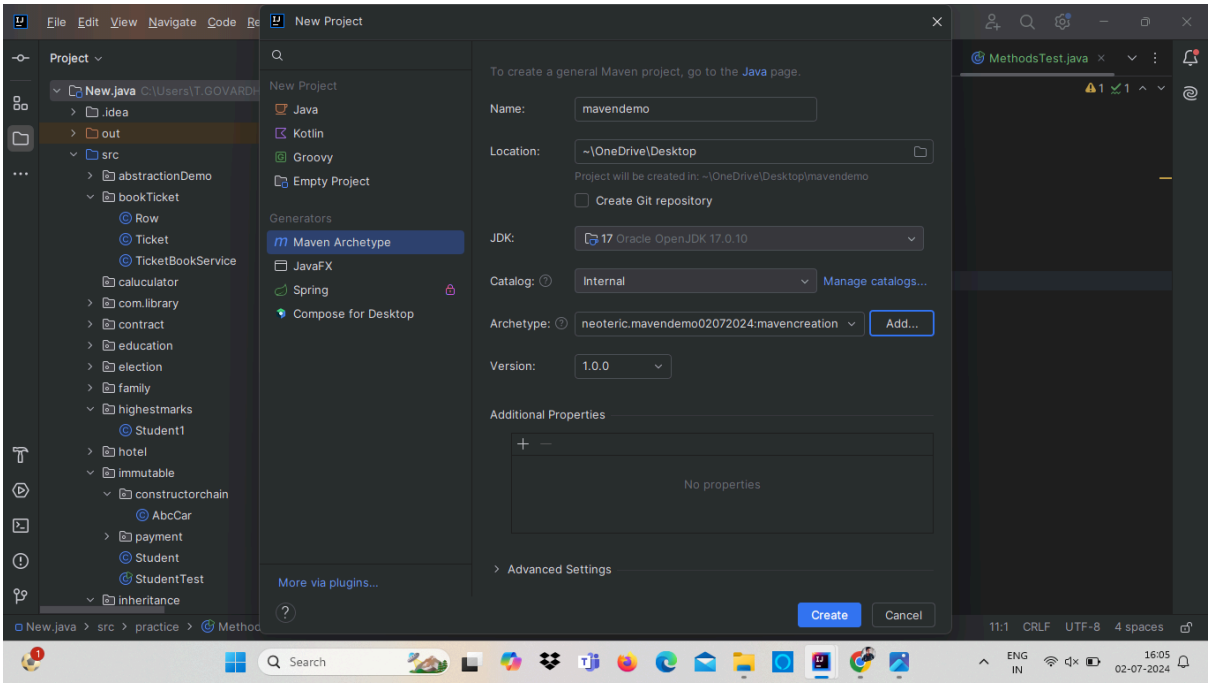
Step 5: Create a new Maven Project:

Open the intellij or any java code editor and click on the **hamburger menu** click on **file** and then click on **New** and next **project**



As appeared in the above, need to follow some steps.

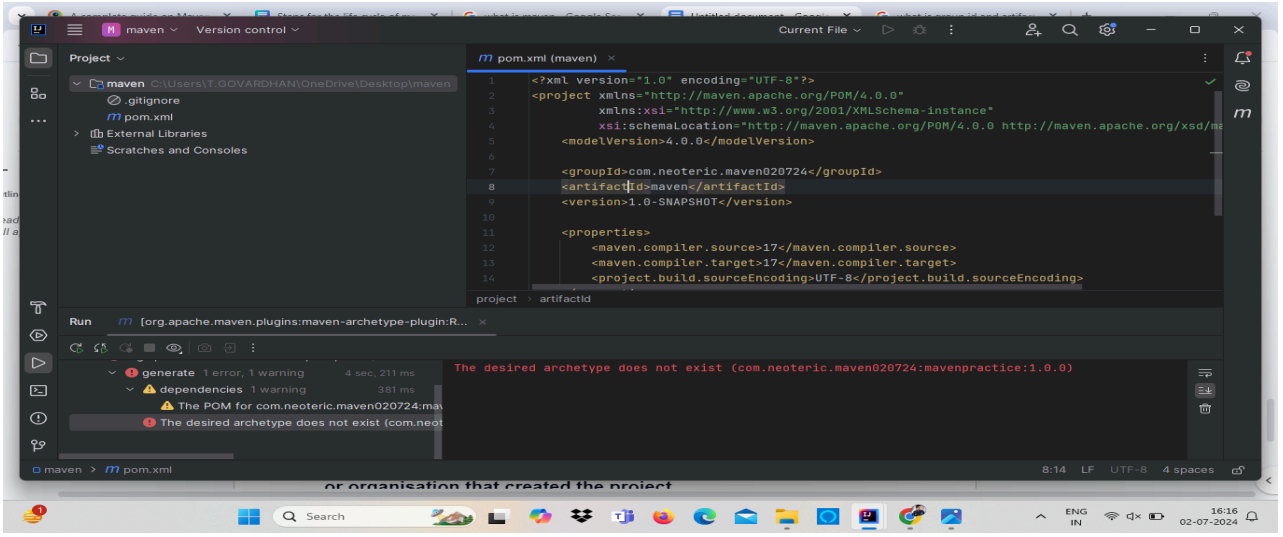
- **Name:** provide the name of the project it should no be untitled because need to identify the project.
- **Location:** This field specifies where the project is stored after that click on the **ArcheType (Add).**



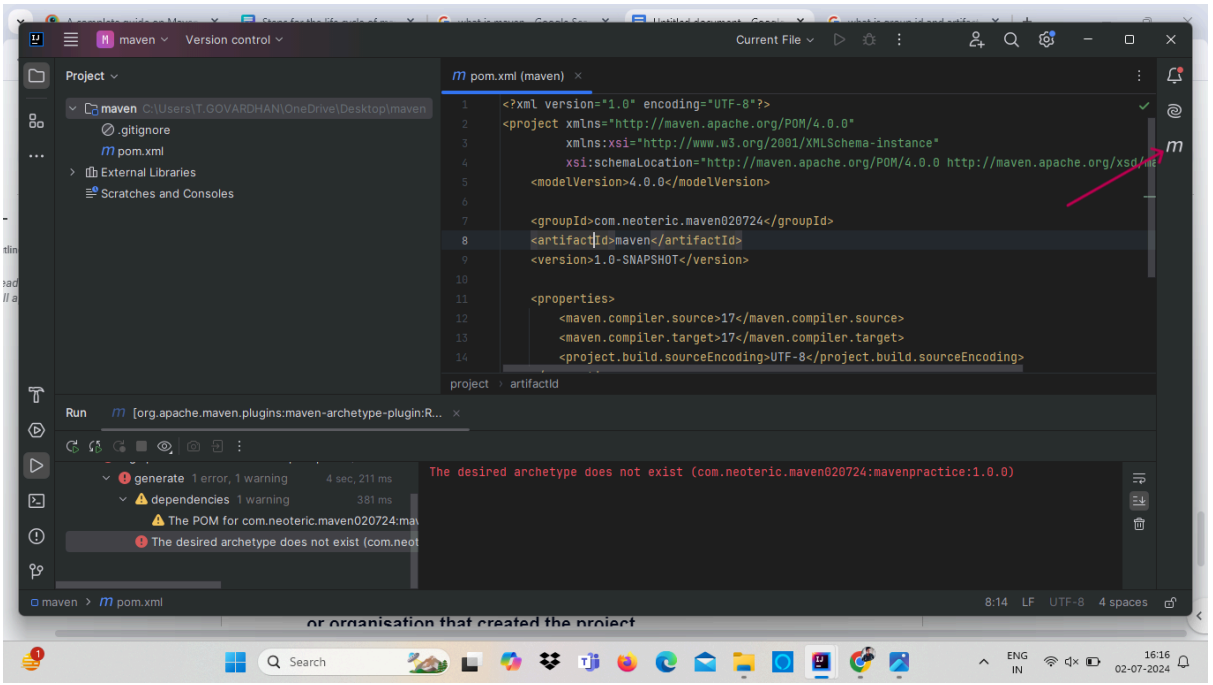
➡️ **GroupId – a unique base name of the company or group or organisation that created the project.**

➡️ **ArtifactId – a unique name of the project.**
➡️ **Version – a version of the project.**

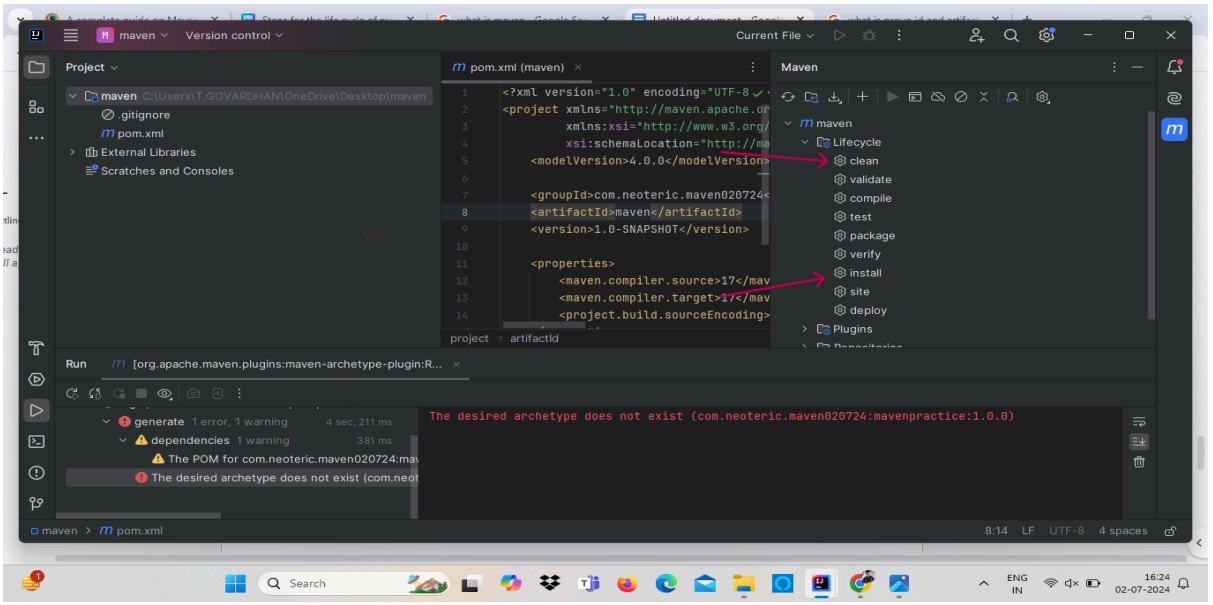
Provide the above fields with proper and click on create. Next it will get into next window as shown below,



Step 6: Click on the **maven** (m) symbol and then expand the **life cycle**



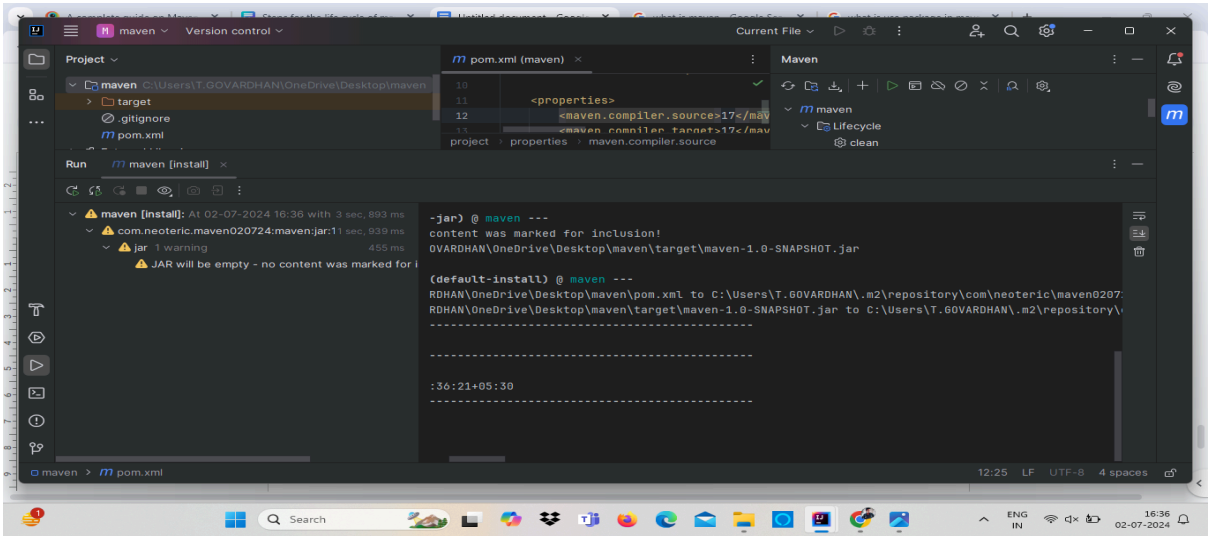
It will show options as below.



Clean: wipes the target folder, so anything that writes to it is "fresh".
Install: builds the project in your target folder and writes it to your .m2 folder. Once the install option is clicked only then the artifacts are generated in our local repository.

Package: specifies the type of artifact the project produces; it happens only in the workspace.

Step 7: click on the clean and install.
So that the path changes are made from the target folder to local repository under .m2 folder.



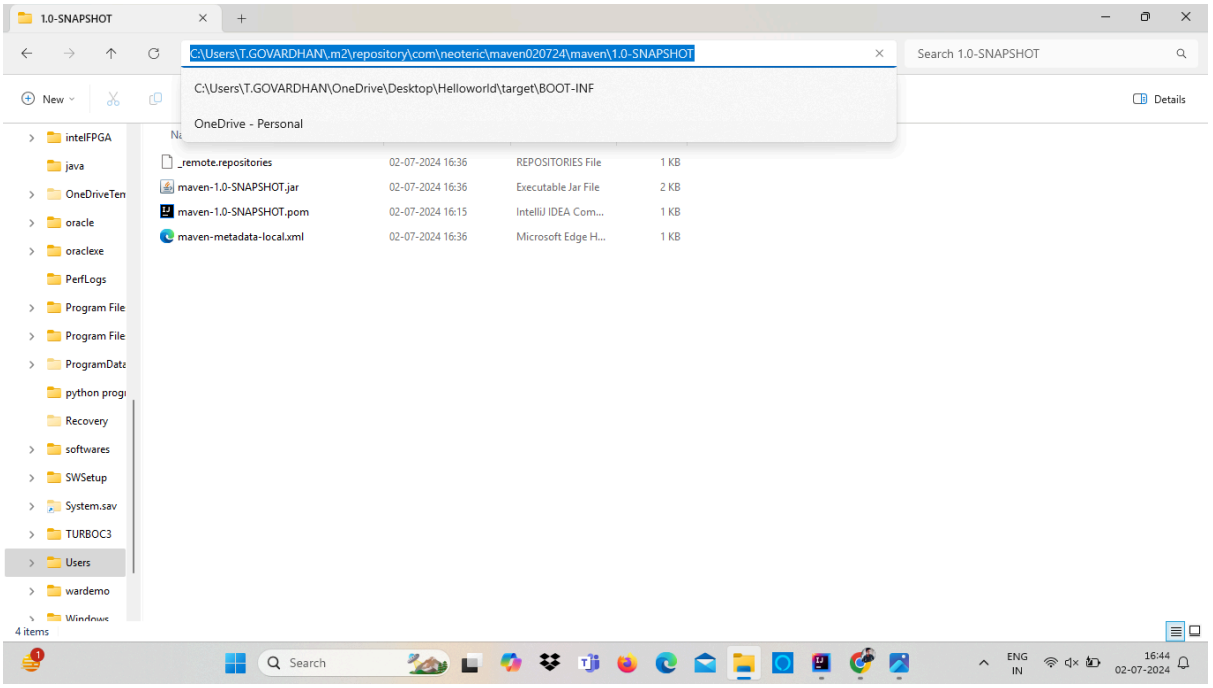
Here we get the information about the target files changes the location to .m2 folder under local repository.

Step 8: Now go the files in pc and click on the users ➡️ .m2 folder ➡️ repository ➡️com folder ➡️neoteric ➡️maven020724 (groupid) ➡️maven (artifactid) ➡️1.0-snapshot(version).

The maven build tool that generates the artifacts called

1 **.jar**
2 **.war**
3 **.ear**

Now finally the .jar files are generated in our local repository.



Deploy: If we created any reusable components. So deploy option allows us to publish the artifacts into the remote repository.