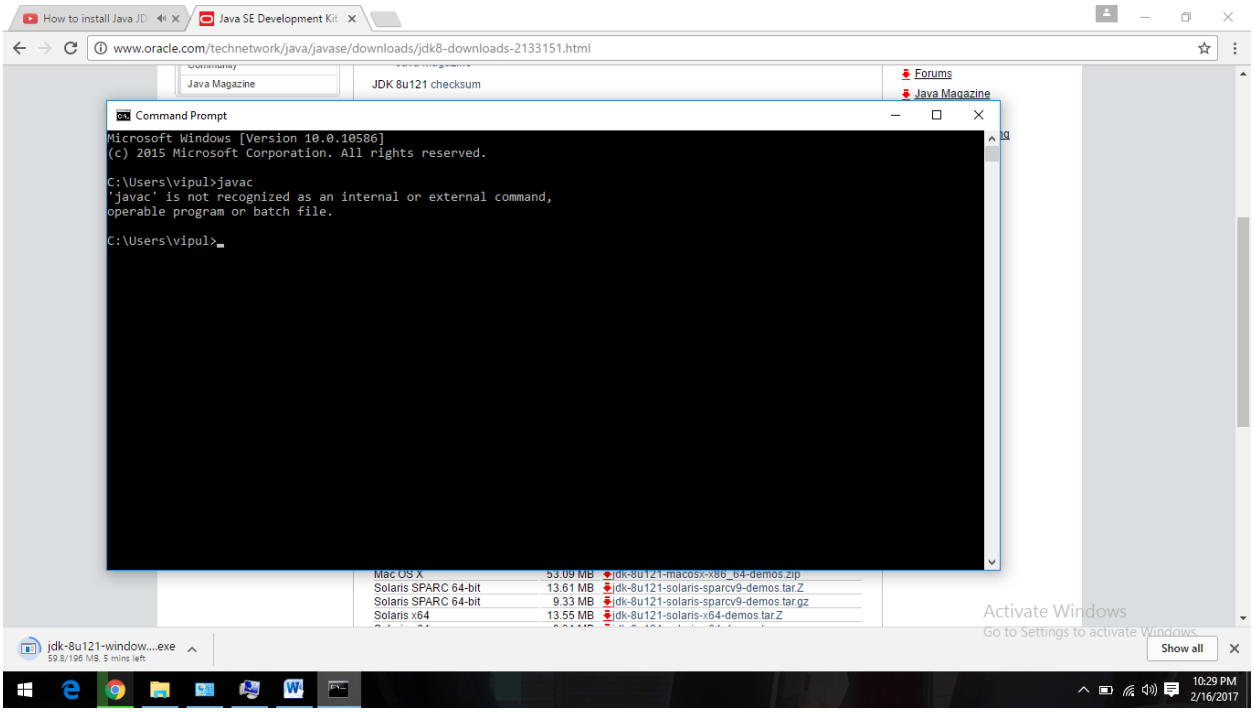
- **To check if Java JDK is installed or not**

  Use command

  Javac



If it says 'javac' is not recognized as an internal or external command this means Java is not installed so get it installed first

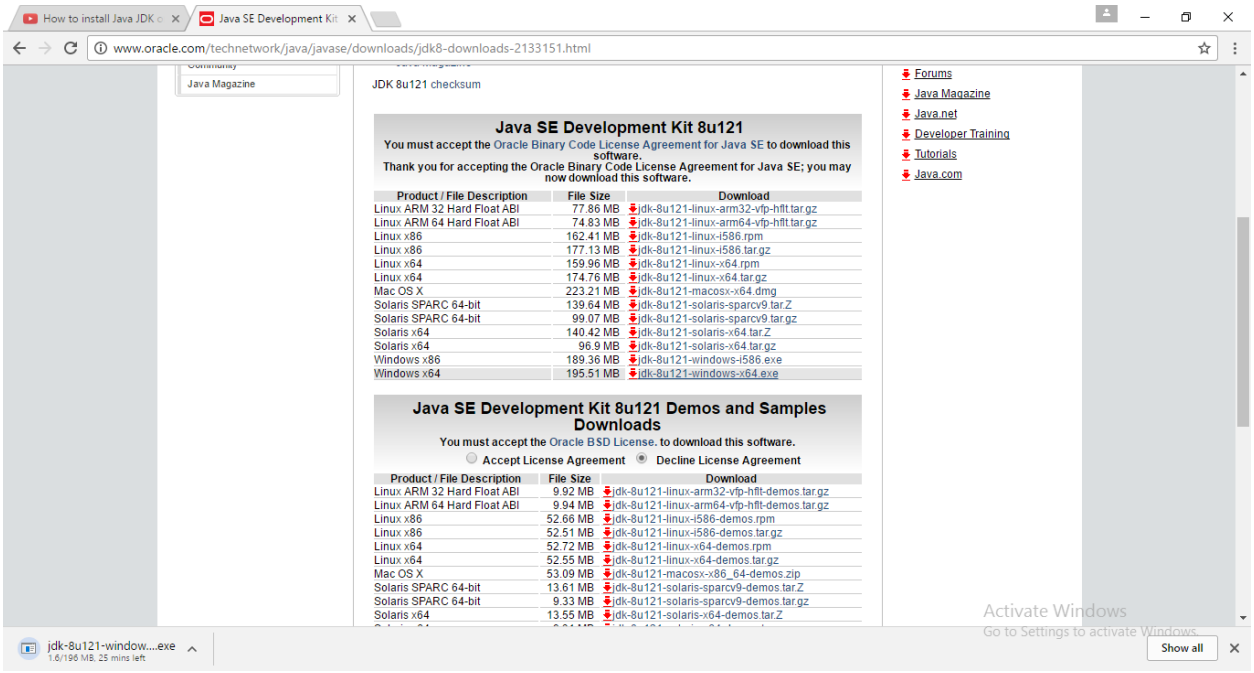
- **JDK installation**

  Search on Google Java JDK

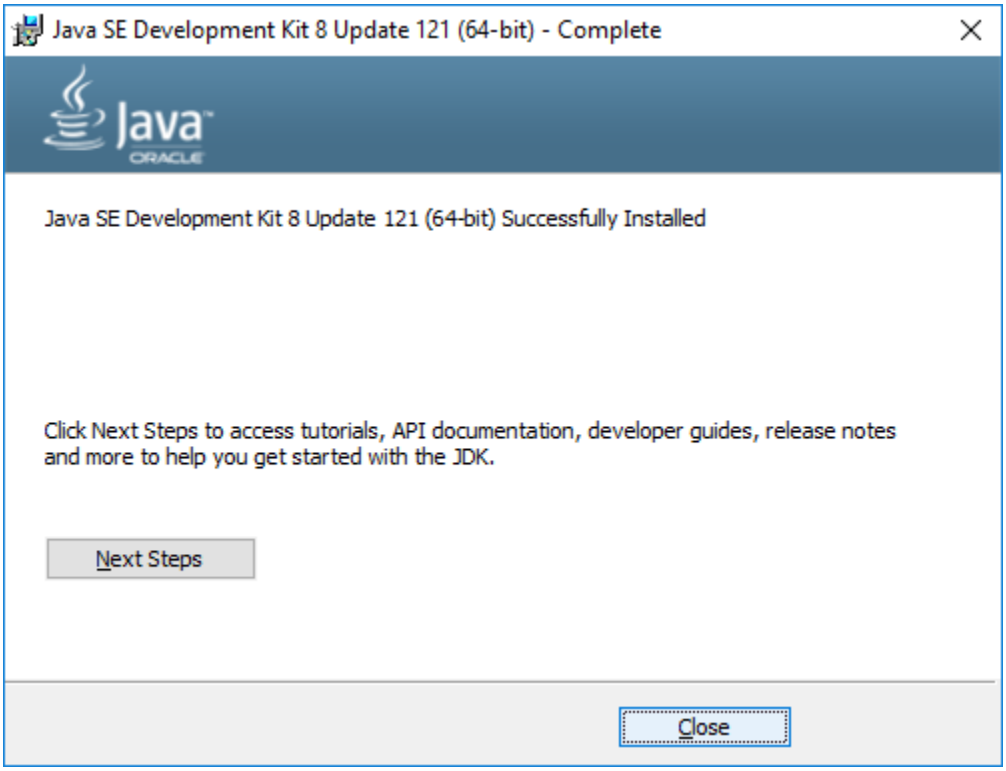
  Select Java Download from http://www.oracle.com/technetwork/java/javase/downloads/index-jsp-138363.html

Accept the License agreement and download appropriate file

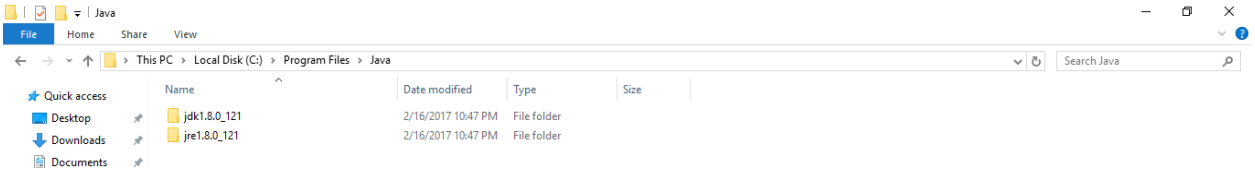
Select appropriate version and download

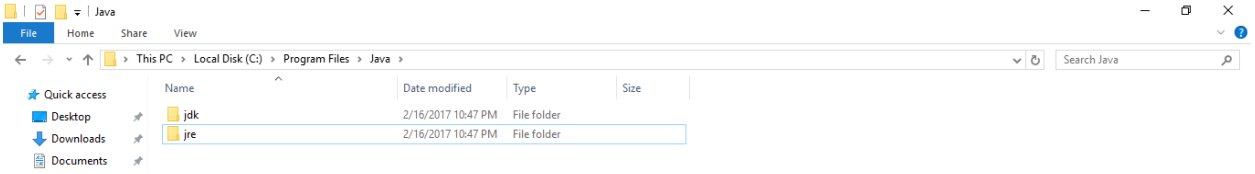


Once download is completed install the same

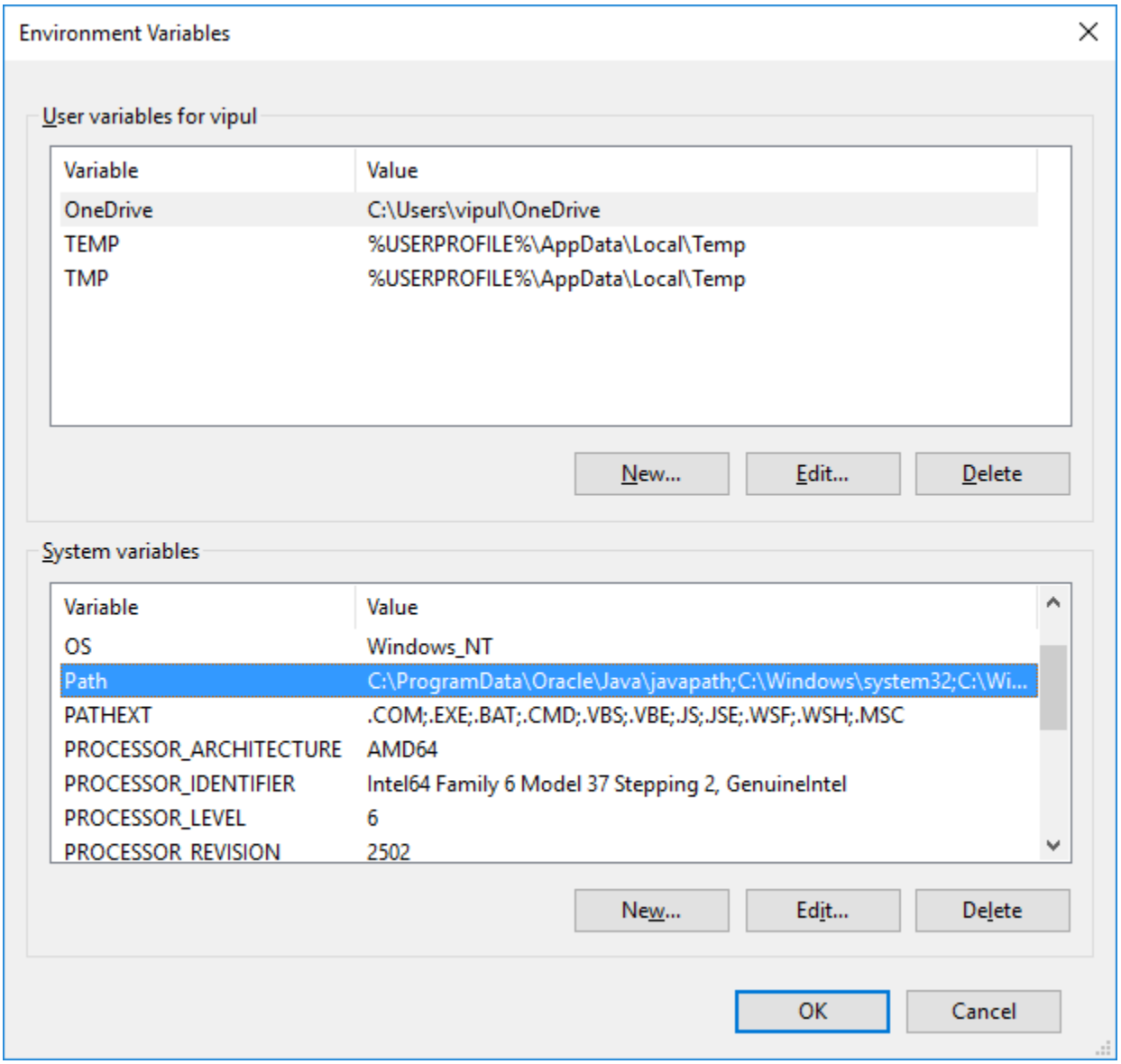


On completion of installation check JDK and JRE folder and rename them with JDK and JRE

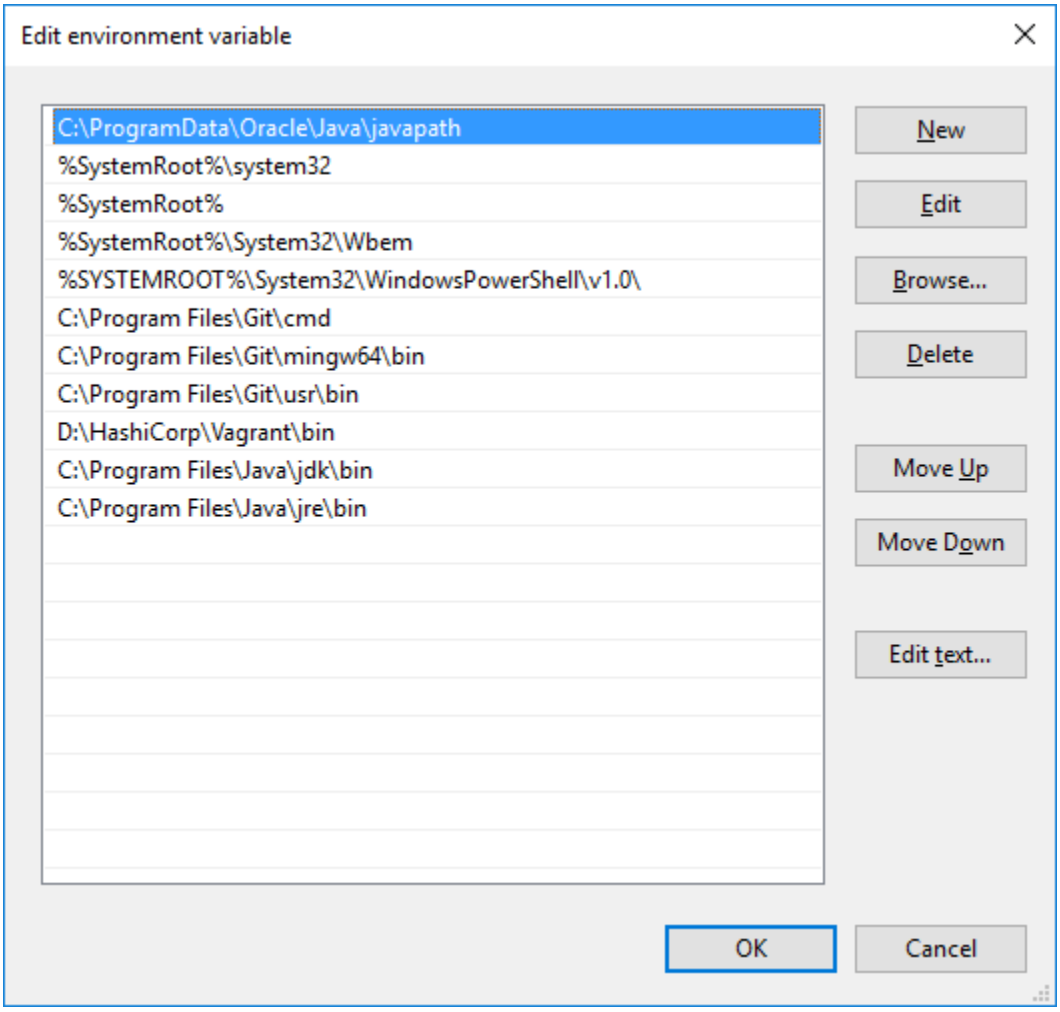




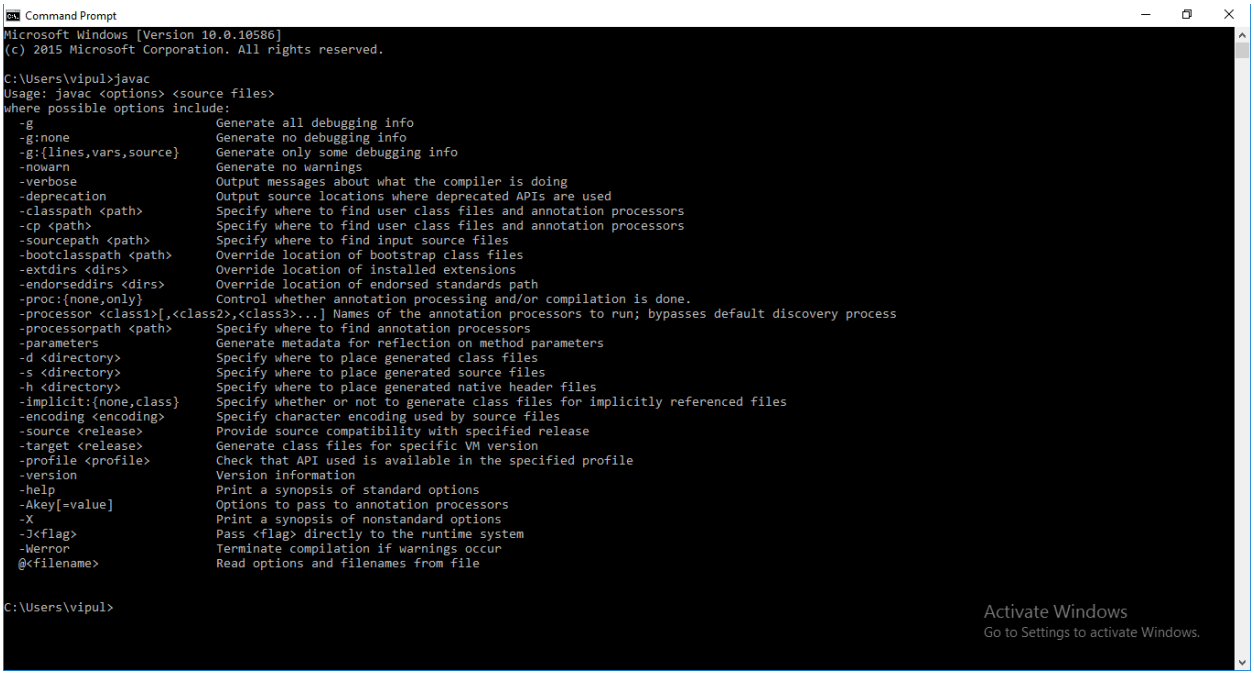
- To set up Environment variable
  Go to Control Panel → System → Advance System Setting → Environmnet variable
  Select Path



Double click on path and add JDK and JRE folder till bin



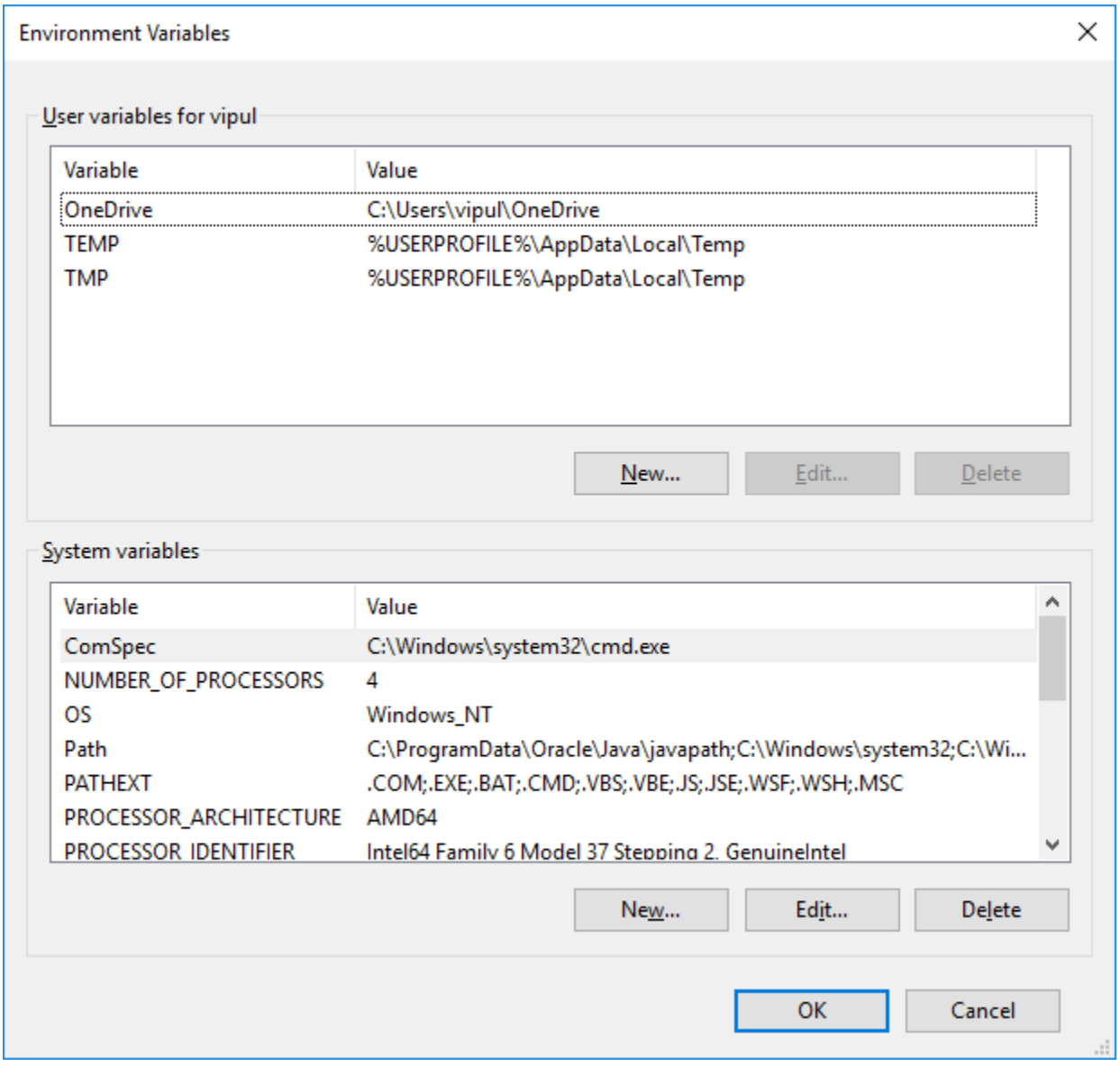
Go to command prompt and provide with command JAVAC to check if java is available



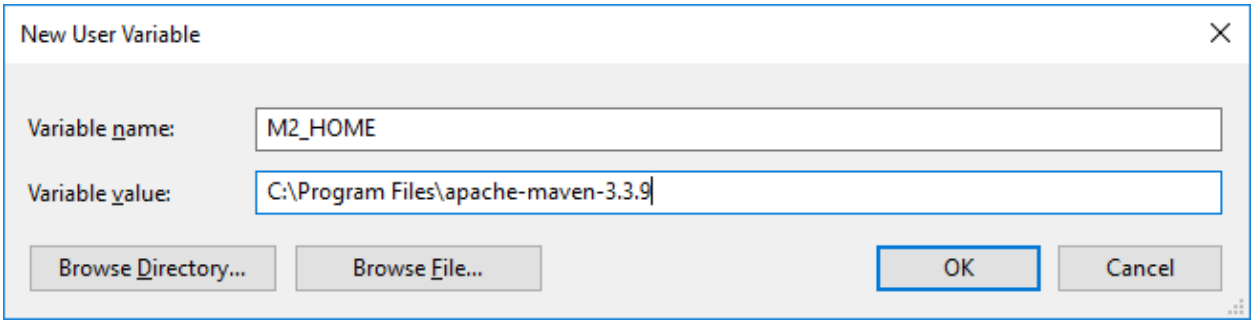
- Maven installation

Get Maven Zip file from internet and download
Extract the same and put is your Desired location in my case this is in **C:\Program Files\apache-maven-3.3.9** here in BIN folder we have maven executable file

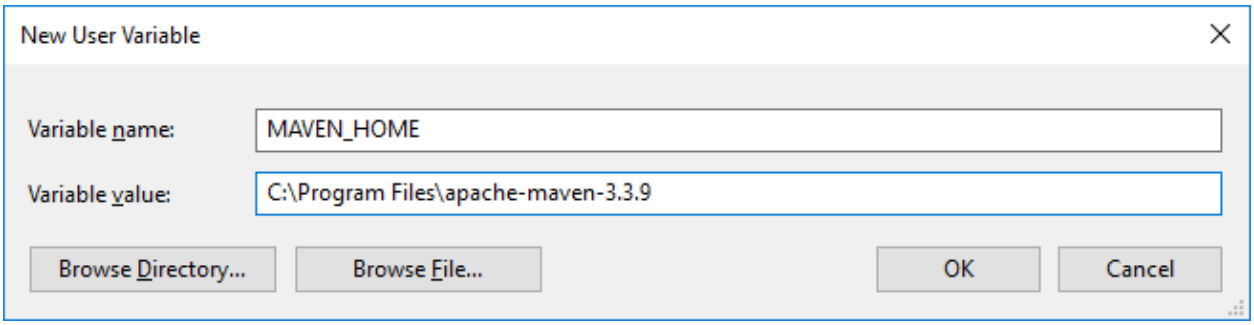
Now Go to Control Panel → System →Advance Setting → Environment variable

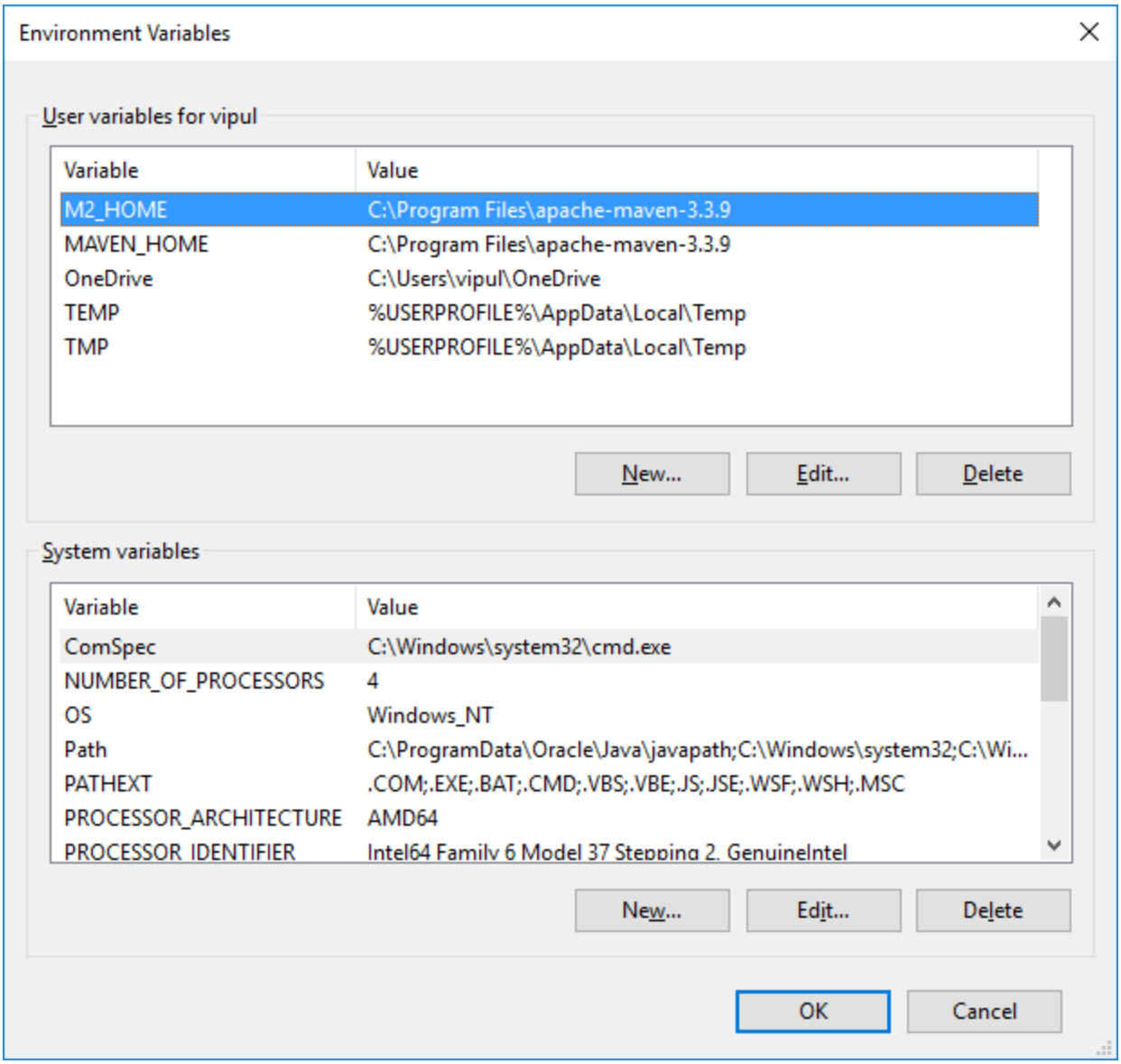


Use Variable and Select New and provide value for Variable name and its value as shown below



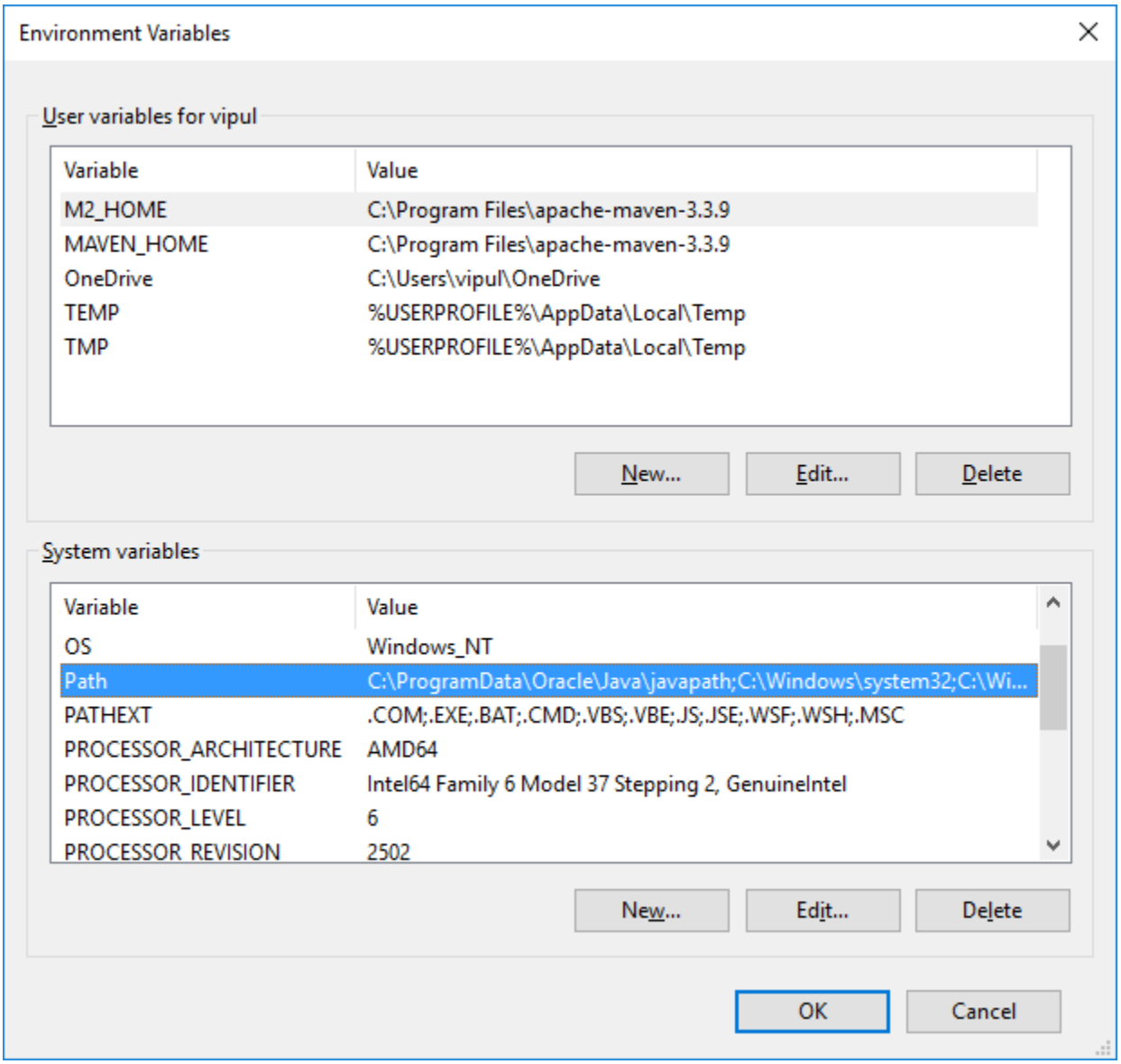
Create one More Variable name and Value for Maven as shown below



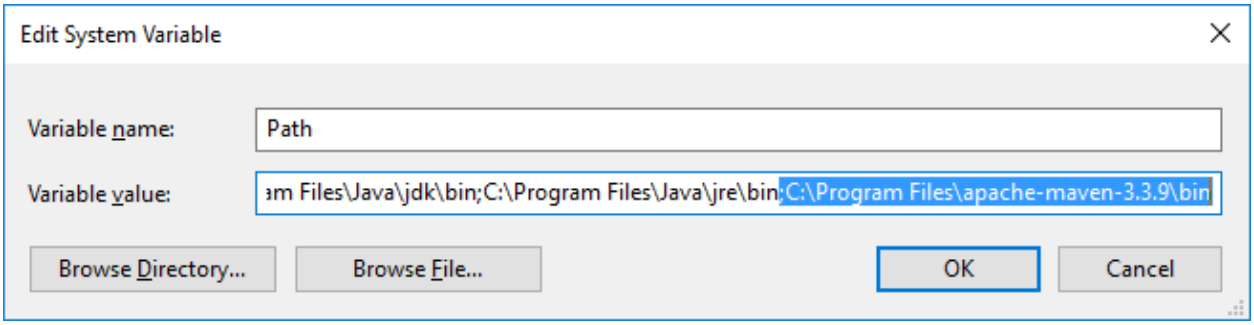


Next step is to take path of Maven Bin folder in my case its **C:\Program Files\apache-maven-3.3.9\bin**

Go to System Variable and select path

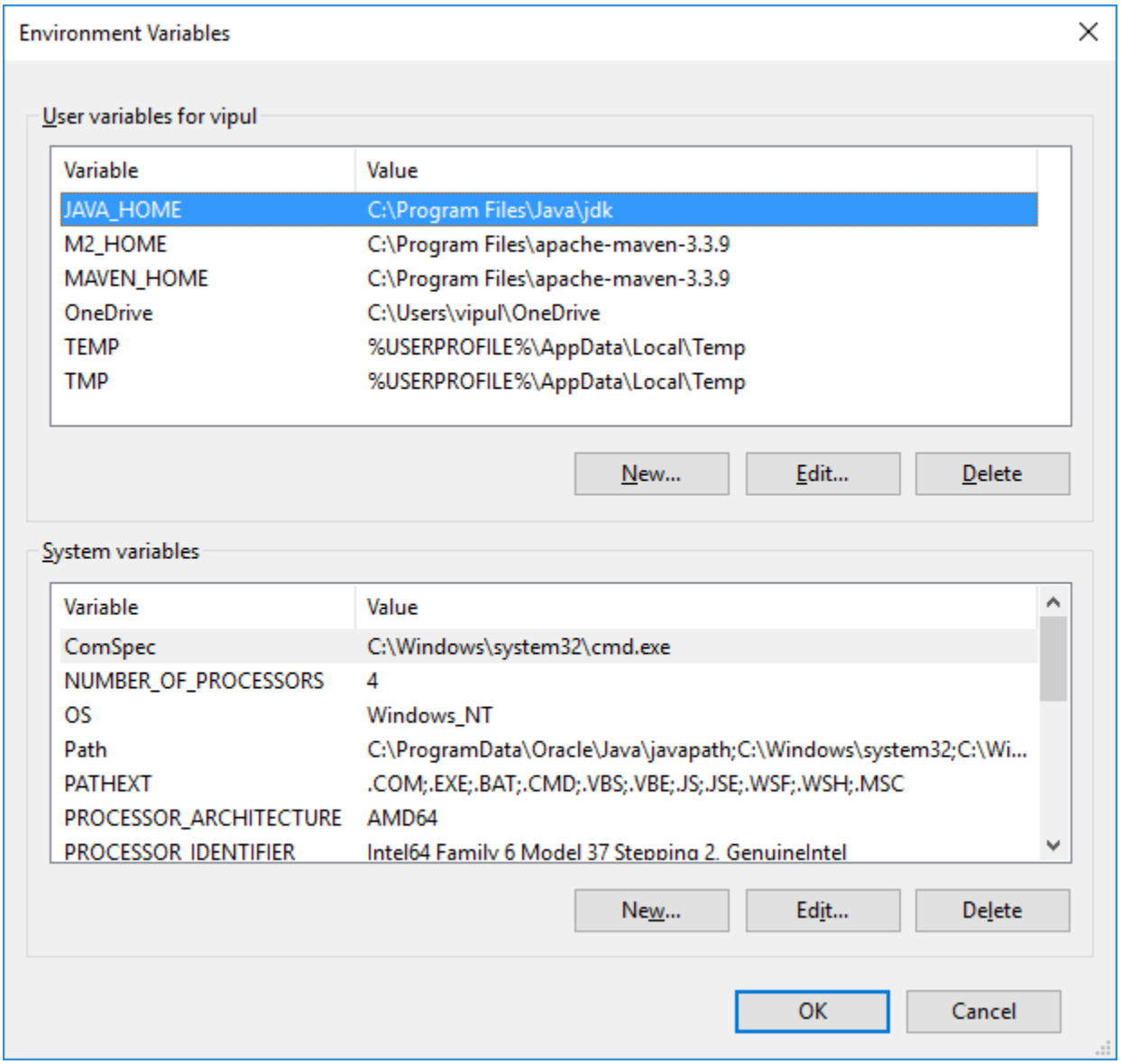


Edit Path appending with ; and Bin path as shown below

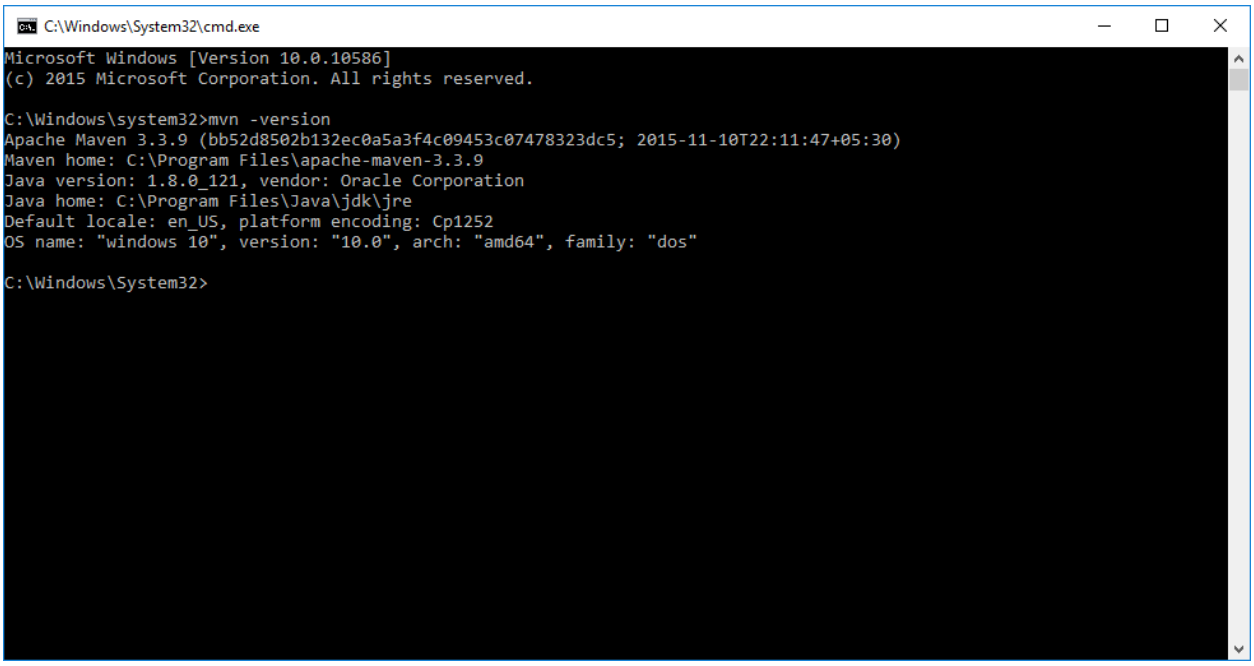


Click Ok and Maven installation is complete

Also Note JAVA_HOME should also be presented in environment variable



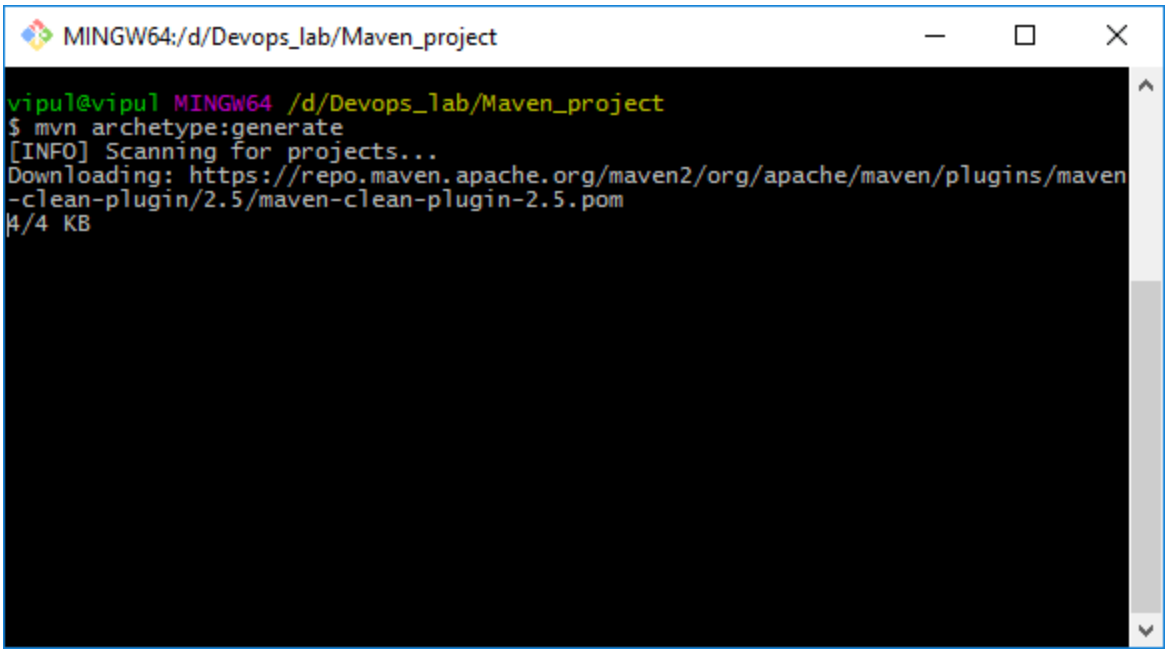
Once this is done reboot the system and give command MVN –VERSION to check if Maven is installed

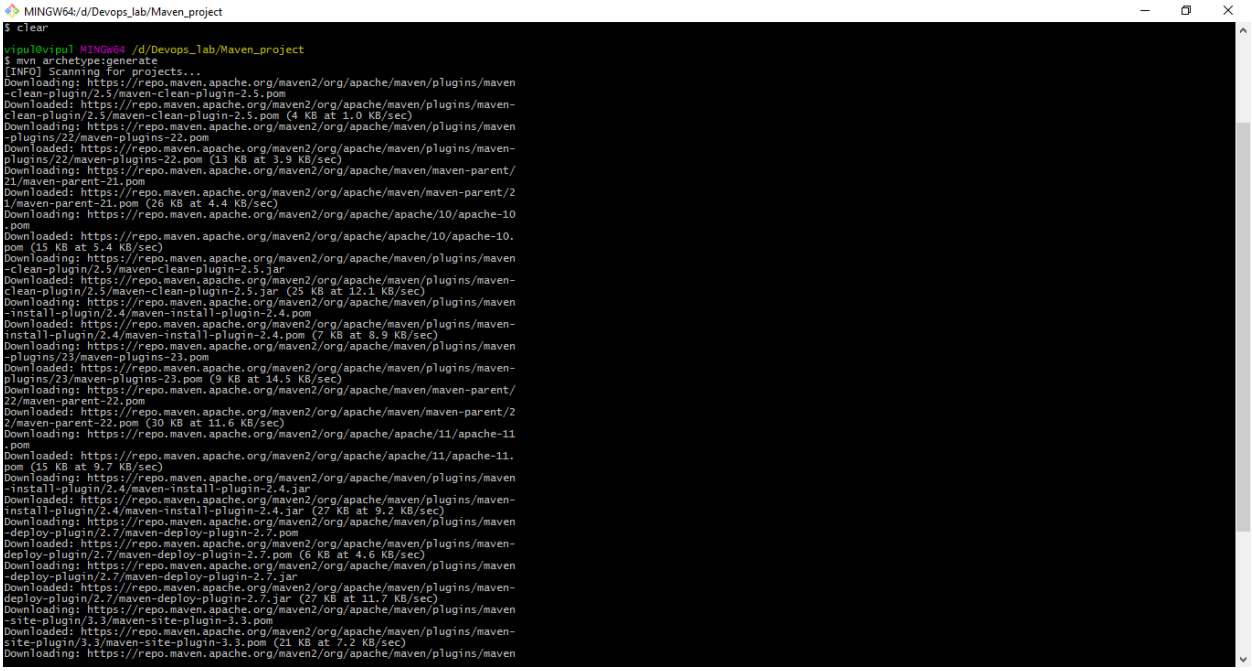


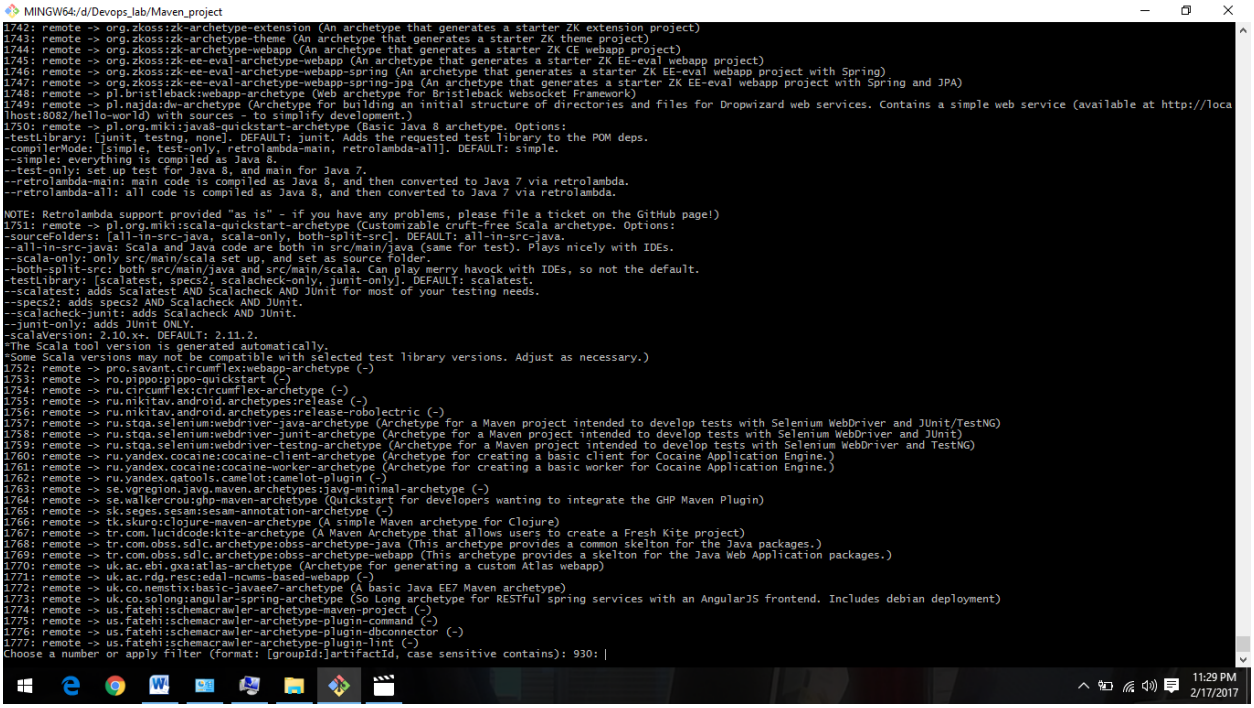
- To create first Maven Project

Create directory where you want to create maven project
In my case **D:\Devops_lab\Maven_project**
Go to command prompt and make sure you are in directory where maven project wanted to be created and give below command this will download the required plugin for first time make sure internet is connected

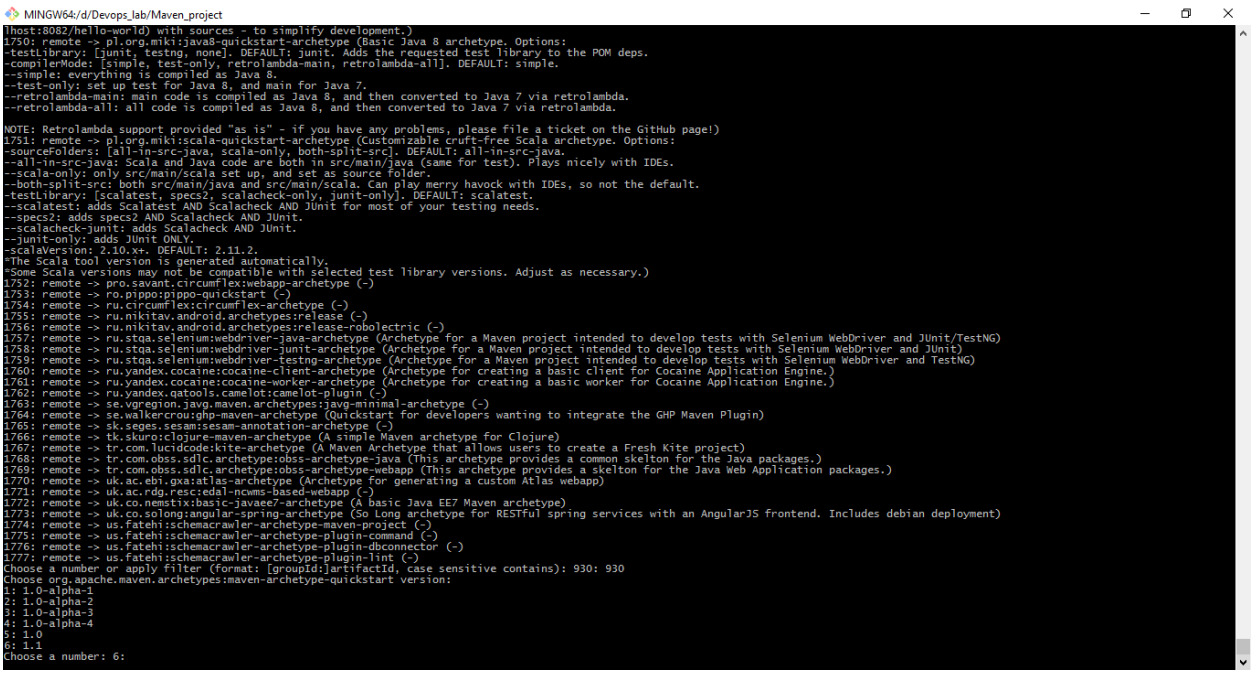
```
archetype:generate
```


MINGW64:/d/Devops_lab/Maven_project
vipul@vipul MINGW64 /d/Devops_lab/Maven_project
$ mvn archetype:generate
[INFO] Scanning for projects...
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven
-clean-plugin/2.5/maven-clean-plugin-2.5.pom
4/4 KB

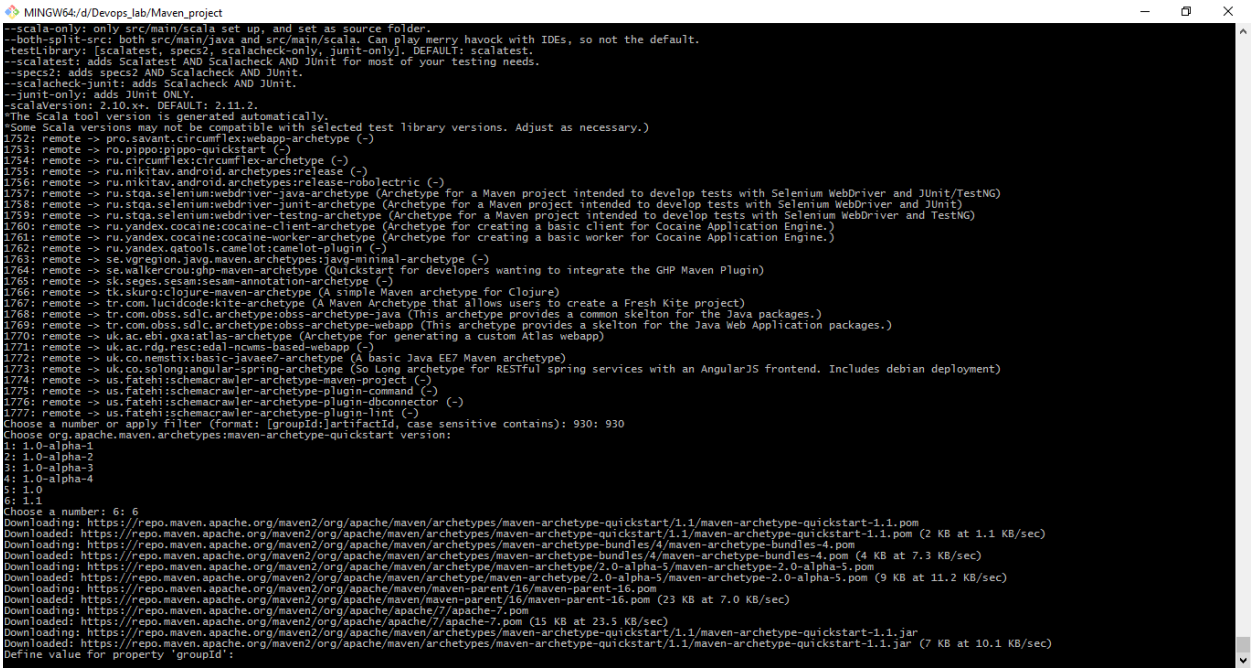

MINGW64:/d/Devops_lab/Maven_project
$ clear
vipul@vipul MINGW64 /d/Devops_lab/Maven_project
$ mvn archetype:generate
[INFO] Scanning for projects...
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven
-clean-plugin/2.5/maven-clean-plugin-2.5.pom
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
clean-plugin/2.5/maven-clean-plugin-2.5.pom (4 KB at 1.0 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven
-plugins/22/maven-plugins-22.pom
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
plugins/22/maven-plugins-22.pom (13 KB at 3.9 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/
21/maven-parent-21.pom
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/2
1/maven-parent-21.pom (26 KB at 4.4 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/apache/10/apache-10
.pom
Downloaded: https://repo.maven.apache.org/maven2/org/apache/apache/10/apache-10.
pom (15 KB at 5.4 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven
-clean-plugin/2.5/maven-clean-plugin-2.5.jar
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
clean-plugin/2.5/maven-clean-plugin-2.5.jar (25 KB at 12.1 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven
-install-plugin/2.4/maven-install-plugin-2.4.pom
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
install-plugin/2.4/maven-install-plugin-2.4.pom (7 KB at 8.9 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven
-plugins/23/maven-plugins-23.pom
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
plugins/23/maven-plugins-23.pom (9 KB at 14.5 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/
22/maven-parent-22.pom
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/2
2/maven-parent-22.pom (30 KB at 11.6 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/apache/11/apache-11
.pom
Downloaded: https://repo.maven.apache.org/maven2/org/apache/apache/11/apache-11.
pom (15 KB at 9.7 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven
-install-plugin/2.4/maven-install-plugin-2.4.jar
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
install-plugin/2.4/maven-install-plugin-2.4.jar (27 KB at 9.2 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven
-deploy-plugin/2.7/maven-deploy-plugin-2.7.pom
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
deploy-plugin/2.7/maven-deploy-plugin-2.7.pom (6 KB at 4.6 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven
-deploy-plugin/2.7/maven-deploy-plugin-2.7.jar
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
deploy-plugin/2.7/maven-deploy-plugin-2.7.jar (27 KB at 11.7 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven
-site-plugin/3.3/maven-site-plugin-3.3.pom
Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-
site-plugin/3.3/maven-site-plugin-3.3.pom (21 KB at 7.2 KB/sec)
Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven



Number defines the **archetype ID** which is template that you can select By default it select one number which is sample maven project this number varies. use number that you want to select if you leave blank and enter it will select default one



Next step is it will provide you with 6 options this are the **archetype version** select the one you want we will select here option 6 which is latest version



Next step is to define **Group ID** website of organization is provided in reverse **com.cts ,**

After this we will be ask for **artifact ID** which is project name **MY_maven_project**

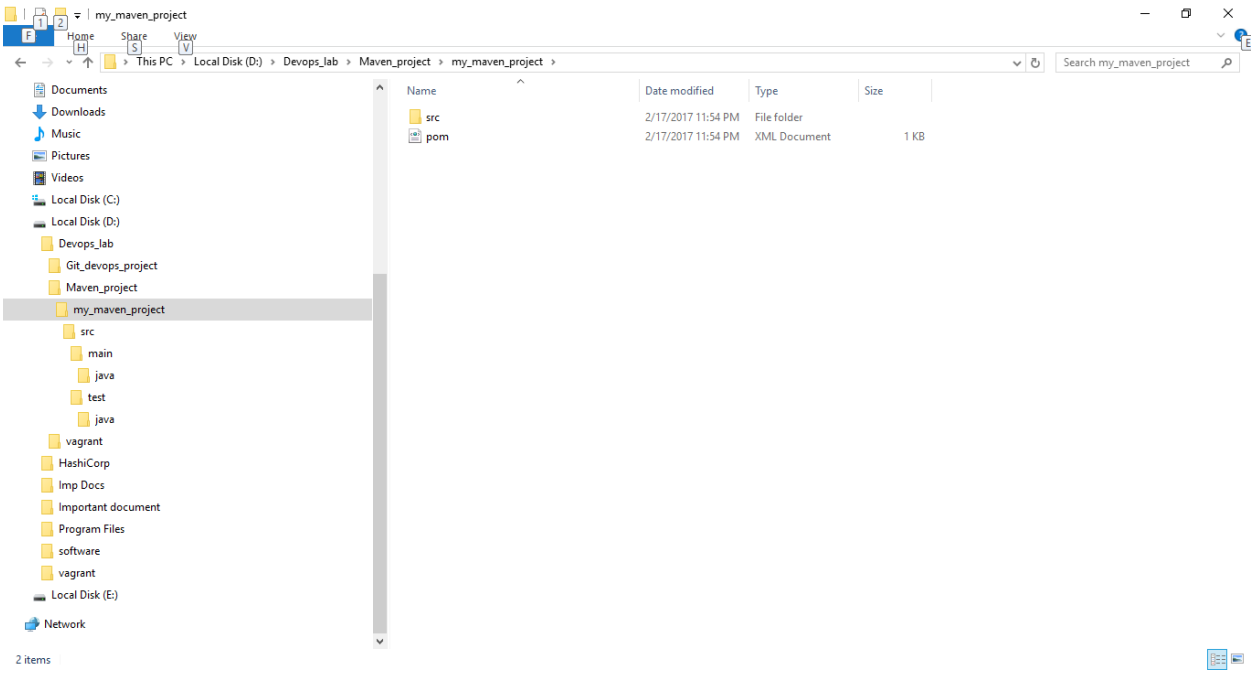
Now you will ask for **version** we will give same that is displayed **1.0-SNAPSHOT ,** snapshot refers to development region

Now we will ask for **Package** we will use same and suffix demo since our project will be created in demo folder

Post this Maven will ask to confirm what all information you have provided

Confirm this by typing Y which will create your maven folder structure and will show if this is success

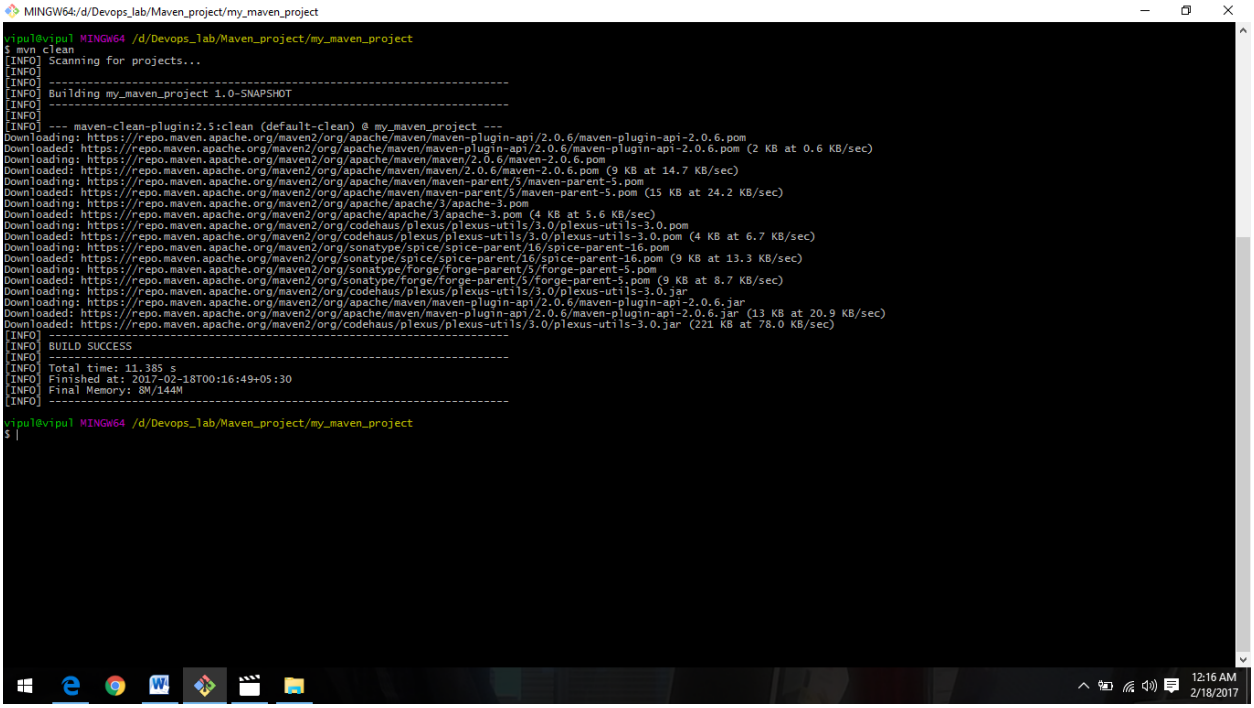
You can go to windows explorer and could see folder structure is created SRC,POM.XML,test and so on



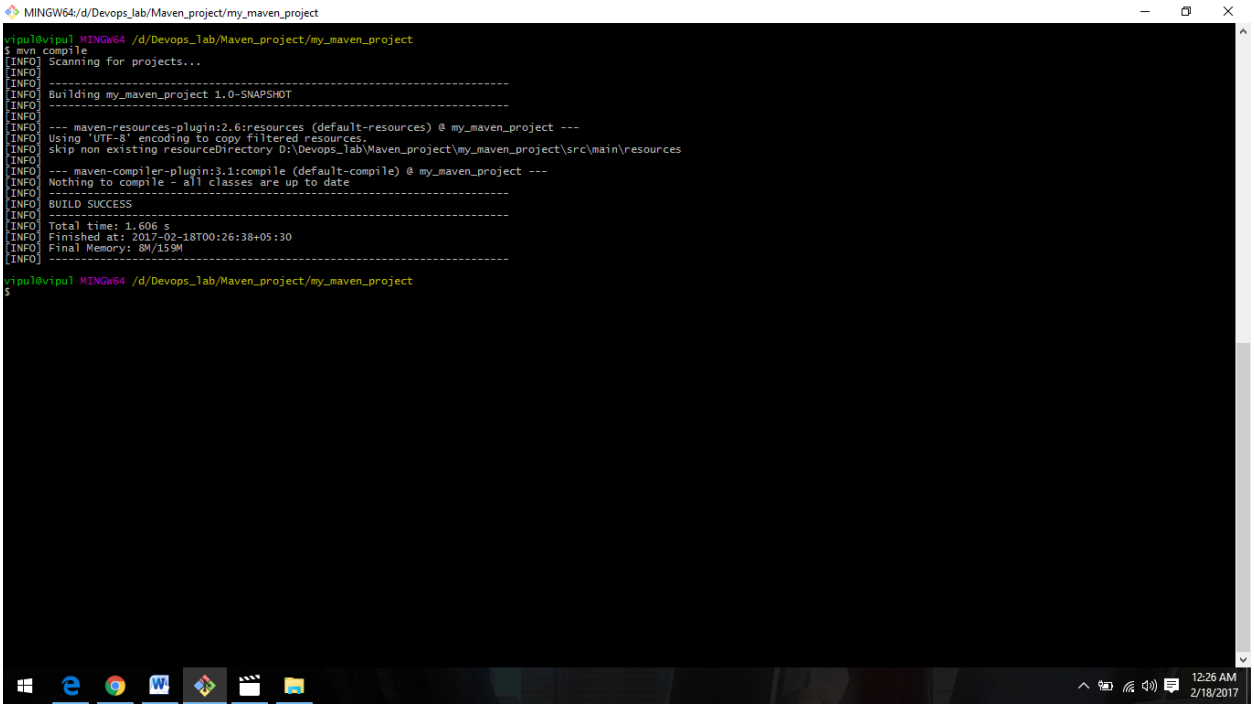
- To Clean,Complile,Run and Jar file creation

Go to maven project directory

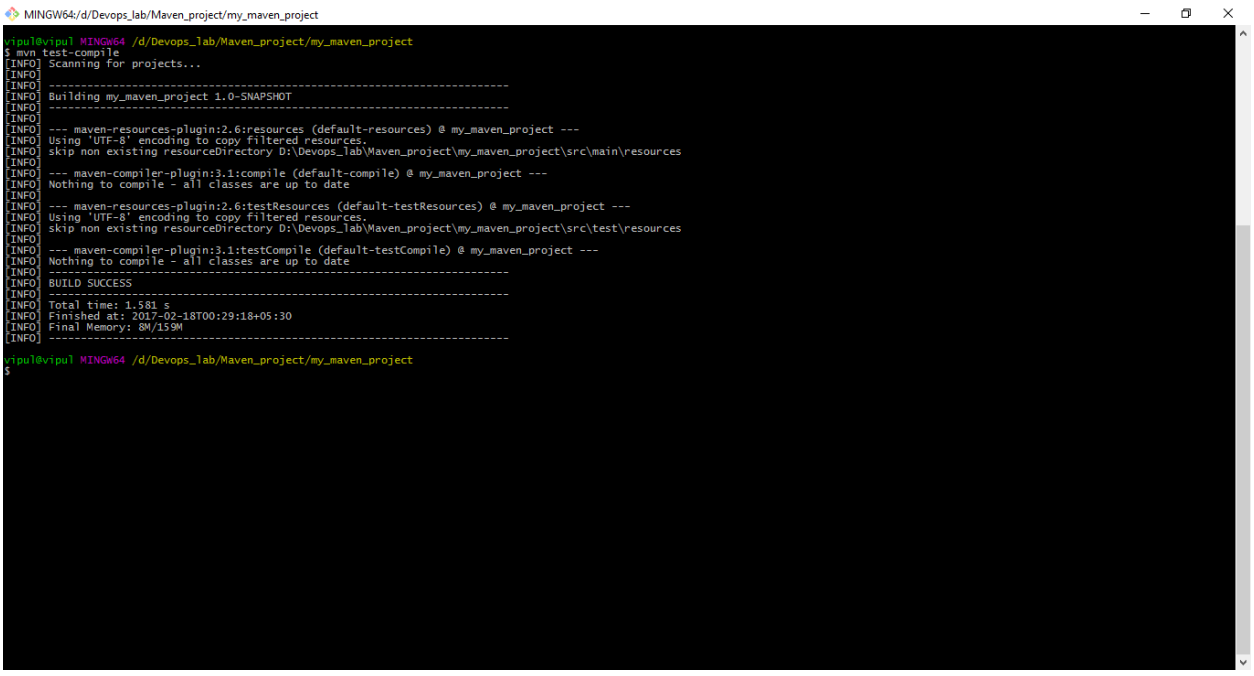
1) MVN CLEAN -is used to clean the project



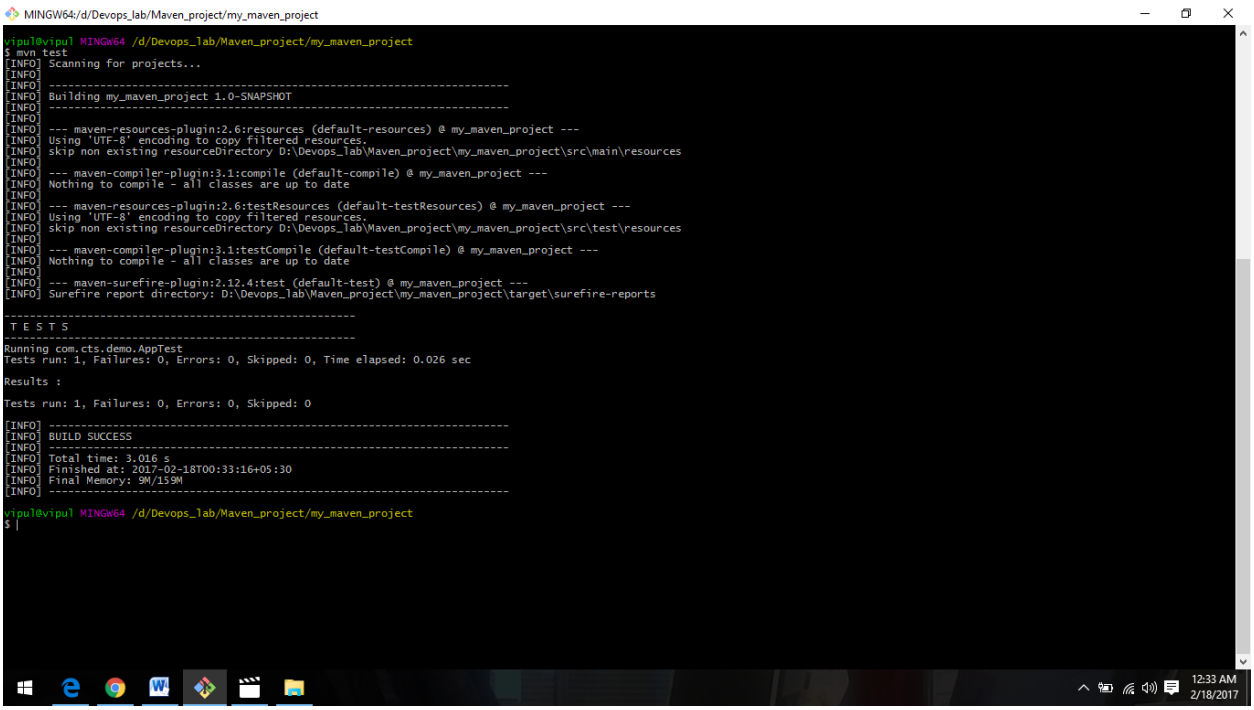
2) MVN compile to compile all source file of project if this fails run MVN install and then run compile



3) MVN TEST-COMPILE to compile your test



4) MVN TEST to run test



5) MVN install - run and create Jar file