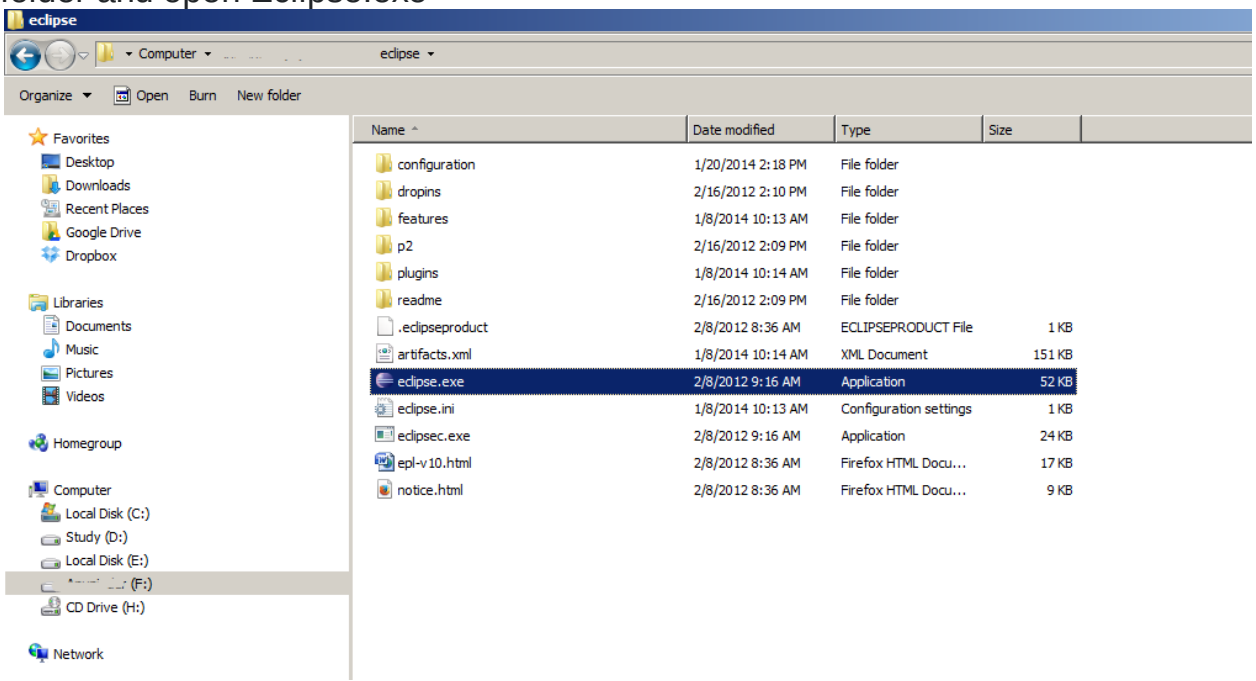
EXPERIMENT -5

Now before you start to setup CloudSim, following resources must be Installed/downloaded on the local system

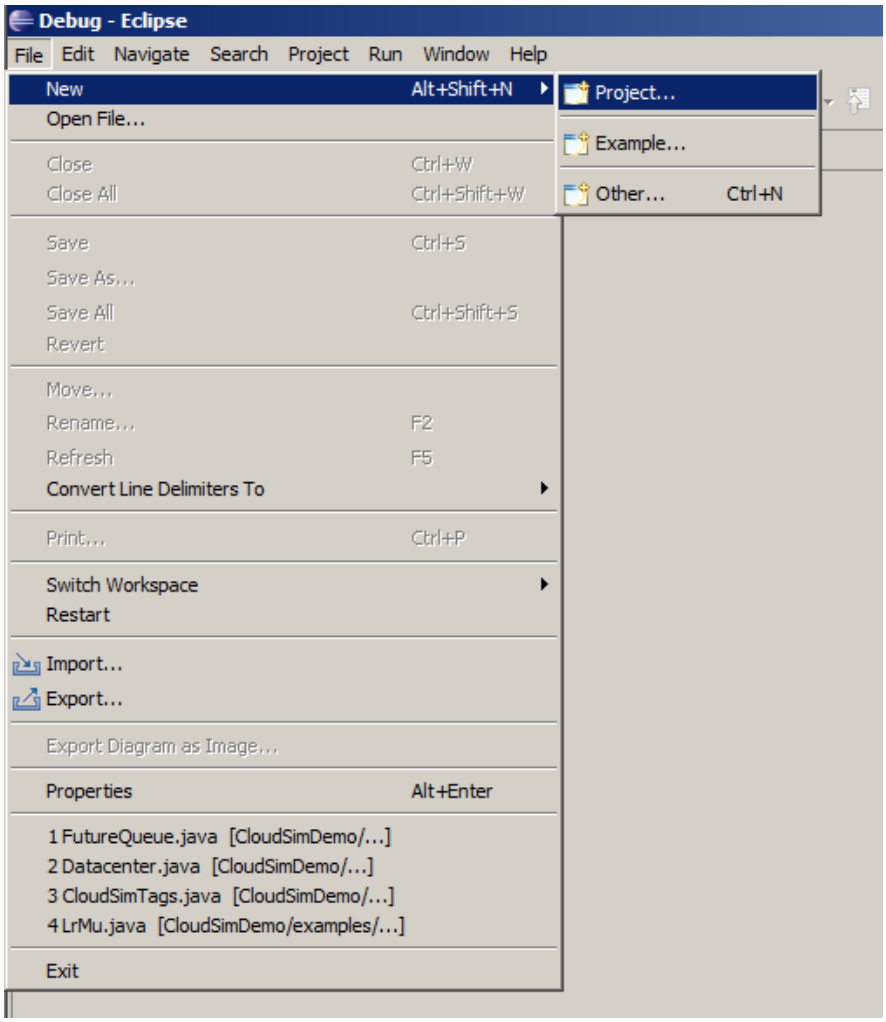
- **Java Development Kit(JDK):** As the Cloudsim simulation toolkit is a class library written in the Java programming language, therefore, the latest version of Java(JDK) should be installed on your machine, which can be downloaded from Oracles Java portal. For assistance in the installation process, detailed documentation is provided by Oracle itself and you may follow the installation instructions
- **Eclipse IDE for Java developers:** As per your current installed operating system(Linux/Windows). Before you download to make sure to check if 32-bit or 64-bit version is applicable to your Computer machine. Link for **Eclipse Kepler** version is available at the following link
- **Download CloudSim source code**: To date, various versions of CloudSim are released the latest version is 5.0, which is based on a container-based engine. Whereas to **keep the setup simple for beginners we will be setting up the most used version i.e. 3.0.3**, which can be directly downloaded by clicking on any of the following: Click for Windows or click for Linux.
- **One external requirement of Cloudsim** i.e. common jar package of math-related functions is to be downloaded from the Apache website or you may directly download by clicking here.
- Unzip **Eclipse**, **Cloudsim** and **Common Math libraries** to some common folder.

"How to install Cloudsim?"

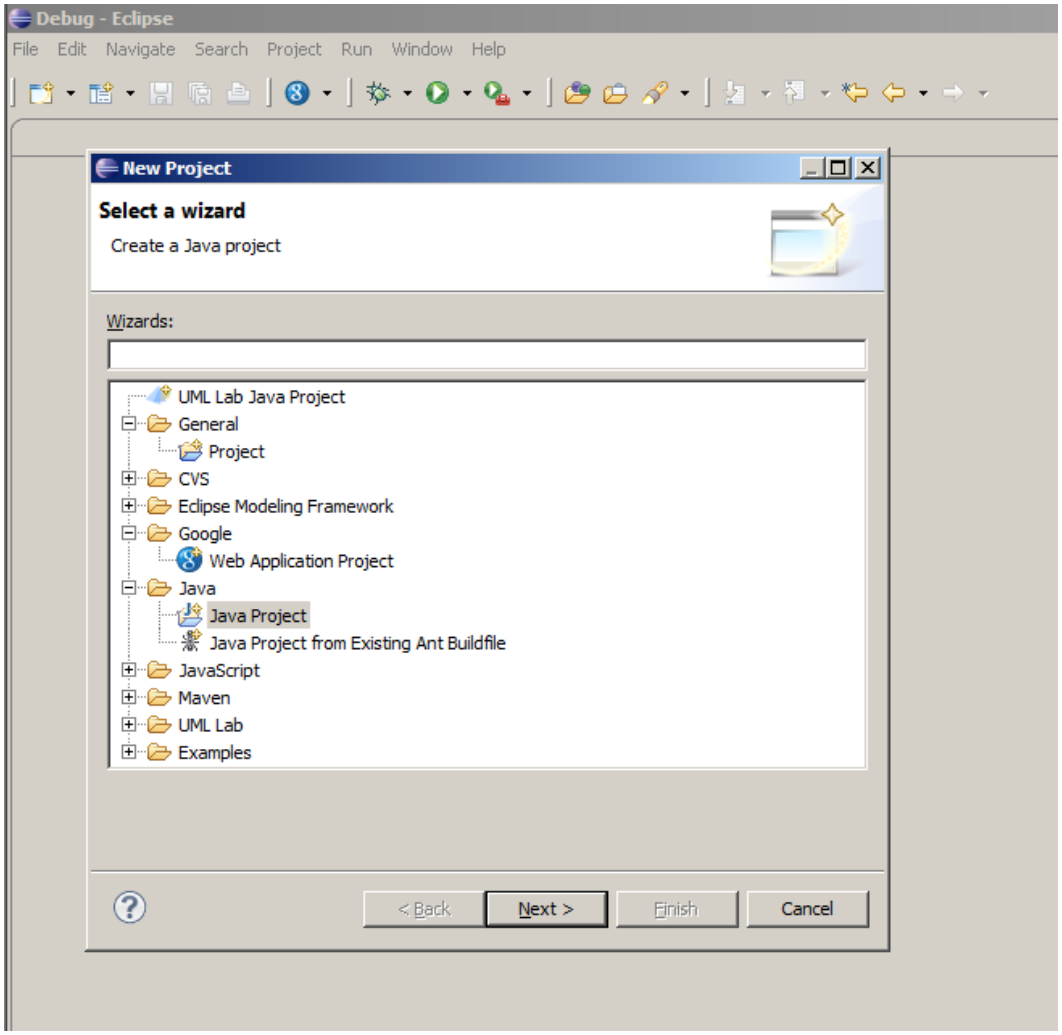
1. First of all, navigate to the folder where you have unzipped the eclipse folder and open Eclipse.exe



2. Now within Eclipse window navigate the menu: ***File -> New -> Project,*** to open the new project wizard

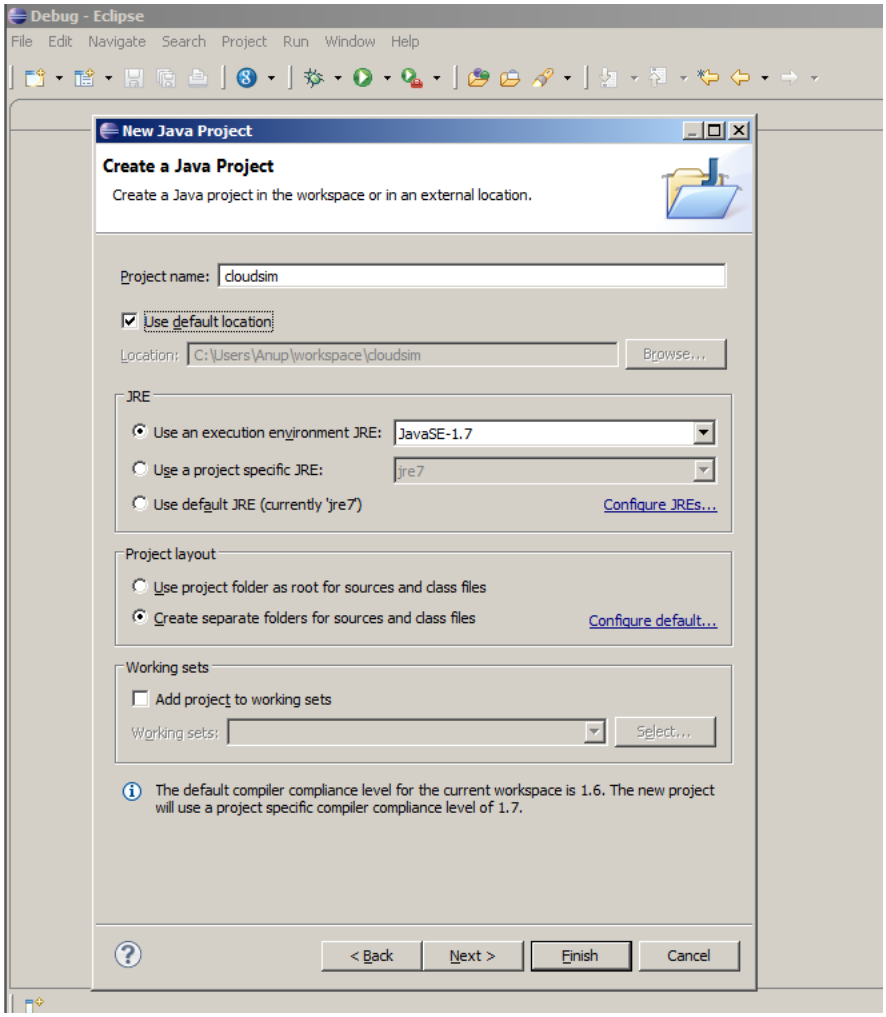


3. A '***New Project***' wizard should open. There are a number of options displayed and you have to find & select the '***Java Project***' option, once done click ***'Next'***

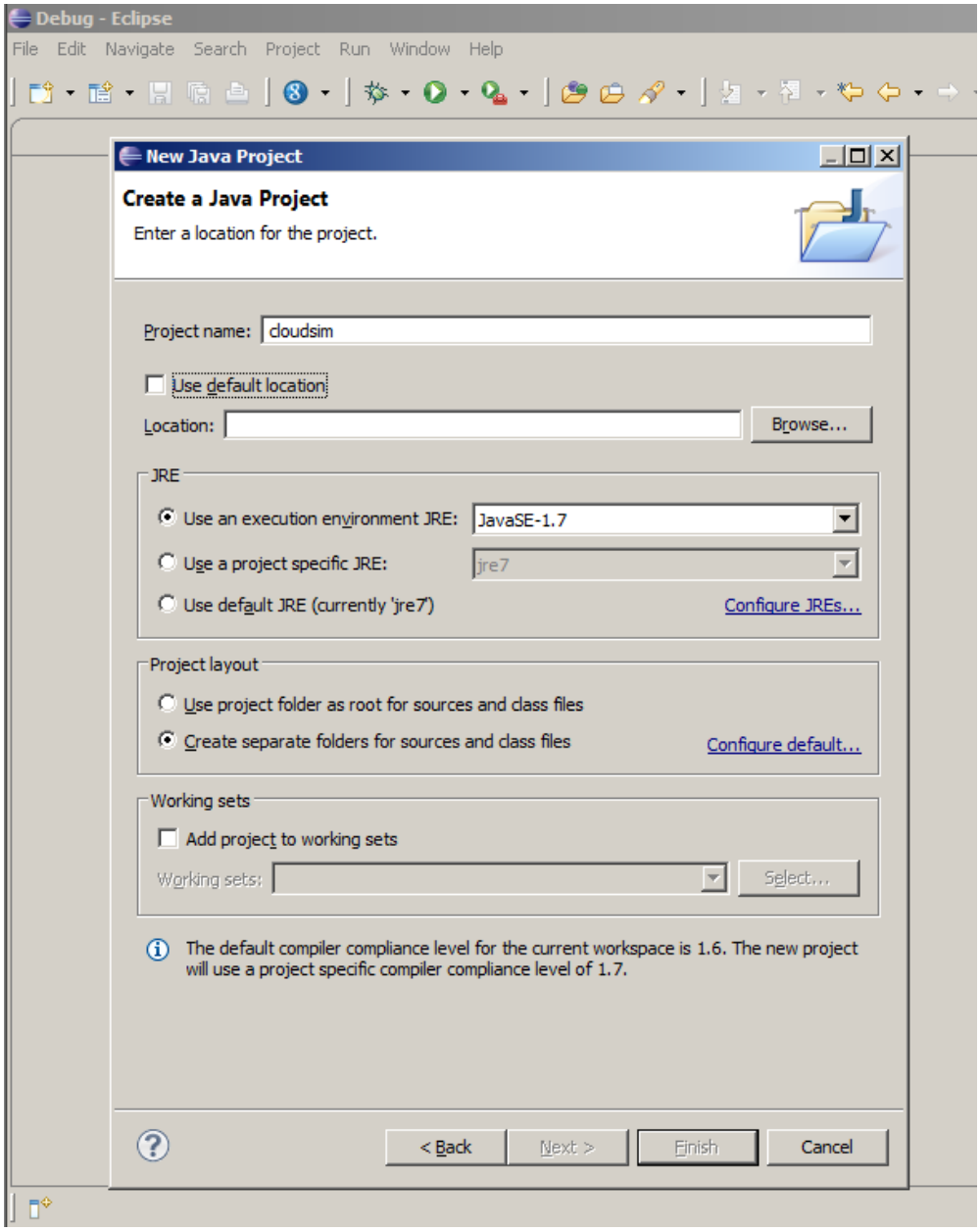


4. Now a detailed new project window will open, here you will provide the project name and the path of CloudSim project source code, which will be done as follows:

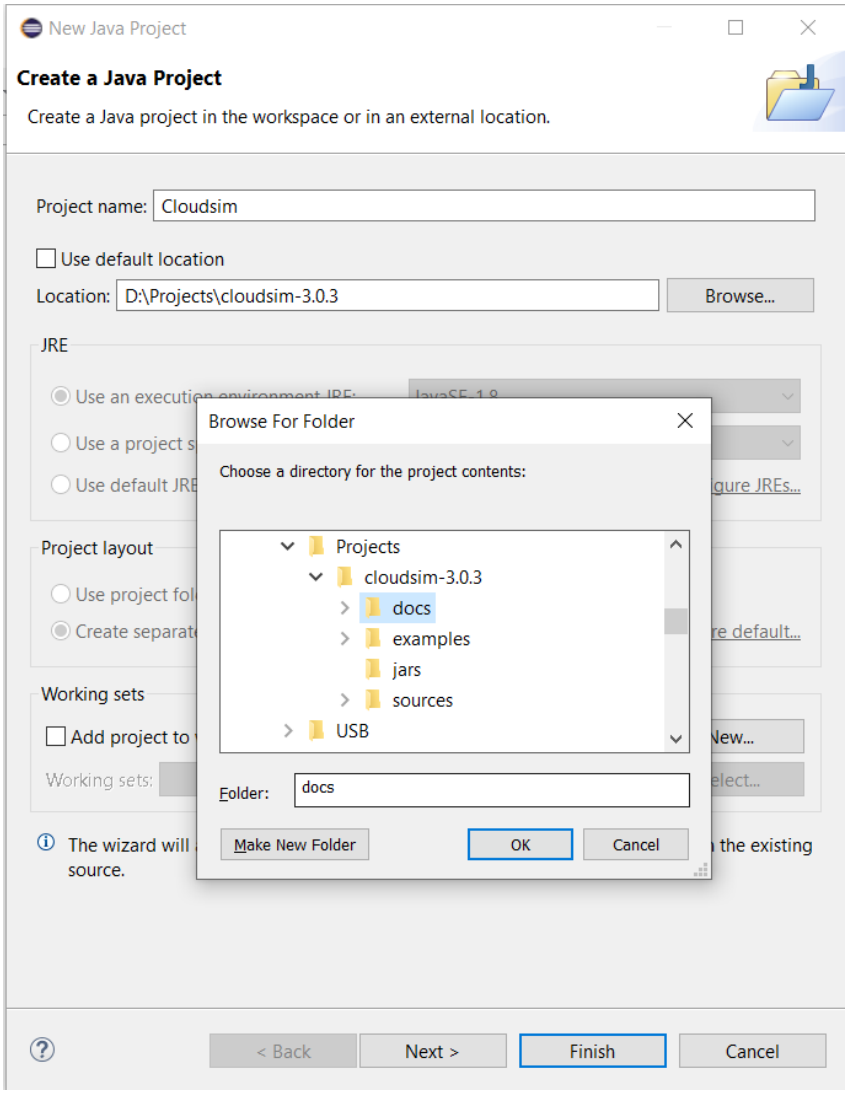
- Project Name: CloudSim.



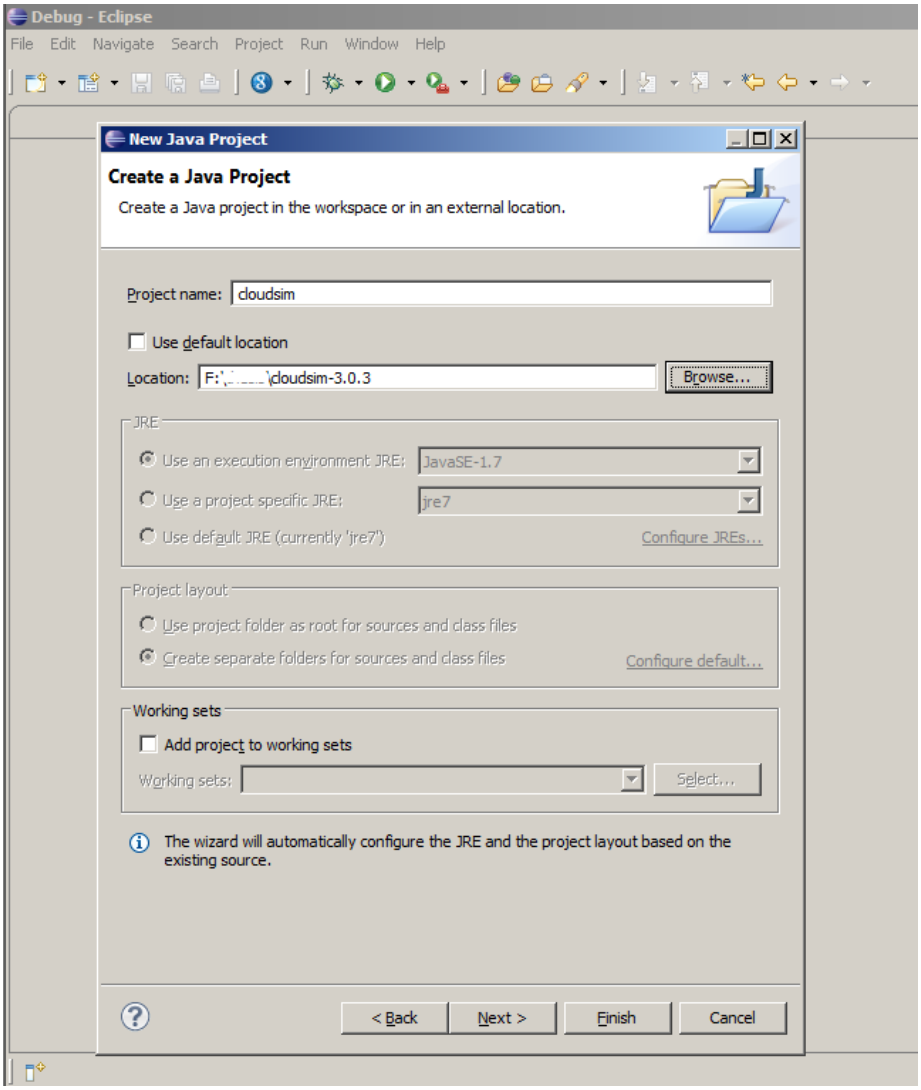
5. Unselect the ***'Use default location'*** option and then click on ***'Browse'*** to open the path where you have unzipped the Cloudsim project and finally click Next to set project settings.



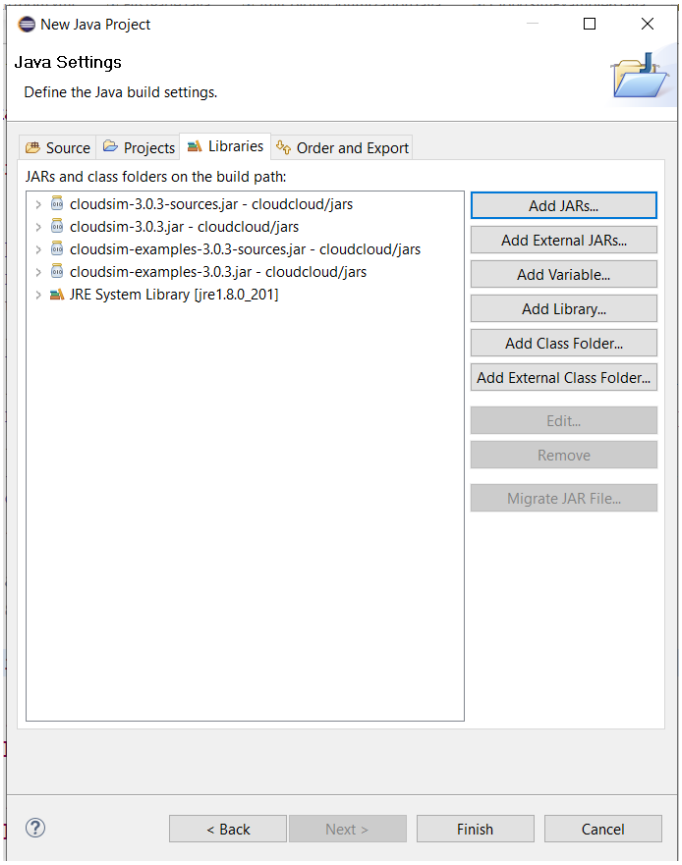
6. Make sure you navigate the path till you can see the bin, docs, examples etc folder in the navigation plane.



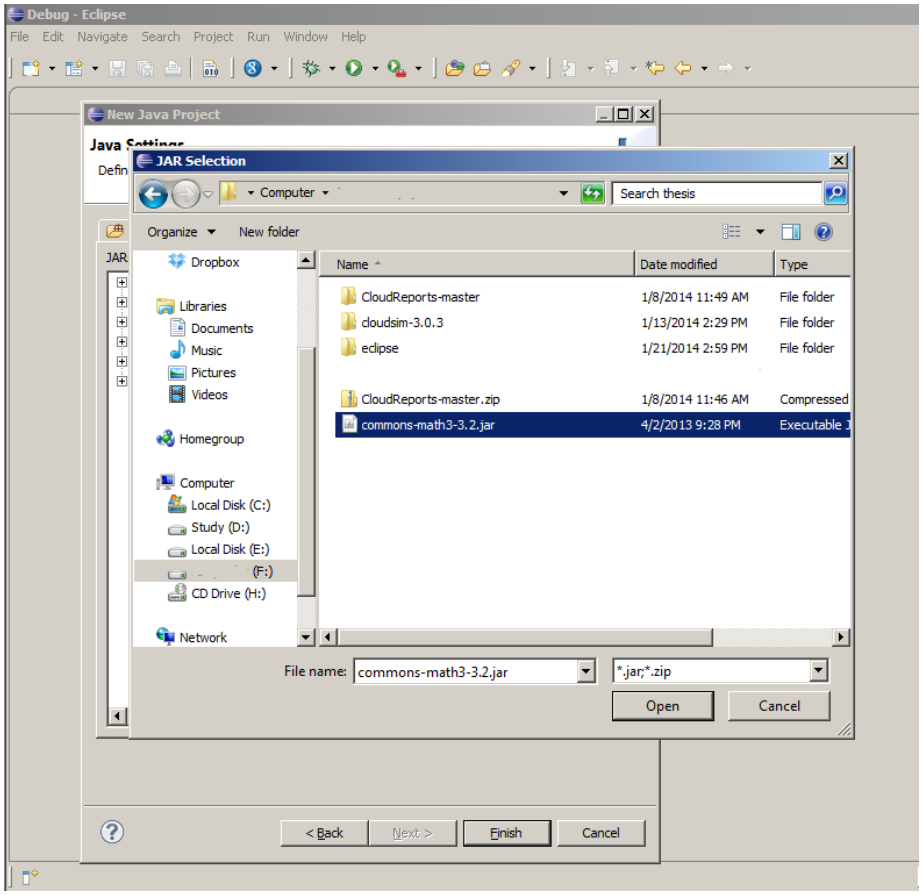
7. Once done finally, click ‘Next’ to go to the next step i.e. setting up of project settings.



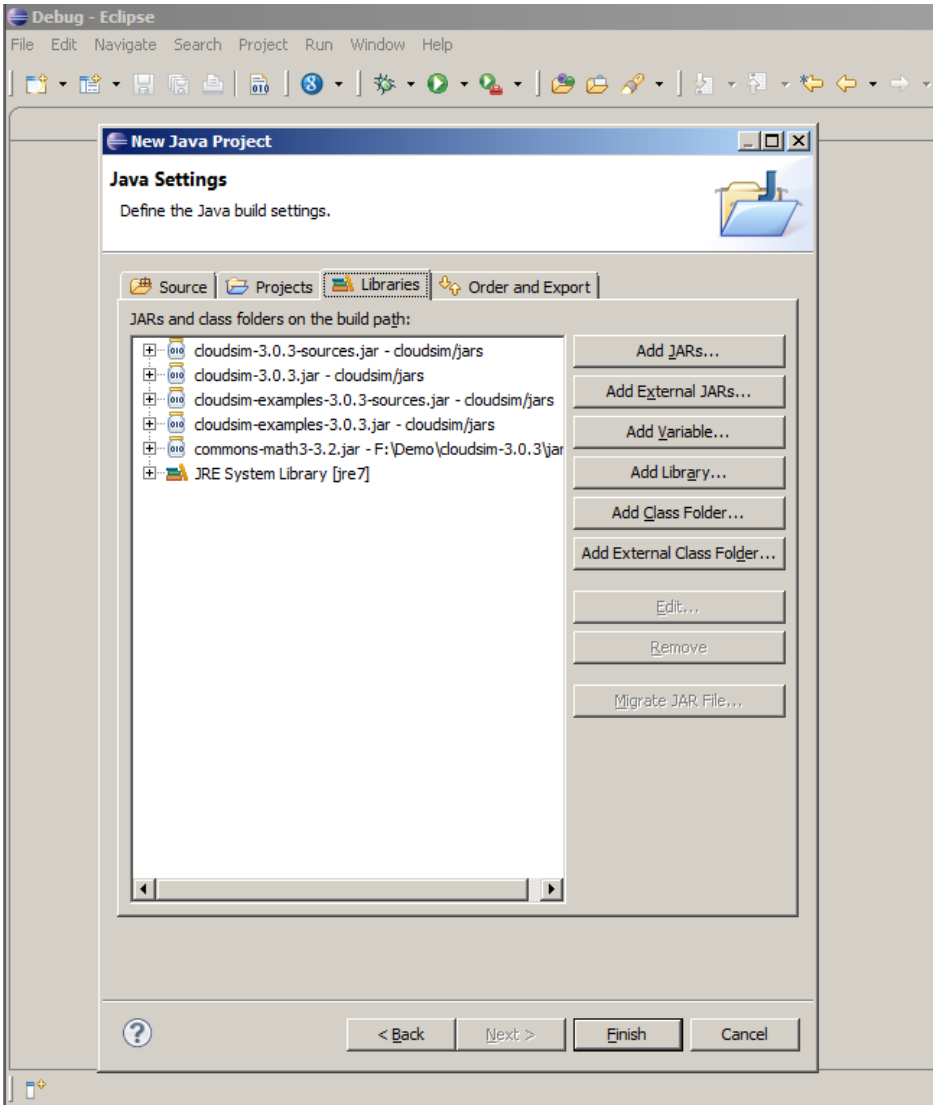
8. Now open ***'Libraries'*** tab and if you do not find commons-math3-3.x.jar *(here 'x' means the minor version release of the library which could be 2 or greater*) in the list then simply click on ***'Add External Jar'*** (commons-math3-3.x.jar will be included in the project from this step)



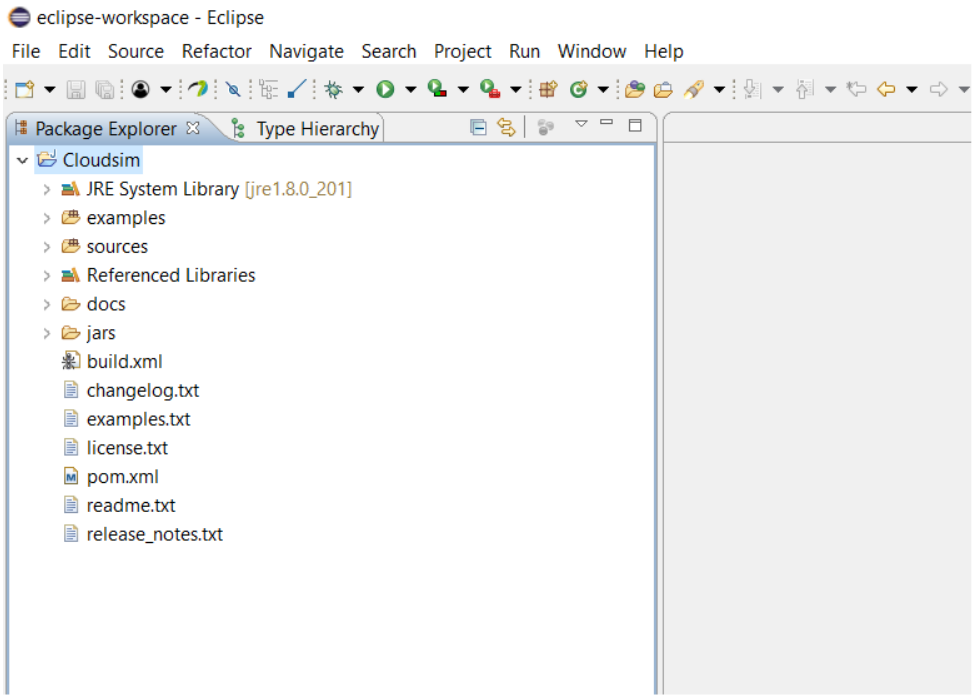
9. Once you have clicked on '***Add External JAR's***' Open the path where you have unzipped the commons-math binaries and select '***Commons-math3-3.x.jar***' and click on open.



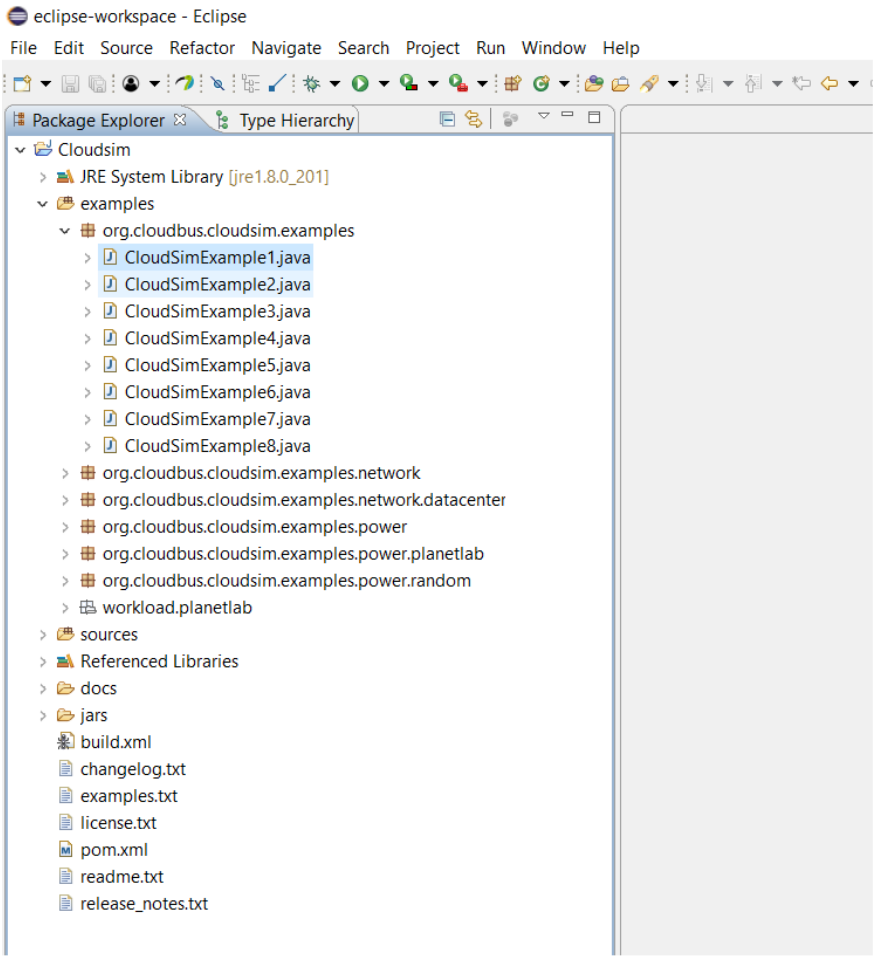
10. Ensure external jar that you opened in the previous step is displayed in the list and then click on '***Finish***' (your system may take 2-3 minutes to configure the project)



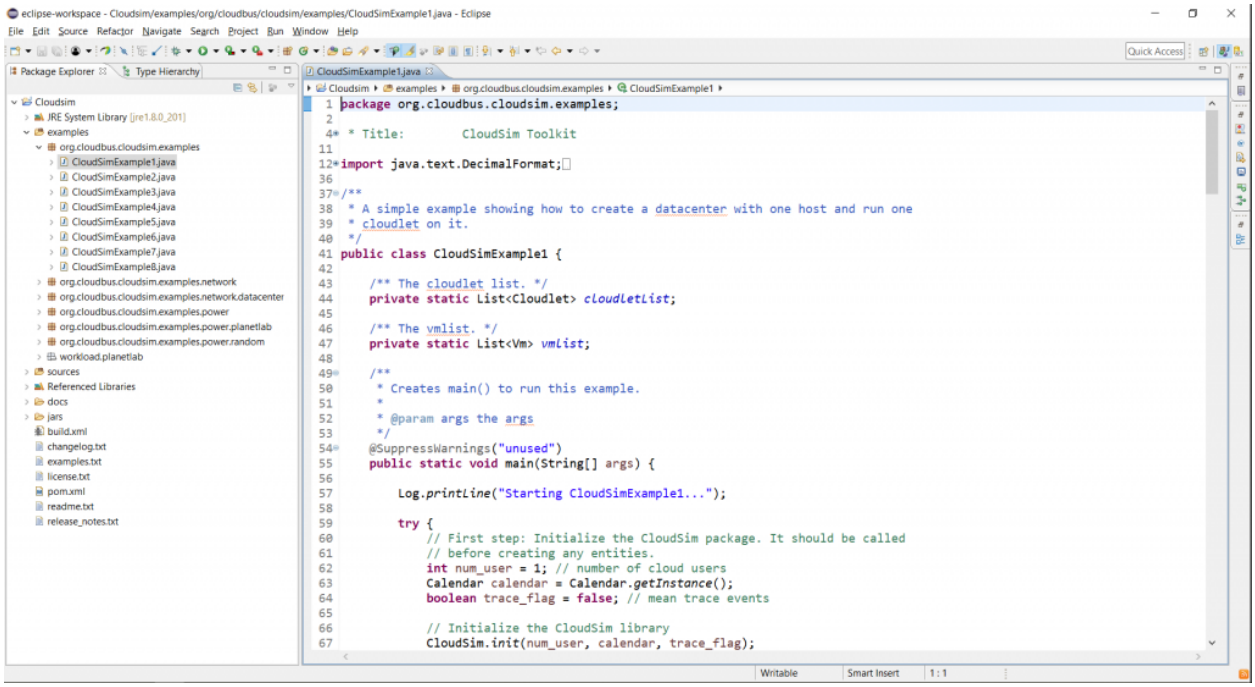
11. Once the project is configured you can open the '***Project Explorer***' and start exploring the Cloudsim project.



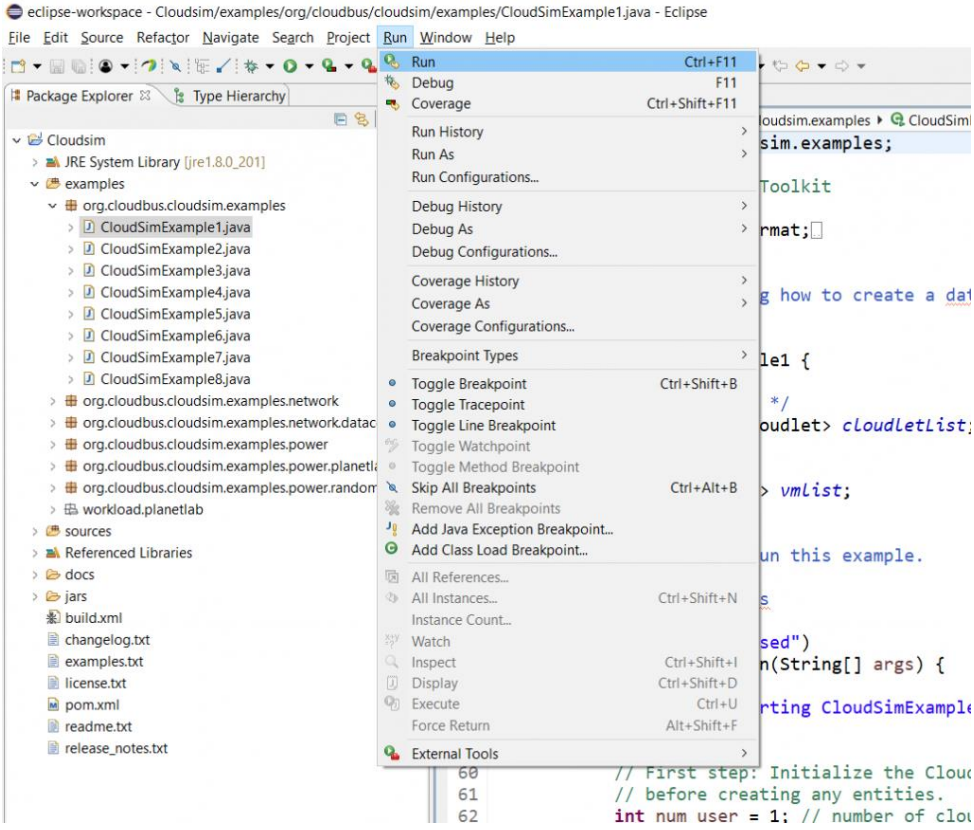
12. Now just to check you within the '**Project Explorer**', you should navigate to the '**examples**' folder, then expand the package '***org.cloudbus.cloudsim.examples***' and double click to open the '***CloudsimExample1.java***'.



13.



14. Now navigate to the Eclipse menu '***Run -> Run***' or directly use a keyboard shortcut ***'Ctrl + F11'*** to execute the '***CloudsimExample1.java***'.



15. if it is successfully executed it should be displaying the following type to output in the console window of the Eclipse IDE.