Ex No:11	**CloudSIM and CloudAnalyst**
14.10.24	

Aim:

To simulate the Cloud Scenarios using CloudSim and Performance analysis using CloudAnalyst

Procedure:

Simulation using CloudSIM:

1.https://github.com/Cloudslab/cloudsim/releases and download the source code(zip file)

CloudSim 5.0 (Pre-release)

skardani released this Jun 7, 2019 · 13 commits to dev since this release   🏷 5.0   -o- 6790fec

Cloudsim 5.0 toolkit combines various releases including containers, VM extensions with perforn clouds. This will also work with other simulation models such as Software-defined Networks (SDI

▼ Assets   2

▢ Source code (zip)
▢ Source code (tar.gz)

👍 14   😄 2   🎉 7   🚀 1   👀 9   29 people reacted

2.Go to the link https://commons.apache.org/proper/commons-math/download_math.cgi and download math4-4.0-beta1-bin.zip file and extract the file

Apache Commons Math 4.0-beta1 (requires Java 8+)

Binaries

commons-math4-4.0-beta1-bin.tar.gz	sha512	pgp
commons-math4-4.0-beta1-bin.zip	sha512	pgp

3. Install Eclipse from the google

Install your favorite desktop IDE packages

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Download Packages | Need Help

4.Click download->choose eclipse IDE for java Developers->Install->Launch

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Home ▸ Downloads ▸ Eclipse downloads - Select a mirror

All downloads are provided under the terms and conditions of the Eclipse Foundation Software User Agreement unless otherwise specified.

⬇ Download

Download from: Korea, Republic Of - Kakao Corp. (https)

File: eclipse-inst-jre-win64.exe SHA-512

>> Select Another Mirror

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type filter text

Eclipse IDE for Java Developers
The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Maven and Gradle...

Eclipse IDE for Enterprise Java and Web
Tools for developers working with Java and Web applications, including a Java IDE, tools for JavaScript,...

Eclipse IDE for C/C++ Developers
An IDE for C/C++ developers.

Eclipse IDE for Embedded C/C++ Devel
An IDE for Embedded C/C++ developers. It includes managed cross build plug-ins (Arm and RISC-V) and...

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Eclipse IDE for Java Developers   details
The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Maven and Gradle integration.

Java 21+ VM   tj/jres/23/updates/release/latest ▼
Installation Folder   THI SRIDHAR\eclipse\java-2024-09

✔ create start menu entry
✔ create desktop shortcut

⬇ INSTALL

---

eclipse installer by Oomph   ⭐ SPONSOR

Eclipse IDE for Java Developers   details
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Java 21+ VM   tj/jres/23/updates/release/latest ▼
Installation Folder   THI SRIDHAR\eclipse\java-2024-09

✔ create start menu entry
✔ create desktop shortcut

✕ INSTALLING
✖ Cancel Installation

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eclipse installer by Oomph

Eclipse IDE for Java Developers
The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Maven integration.
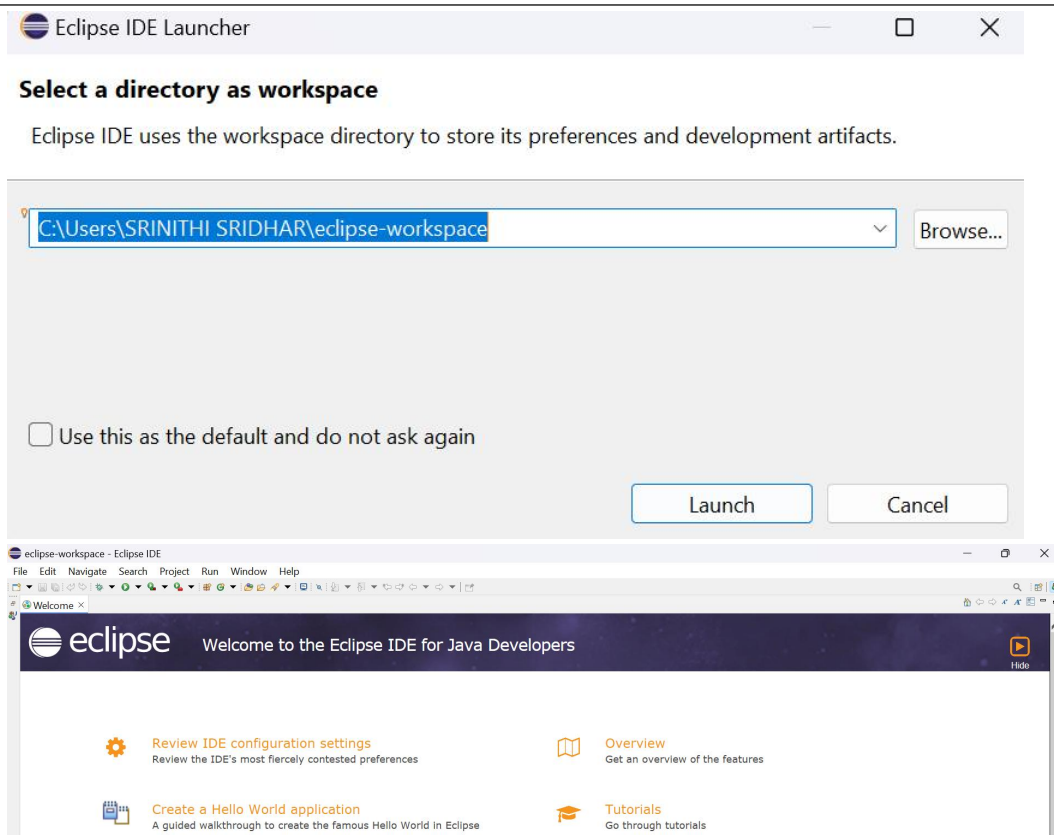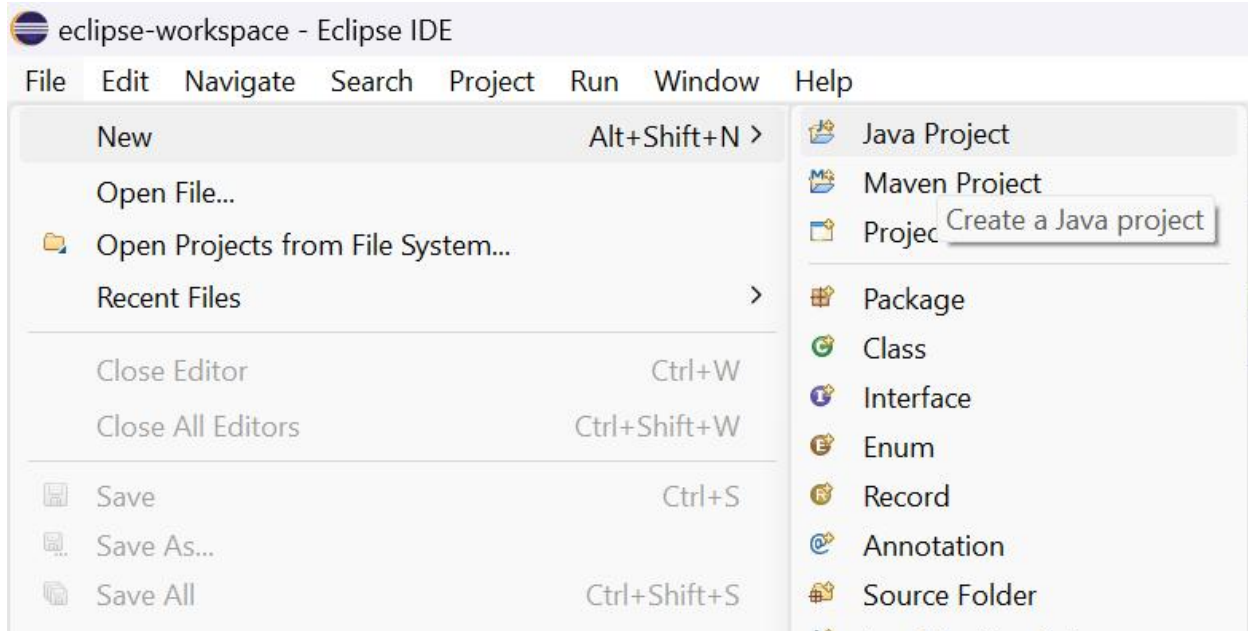
Java 21+ VM   JRE 23.0.0 - https://download.eclipse.org/justj/jres/23/updates/release/latest
Installation Folder   THI SRIDHAR\eclipse\java-2024-09

✔ create start menu entry
✔ create desktop shortcut

▶ LAUNCH
show readme file
open in system explorer
keep installer

5.Click Launch ->eclipse page will be opened

6.Click file->new->java project

7.Enter name and disable the default location and enter the cloudsim folder location that you downloaded from the github and click finish

New Java Project — □ ✕

Create a Java Project

Discouraged module name. By convention, module names usually start with a lowercase letter

Project name: Cloudsim

☑ Use default location

Location: C:\Users\SRINITHI SRIDHAR\eclipse-workspace\Cloudsim   Browse...

JRE

⦿ Use an execution environment JRE: JavaSE-22   ⌄

◯ Use a project specific JRE: jre   ⌄

◯ Use default JRE 'jre' and workspace compiler preferences   Configure JREs...

New Java Project — □ ✕

Create a Java Project

Discouraged module name. By convention, module names usually start with a lowercase letter

Project name: Cloudsim

☐ Use default location

Location: C:\Users\SRINITHI SRIDHAR\Downloads\cloudsim-5.0   Browse...

JRE

⦿ Use an execution environment JRE: JavaSE-22   ⌄

◯ Use a project specific JRE: jre   ⌄

◯ Use default JRE 'jre' and workspace compiler preferences   Configure JREs...

Project layout

◯ Use project folder as root for sources and class files

⦿ Create separate folders for sources and class files   Configure default...

Working sets

☐ Add project to working sets   New...

Working sets: Select...

Module

⊡

⑦   < Back   Next >   Finish   Cancel

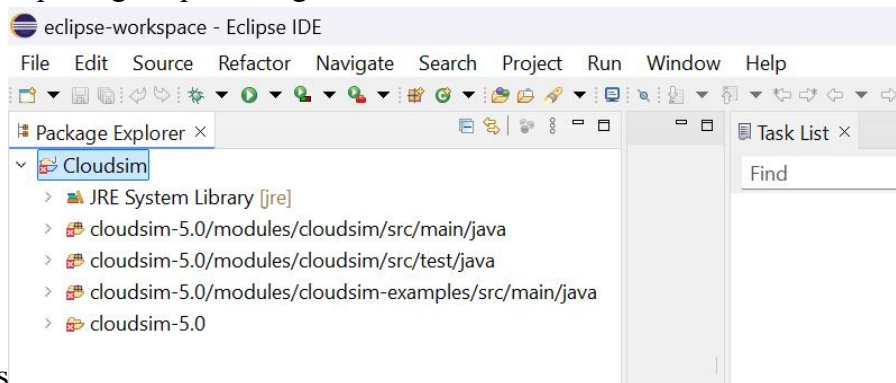**Refreshing takes place..**

Module

Refreshing '/Cloudsim'.
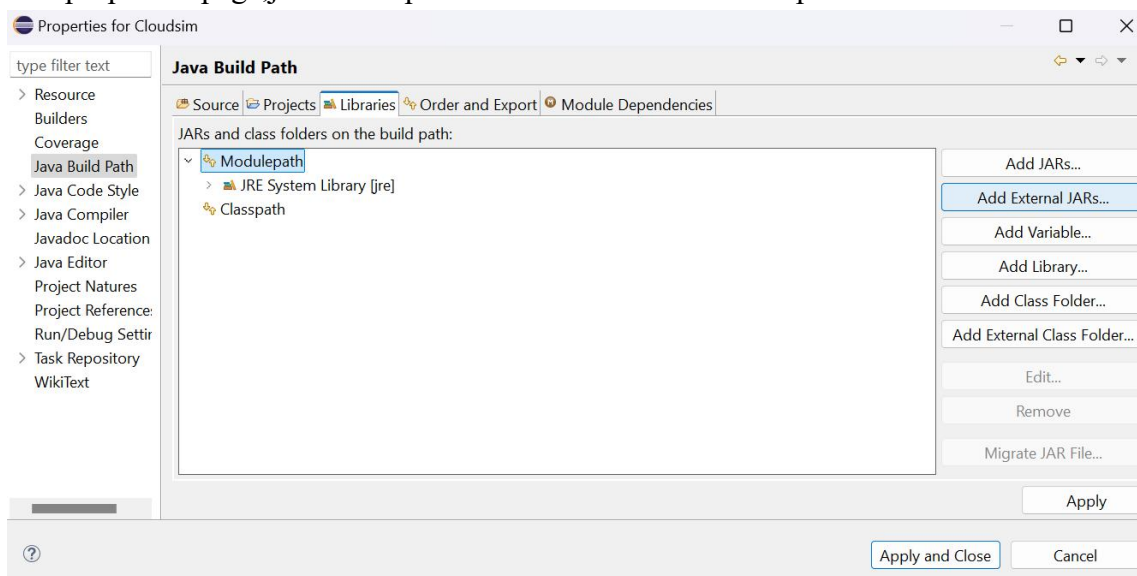
⑦   < Back   Next >   Finish   Cancel

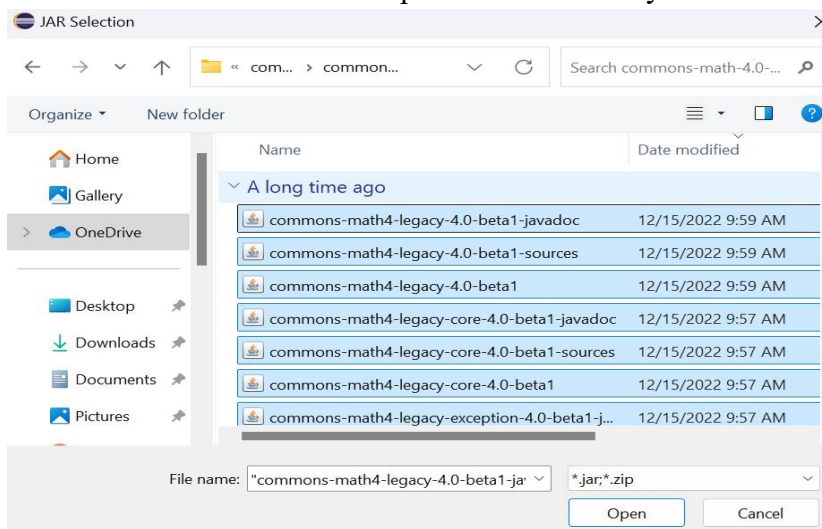8.Now in the package explorer, right click the cloudsim-

>properties

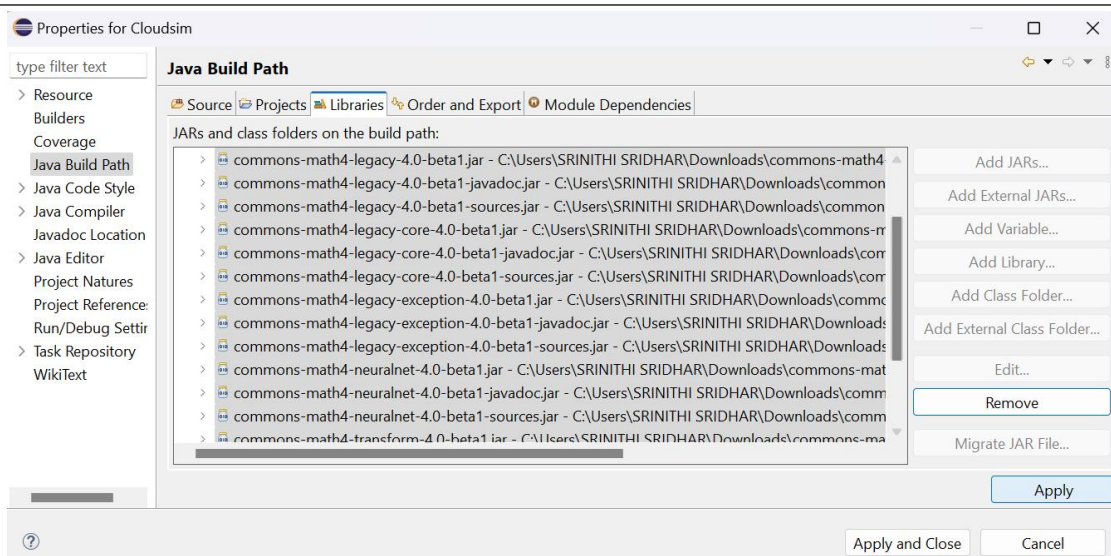9.In properties page,java build path->libraries->click module path ->Add external JAR

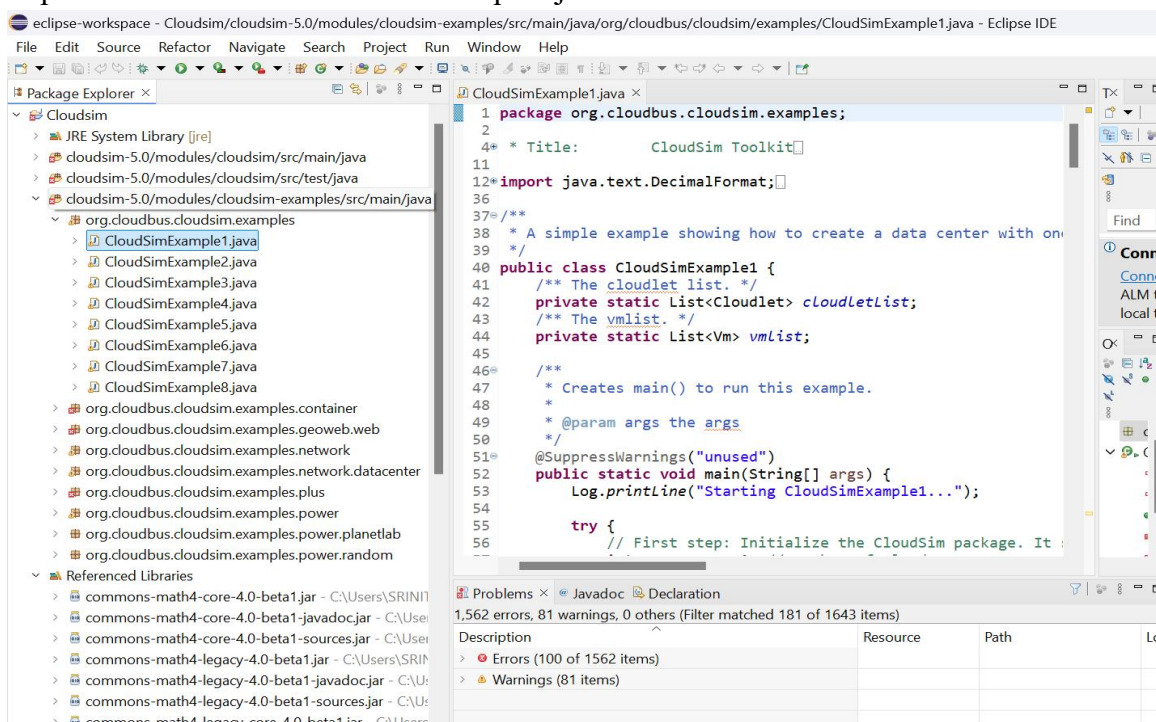10.Go to the math folder and upload all the files by ctrl+A
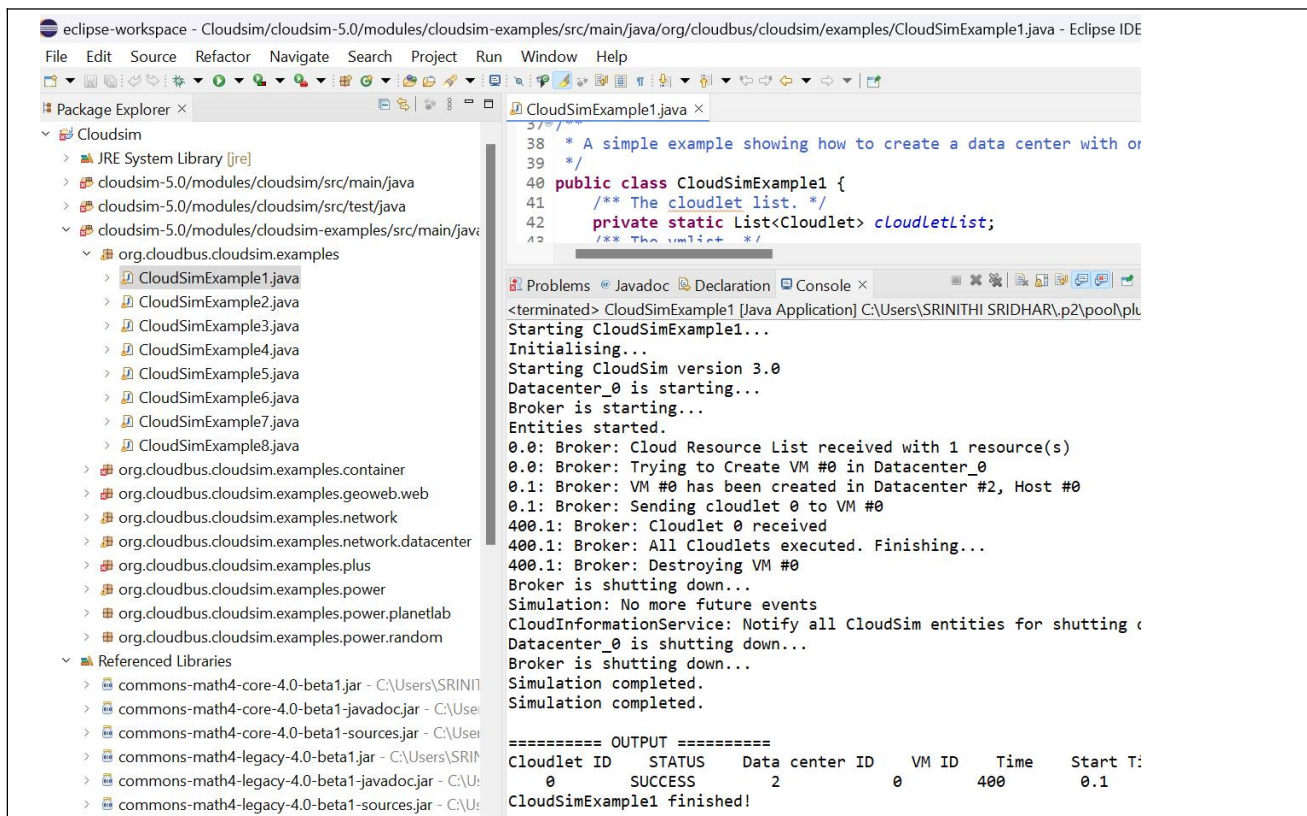

11.Click Apply and click then apply and close

12.Now go to eclipse web page->under cloudsim->cloudsim-5.0/modules/cloudsim-examples..->open the first folder->click the example1.java and the code will be visible ->run the code
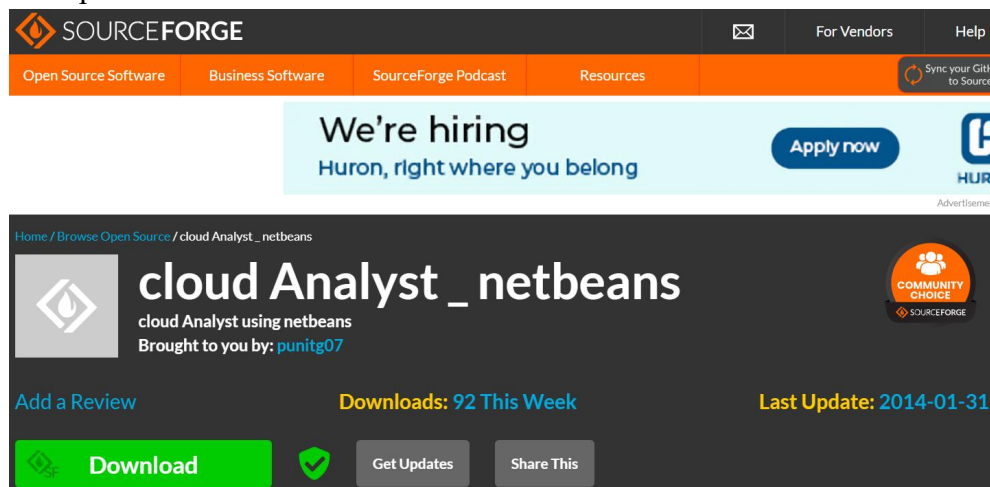

13.Output will be printed on the console as example finished
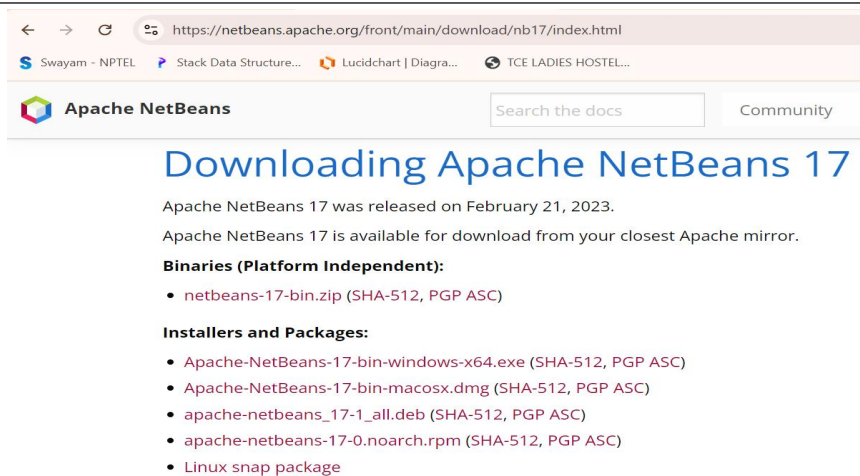
Performance Analysis using cloud Analyst:

1.Go to the link https://sourceforge.net/projects/cloudanalystnetbeans/   and download ->extract the zip file

2. Go to the link https://netbeans.apache.org/front/main/download/nb17/index.html and install Apache-NetBeans-17-bin-windows-x64.exe(SHA-512,PGP ASC)

Downloading Apache NetBeans 17

Apache NetBeans 17 was released on February 21, 2023.

Apache NetBeans 17 is available for download from your closest Apache mirror.

Binaries (Platform Independent):

- netbeans-17-bin.zip (SHA-512, PGP ASC)

Installers and Packages:

- Apache-NetBeans-17-bin-windows-x64.exe (SHA-512, PGP ASC)
- Apache-NetBeans-17-bin-macosx.dmg (SHA-512, PGP ASC)
- apache-netbeans_17-1_all.deb (SHA-512, PGP ASC)
- apache-netbeans-17-0.noarch.rpm (SHA-512, PGP ASC)
- Linux snap package

3. Once you downloaded, click the exe file then configuration takes place
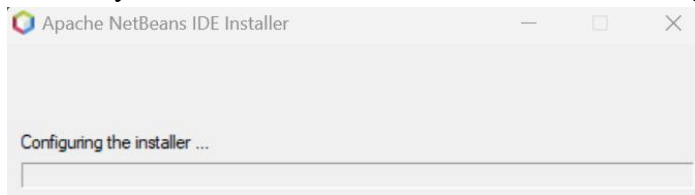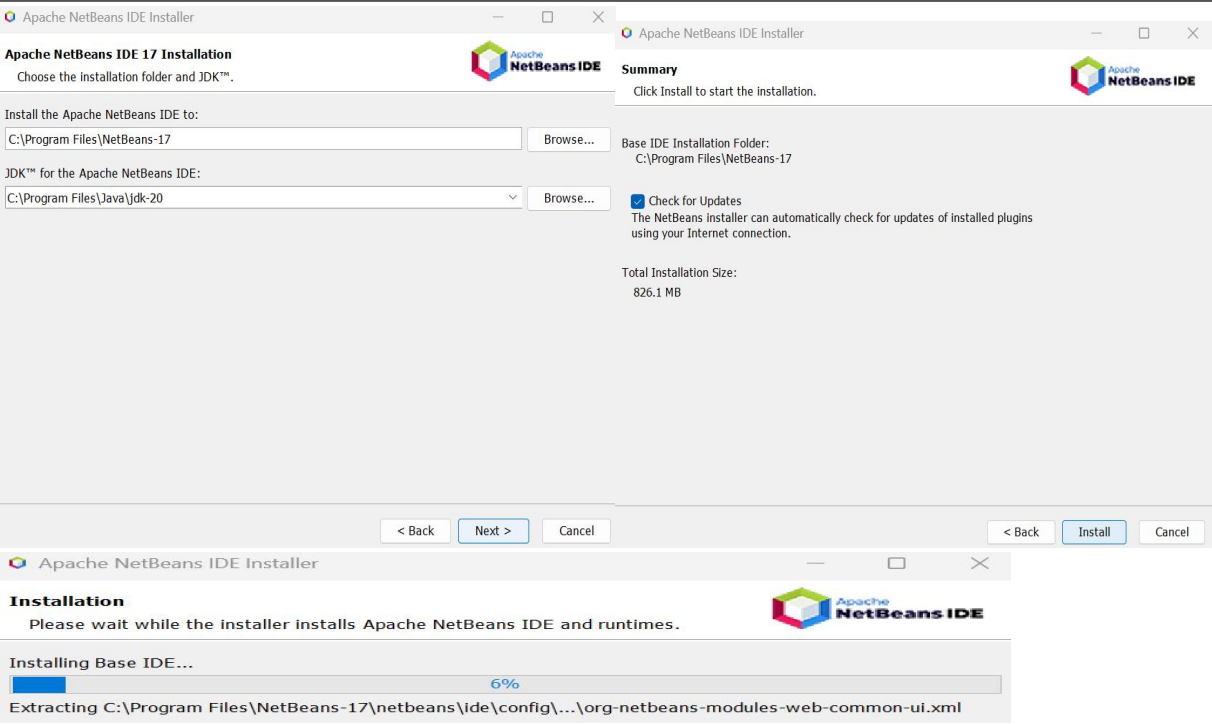
4.Then click next and click the term and license ->next
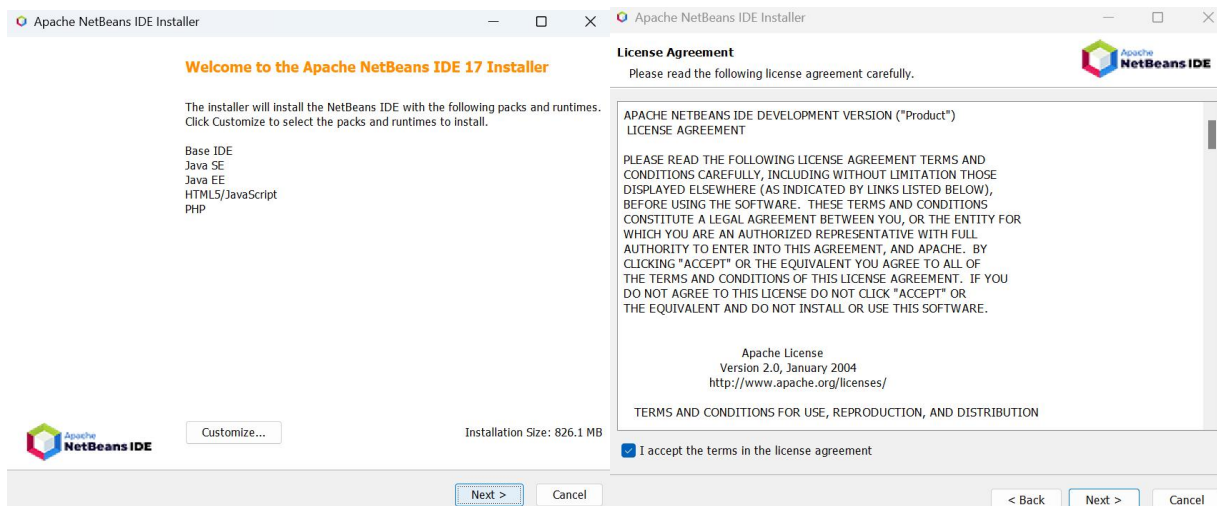
5.Click next and click install

6.Click Finish
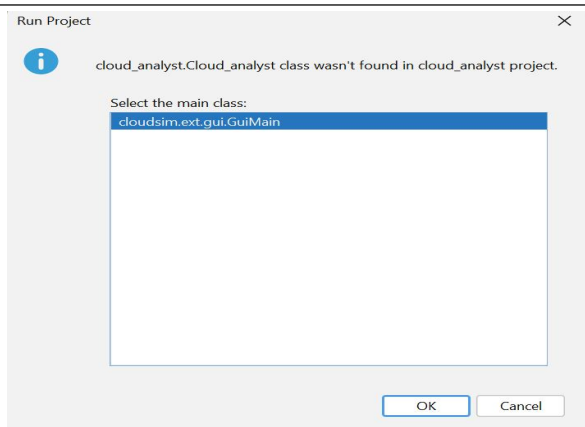

7.Open Apache NetBeans from search bar of window

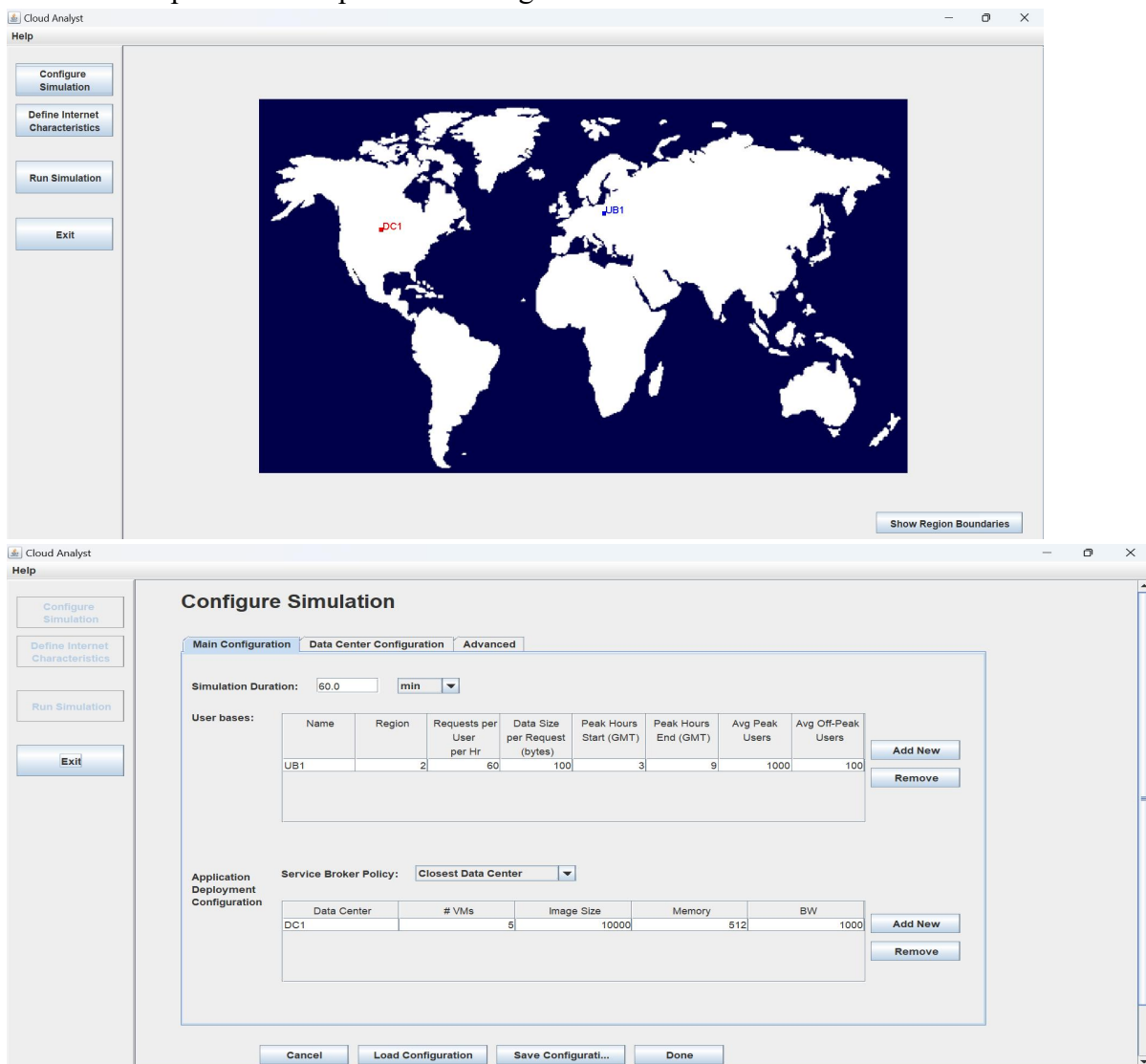**8.Open Project->Go to the cloud analyst folder->click the cloud analyst file ->open project**
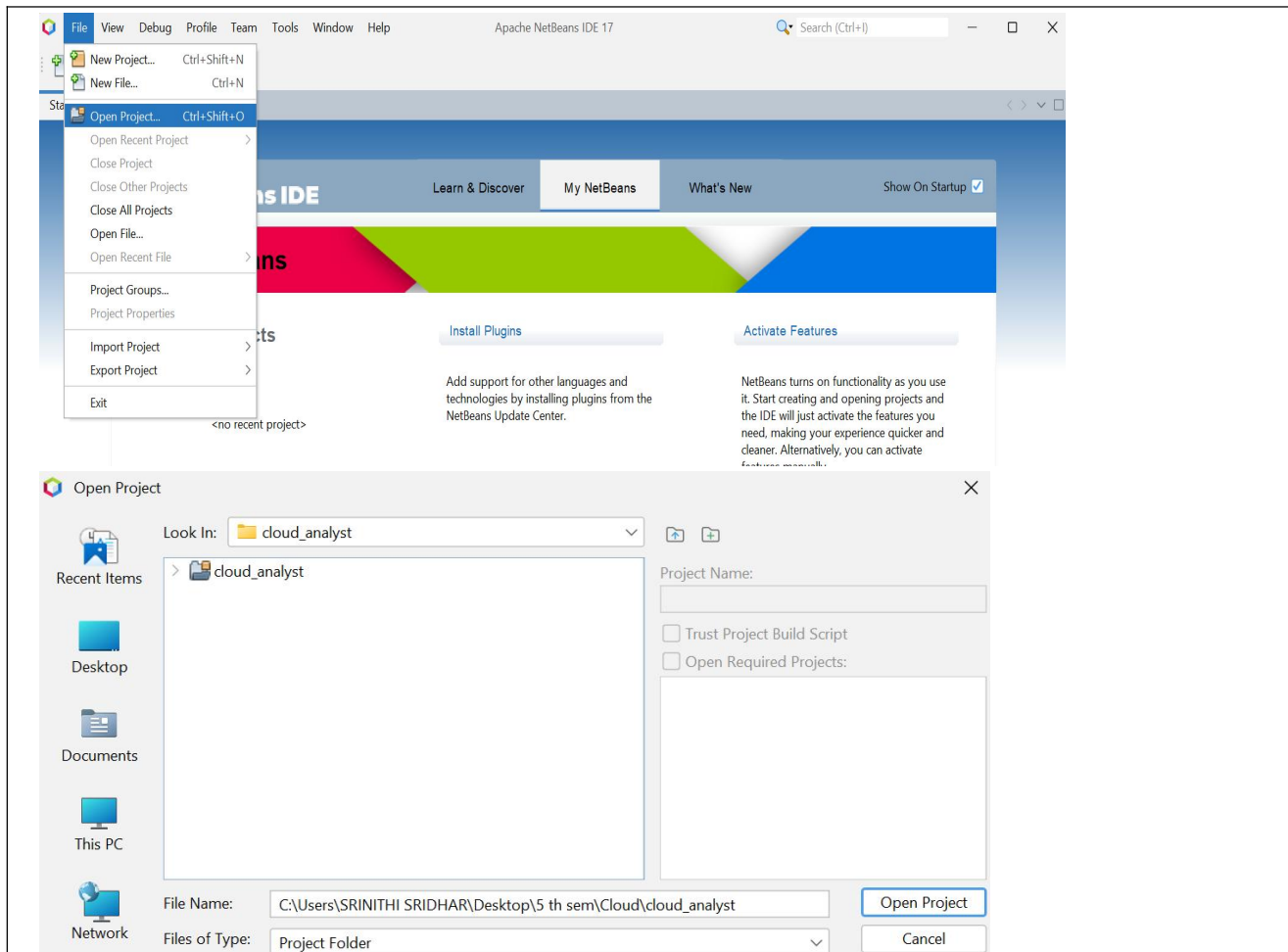
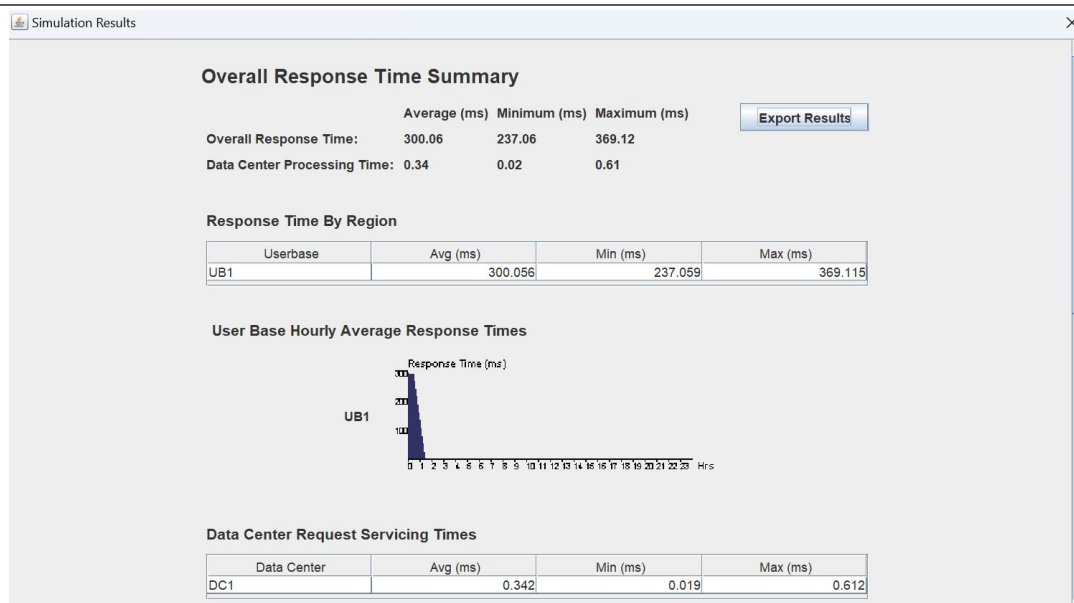9.The projects will be showed up on the left and then click the play button
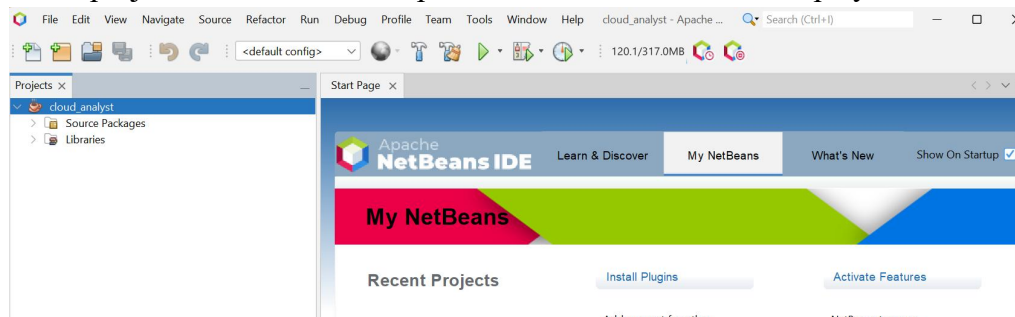
An error occurs,ignore it .click ok

10. World Map is showed up ->click configure simulation->Done

11. Again click Run simulation->Done

Overall Response Time Summary

	Average (ms)	Minimum (ms)	Maximum (ms)
Overall Response Time:	300.06	237.06	369.12
Data Center Processing Time:	0.34	0.02	0.61

Export Results

Response Time By Region

Userbase	Avg (ms)	Min (ms)	Max (ms)
UB1	300.056	237.059	369.115

User Base Hourly Average Response Times

Data Center Request Servicing Times

Data Center	Avg (ms)	Min (ms)	Max (ms)
DC1	0.342	0.019	0.612

12. At last,we can get the result of the simulation.

Result:

Thus the simulation of cloud scenarios and performance analysis using cloud analyst has been executed successfully.