

Exp No: 7

Date :

CLOUD SIMULATION

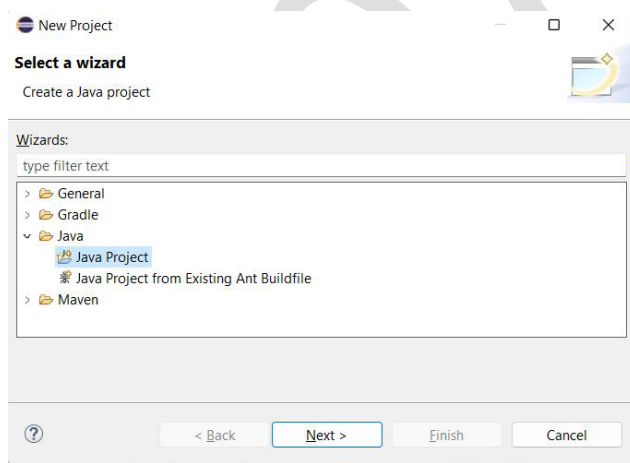
MODEL CLOUD ENVIRONMENT USING CLOUD SIM

AIM:

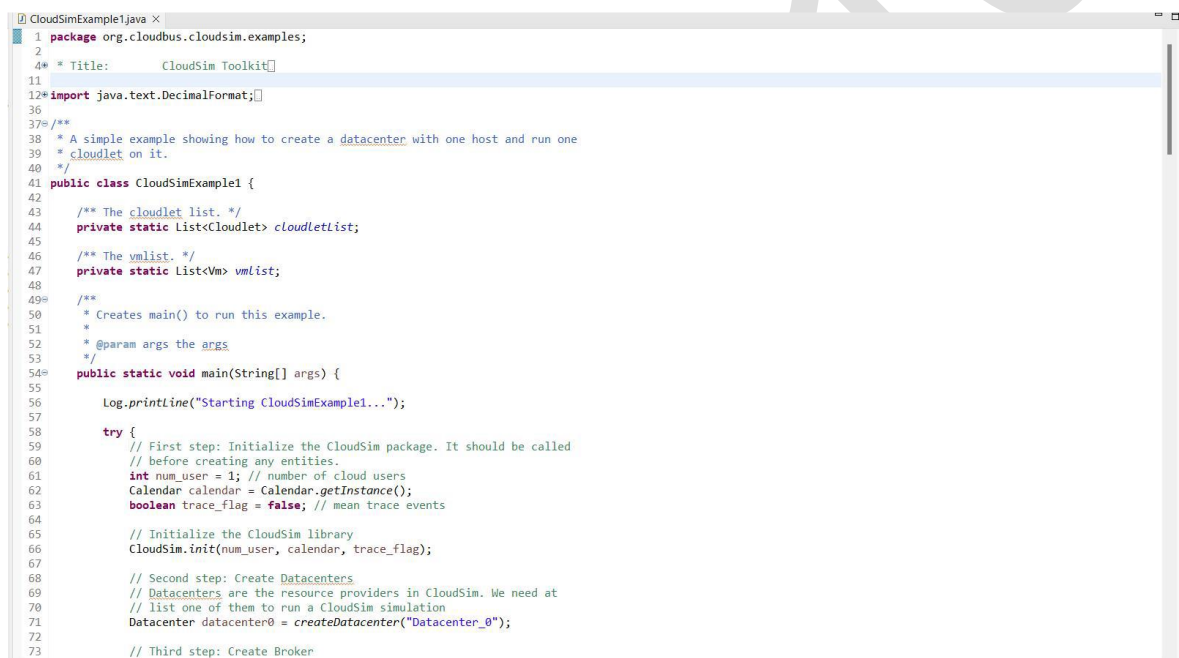
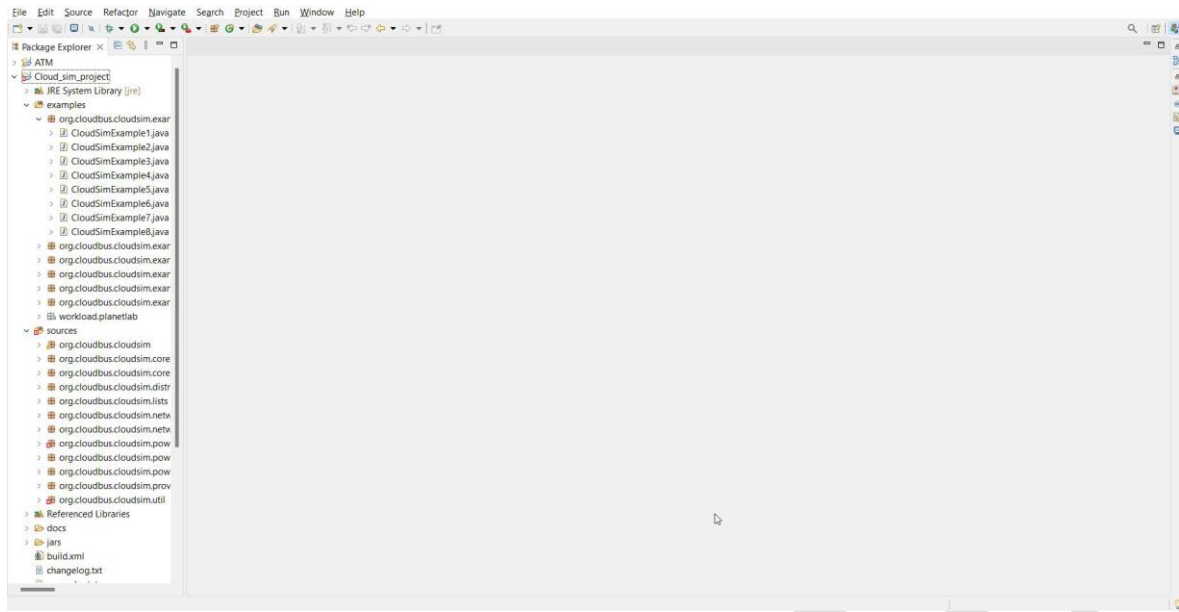
To model the cloud environment using cloud sim tools.

PROCEDURE:

1. Now within the Eclipse window navigate the menu: File -> New -> Project, to open the new project wizard.
2. Select the 'Java Project' from the window popup and click Next.
3. 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.
4. Now select the example program from folder examples from the unzipped folder.
5. Run the sample program

OUTPUT:

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The screenshot shows the Eclipse IDE with a Java class named `CloudSimExample1` and its console output. The class is part of the `org.cloudbus.cloudsim.examples` package and is titled "CloudSim Toolkit". It imports `java.text.DecimalFormat` and contains a `main` method that initializes the CloudSim environment, creates a datacenter, and runs a simulation.

```

1 package org.cloudbus.cloudsim.examples;
2
3
4 * Title:      CloudSim Toolkit[]
5
6
7
8
9
10
11
12 import java.text.DecimalFormat;
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28 /**
29  * A simple example showing how to create a datacenter
30  * and run a simulation on it.
31  */
32
33
34
35
36
37
38
39
40
41 public class CloudSimExample1 {
42
43     /** The cloudlet list. */
44     private static List<Cloudlet> cloudletList;
45
46     /** The vm list. */
47     private static List<Vm> vmList;
48
49
50     /**
51      * Creates main() to run this example.
52      *
53      * @param args the args
54      */
55     public static void main(String[] args) {
56
57         Log.println("Starting CloudSimExample1...");
58
59         try {
60             // First step: Initialize the CloudSim package. It should be called
61             // before creating any entities.
62             int num_user = 1; // number of cloud users
63             Calendar calendar = Calendar.getInstance();
64             boolean trace_flag = false; // mean trace events
65
66             // Initialize the CloudSim library
67             CloudSim.init(num_user, calendar, trace_flag);
68
69             // Second step: Create Datacenters
70             // Datacenters are the resource providers in CloudSim. We need at
71             // list one of them to run a CloudSim simulation
72             Datacenter datacenter0 = createDatacenter("Datacenter_0");
73
74             // Third step: Create Broker

```

The console output shows the simulation progress and completion:

```

<terminated> CloudSimExample1 [Java Application] C:\Users\SRI\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_15.0.2.v20210201-0955\jre\bin\java
Simulation: No more future events
CloudInformationService: Notify all CloudSim entities for shutting down.
Datacenter_0 is shutting down...
Broker is shutting down...
Simulation completed.
Simulation completed.
===== OUTPUT =====
Cloudlet ID   STATUS   Data center ID   VM ID   Time   Start Time   Finish Time
0            SUCCESS    2              0       400     0.1          400.1
****Datacenter: Datacenter_0****
User id      Debt
3            35.6
CloudSimExample1 finished!

```

RESULT:

Thus, the cloud environment using cloud sim tools has been modelled.