

Exp No: 7

Date :

CLOUD SIMULATION

MODEL CLOUD ENVIRONMENT USING CLOUD

SIM

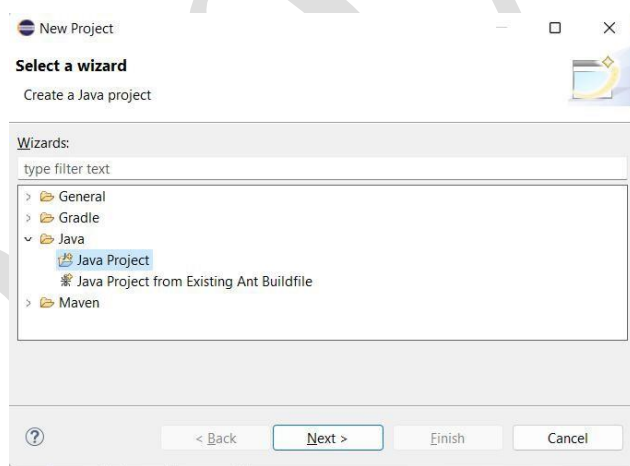
AIM:

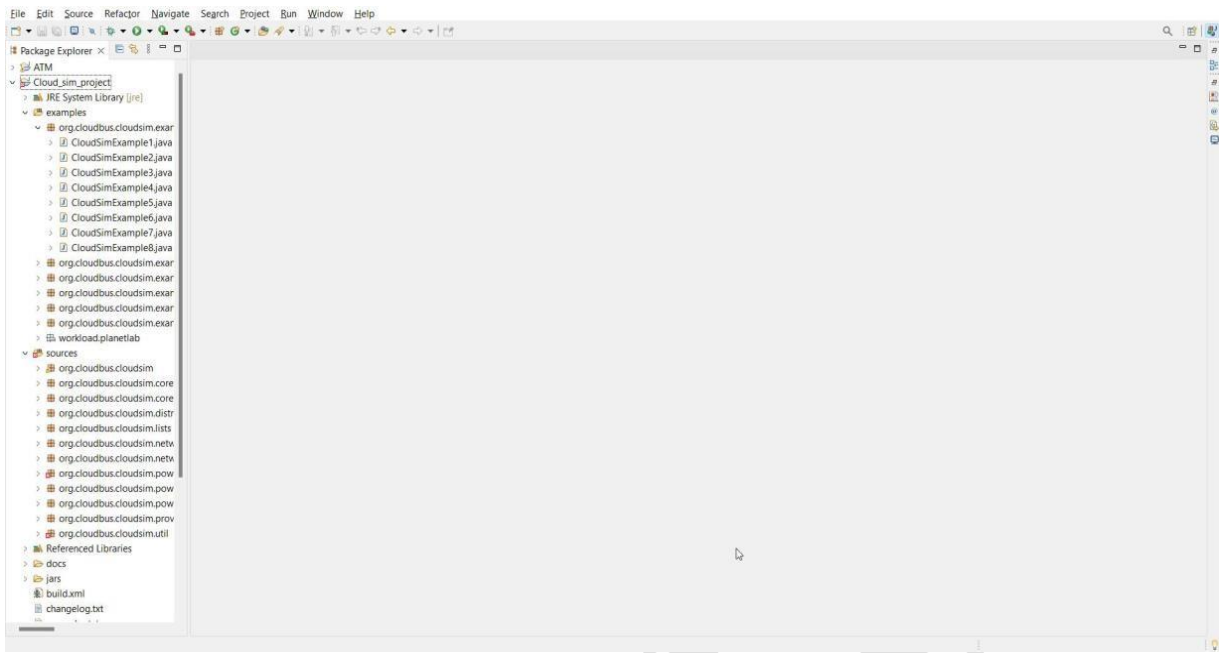
To model the cloud environment using cloud sim tools.

PROCEDURE:

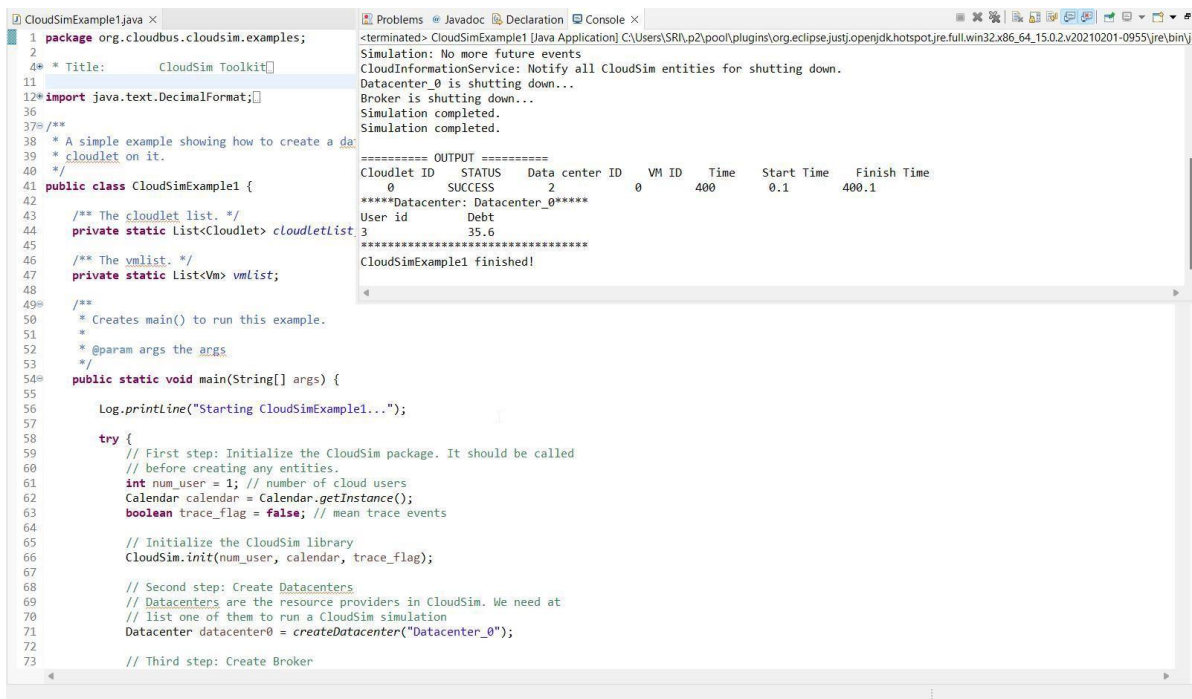
1. Now within the Eclipse window navigate the menu: File -> New -> Project, to open the new project wizard.
2. Select the 'Java Project' from the window popup and click Next.
3. Unselect the Use default location option and then click on '*Browse*' to open the path where you have unzipped the Cloudsim 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:





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



The screenshot shows the Eclipse IDE with two panes. The left pane displays the source code of `CloudSimExample1.java`, and the right pane shows the console output.

Source Code:

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

Console Output:

```
<terminated> CloudSimExample1 [Java Application] C:\Users\SRM\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_15.0.2.v20210201-0955\jre\bin\je
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.