

Exp No: 8

Date:

CLOUD SIMULATION

IMPLEMENT ROUND ROBIN TASK SCHEDULING IN BOTHTIMESHARED AND SPACE SHARED CPU ASSIGNMENT

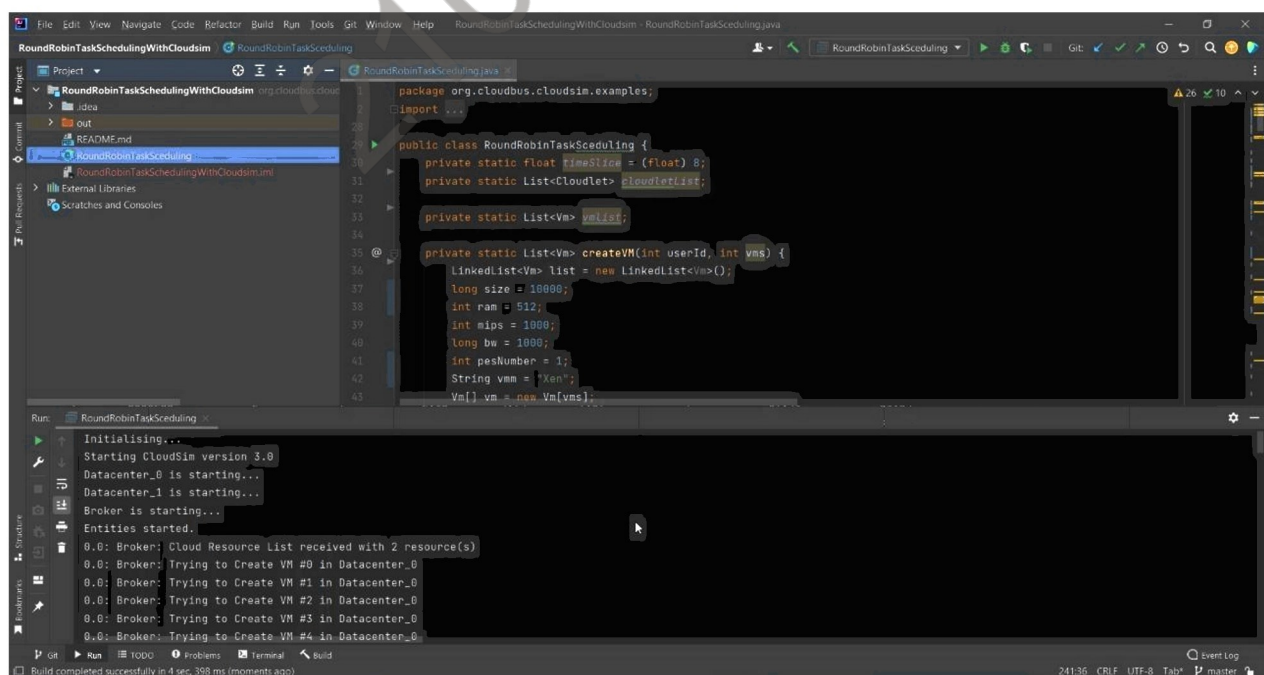
AIM:

Implement RoundRobin task scheduling in both TimeShared and SpaceShared CPU assignments.

PROCEDURE:

1. Create a new project by selecting java console line application template and JDK 18.
2. Open project settings from the file menu of the options window.
3. Navigate to project dependencies and select on add external jars and then click on 'Browse' to open the path where you have unzipped the Cloudsim Jars and click on apply.
4. Create a java file with the cloudsim code to implement the Round robin scheduling algorithm.
5. Run the application as a java file to see the output in the console below.

OUTPUT:



The screenshot displays an IDE window with a Java file named `RoundRobinTaskScheduling.java`. The code defines a class `RoundRobinTaskScheduling` with the following attributes and methods:

- Package: `org.cloudbus.cloudsim.examples`
- Imports: `java.util.*`, `org.cloudbus.cloudsim.*`
- Class: `RoundRobinTaskScheduling`
- Attributes:
 - `private static float timeSlice = (float) 8;`
 - `private static List<Cloudlet> cloudletList;`
 - `private static List<Vm> vmlist;`
- Method: `private static List<Vm> createVm(int userId, int vms)`
 - Creates a `LinkedList<Vm>` named `list`.
 - Attributes for each VM:
 - `long size = 10000;`
 - `int ram = 512;`
 - `int mips = 1000;`
 - `long bw = 1000;`
 - `int pesNumber = 1;`
 - `String vmm = "xen";`
 - Creates an array of VMs: `Vm[] vm = new Vm[vms];`

The console output shows the following sequence of events:

- Initialising...
- Starting CloudSim version 3.0
- Datacenter_0 is starting...
- Datacenter_1 is starting...
- Broker is starting...
- Entities started.
- 0.0: Broken: Cloud Resource List received with 2 resource(s)
- 0.0: Broken: Trying to Create VM #0 in Datacenter_0
- 0.0: Broken: Trying to Create VM #1 in Datacenter_0
- 0.0: Broken: Trying to Create VM #2 in Datacenter_0
- 0.0: Broken: Trying to Create VM #3 in Datacenter_0
- 0.0: Broken: Trying to Create VM #4 in Datacenter_0

The console also indicates that the build completed successfully in 4 seconds and 388 milliseconds.

RESULT:

Thus Round Robin task scheduling is implemented using cloud simulator.