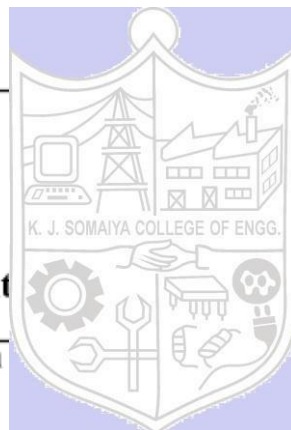


No.: 08 Title
CloudSim



Experiment
on using

Batch: A2

Roll No.: 16010421073

Experiment No.: 08

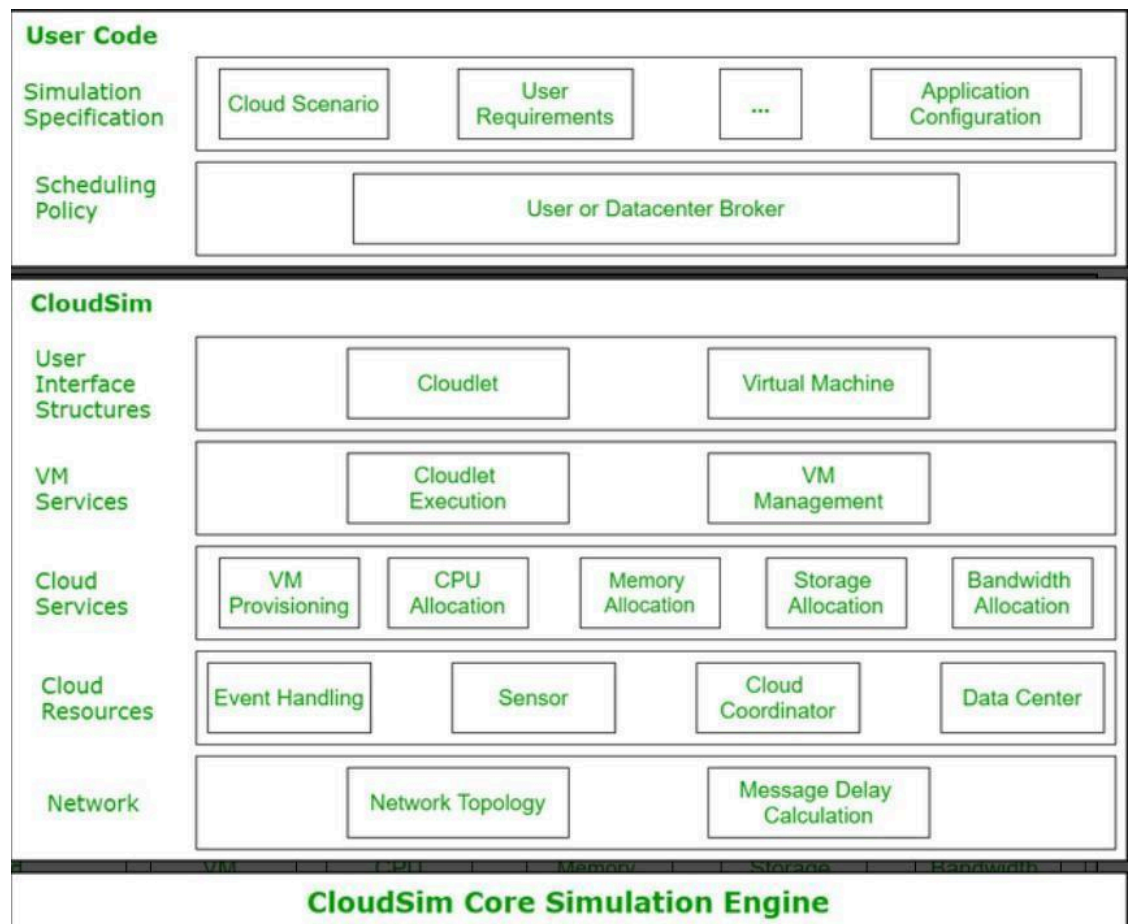
Aim: Cloud simulation using CloudSim

Resources needed: CloudSim Simulator

Theory:

CloudSim is a framework for modeling and simulation of cloud computing infrastructures and services. Originally built primarily at the Cloud Computing and Distributed Systems (CLOUDS) Laboratory, The University of Melbourne, Australia, CloudSim has become one of the most popular open source cloud simulators in the research and academia. CloudSim is completely written in Java.

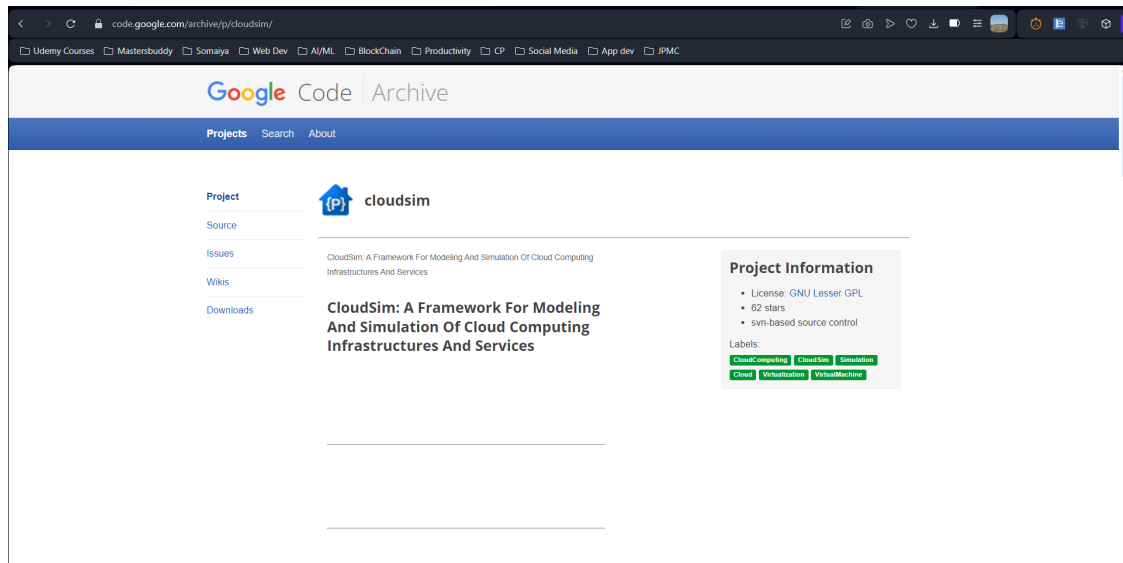
CloudSim Architecture:



Procedure:

1. refer references STEP BY STEP INSTALLATION OF CLOUD SIM INTO NET BEANS
 2. Run all the examples and observe the results.
 3. Add more VM/ Cloudlets in any one example and observe the results.
-

Results: (Steps with commands and screenshots)



```

run:
Starting CloudSimExample1...
Initialising...
Starting CloudSim version 3.0
Datacenter_0 is starting...
Broker is starting...
Entities started.
0.0: Broker: Cloud Resource List received with 1 resource(s)
0.0: Broker: Trying to Create VM #0 in Datacenter_0
0.1: Broker: VM #0 has been created in Datacenter #2, Host #0
0.1: Broker: Sending cloudlet 0 to VM #0
400.1: Broker: Cloudlet 0 received
400.1: Broker: All Cloudlets executed. Finishing...
400.1: Broker: Destroying VM #0
Broker is shutting down...
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
CloudSimExample1 finished!
BUILD SUCCESSFUL (total time: 0 seconds)

```

Questions: what are cloudlets?

A cloudlet is a small-scale data centre located at the edge of the Internet to provide computing resources to mobile applications with lower latency. It is a newer architectural element of cloud computing infrastructure of a 3-tier hierarchy: mobile device or IoT hardware, cloudlet, cloud. The cloudlet concept is also known as mobile micro-cloud.

Outcomes:

CO3: Analyze different cloud architectures.

Conclusion:

In this Experiment, we installed cloudSim and completed the setup in NetBeans IDE and stimulated using examples.

Signature of faculty in-charge with date

References:

1. **STEP BY STEP INSTALLATION OF CLOUD SIM INTO NET BEANS**
<https://researchcloudcomputing.wordpress.com/2015/01/11/step-by-step-ui-installation-of-cloud-sim-into-net-beans/>
2. **CloudSim Example 1**
<https://www.youtube.com/watch?v=YYTrlyUYpRU>
3. <http://www.cloudbus.org/cloudsim/>