KLE Technological University
Creating Value
Leveraging Knowledge

TEAM NUMBER 21 (B1)

HOSPITAL MANAGEMENT SYSTEM

Project Guide: Priyadarshini P

Dinesh D (78)
K Kruthika (91)
Jyotiba Mane(90)
Mohammed Zeeshan(109)

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

FUNCTIONALITIES

Front Page Slideshow

Login / Logout for customer.

Seperate login for admin

Navigation Bar

Ability to Add patient detail and book appointment.

Contact Details on all the pages

Social Media shortcuts on header.

CLOUD SERVICE PROVIDER

Google Cloud

Google Cloud Platform offers services for compute, storage, networking, big data, machine learning and the internet of things (IoT), as well as cloud management, security and developer tools.

Google Cloud has been one of the top cloud providers in the IT industry. The services they offer can be accessed by software developers, as it provides a reliable and highly scalable infrastructure to build, test, and deploy their applications.

FEATURES OF CSP

Google compute engine, which is an infrastructure-as-a-service (IaaS) offering that provides users with virtual machine instances for workload hosting.

Google App Engine, which is a platform-as-a-service (PaaS) offering that gives software developers access to Google's scalable hosting. Developers can also use a software developer kit (SDK) to develop software products that run on App Engine.

Google Cloud Storage, which is a cloud storage platform designed to store large, unstructured data sets.

INFRASTRUCTURE AS A SERVICE (IAAS)

IaaS is the most comprehensive and flexible type of cloud service available. It provides a completely virtualized computing infrastructure that is provisioned and managed over the internet.

With IaaS, the customer can purchase, install, configure, and manage any software they need to use, including things like operating systems, middleware, applications, business analytics, and development tools.

IaaS provides the latest in security protections.

- VirtualMachine Instance is created in Google Cloud.
- OS: Ubuntu Server Running in VM Instance.

PLATFORM AS A SERVICE (PAAS)

PaaS provides the framework needed to build, test, deploy, manage, and update software products rather than pure infrastructure.

It utilizes the same basic infrastructure as IaaS, but it also includes the operating systems, middleware, development tools, and database management systems needed to create software applications.

- MySql for Database
- XAMPP for Hosting php Website

SOFTWARE AS A SERVICE (SAAS)

SaaS is a fully-developed software solution ready for purchase and use over the internet on a subscription basis.

The SaaS provider manages the infrastructure, operating systems, middleware, and data necessary to deliver the program, ensuring that the software is available whenever and wherever customers need it.

- An application which can access the website.

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

SECURITY ASSESSMENT REPORT

Scan date	URLs tested	Duration	Vulnerabilities found	Next scheduled scan
Feb 13, 9:45 AM	41	4 min 17 sec	0	2020-02-13T04:21:15.635Z

RESULTS | URLS CRAWLED | DETAILS

No vulnerabilities found.

RUN SCAN AGAIN

Scan date	URLs tested	Duration	Vulnerabilities found	Next scheduled scan
Feb 13, 9:45 AM	41	4 min 17 sec	0	2020-02-13T04:21:15.635Z

RESULTS | URLS CRAWLED | DETAILS

Starting URLs	http://34.70.252.124
Authentication	None
User agent	Chrome on Linux
Maximum scan speed (QPS)	15
Risk level	Normal
Schedule	Daily

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

DYNAMIC INSERTION OF SIMULATION ELEMENTS, STOPPING AND RESUMING SIMULATION

KLE TECH
KLE Technological University
Creating Value
Leveraging Knowledge

SIMULATION TOOL USED

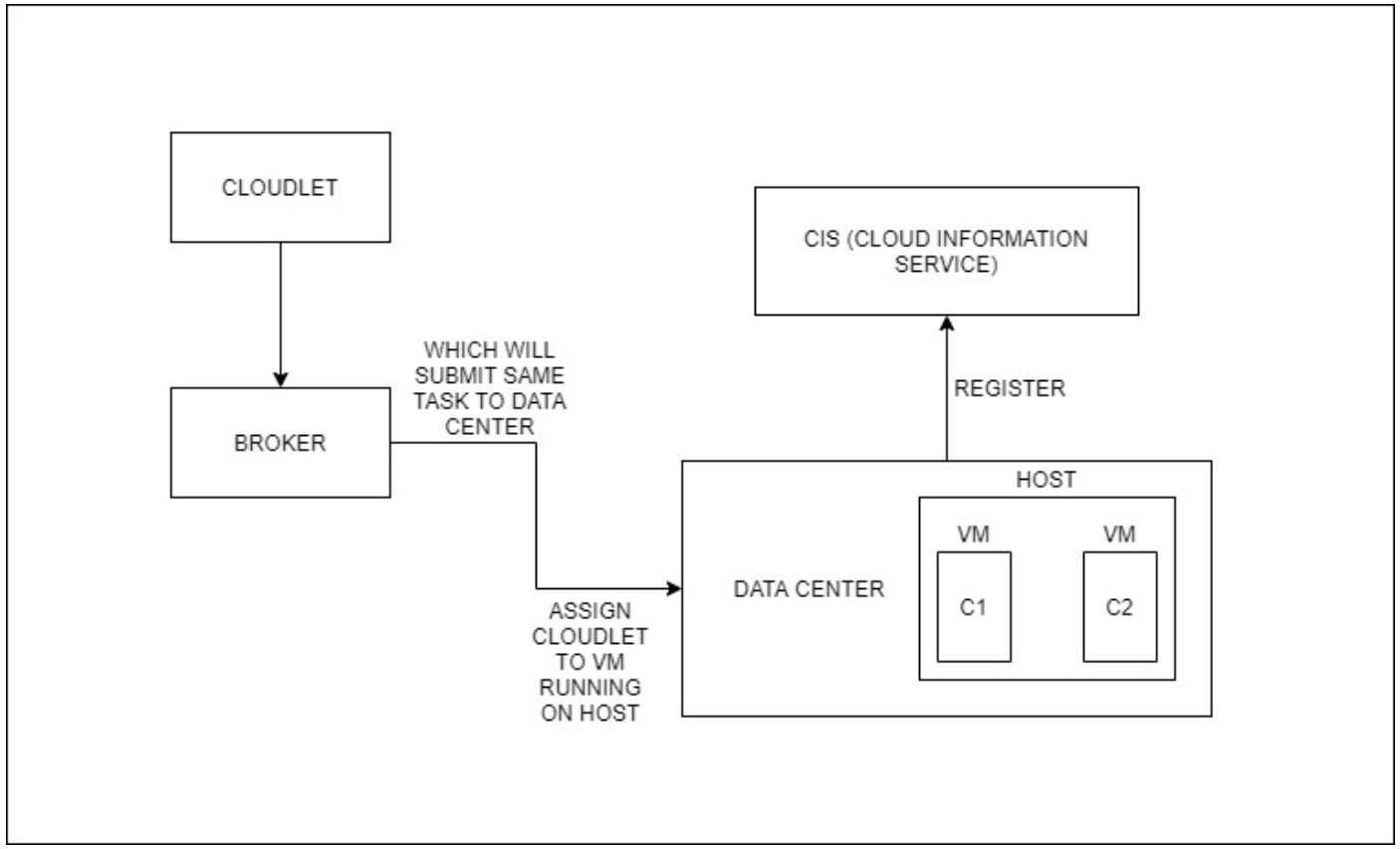
CloudSim:

CloudSim is a toolkit for modelling and simulation of Cloud computing environments. It provides a system and behavioral modelling of cloud computing components. This can be used to evaluate the performance which may be useful to get insights. As it provides classes for describing datacenter's , computational resources and virtual machines this will be helpful in live migration of virtual machines.

FEATURES:

- Support for modelling and simulation of large-scale Cloud computing environments, including data centers, on a single physical computing node (could be a desktop, laptop, or server machine).
- A self-contained platform for modelling Clouds, service brokers, provisioning, and allocation policies.
- Facilitates the simulation of network connections across the simulated system elements.
- Availability of a virtualization engine that facilitates the creation and management of multiple, independent, and co-hosted virtualized services on a data center node.

BLOCK DIAGRAM



STEPS

How many users -> set number of user (broker count)

Initialization of common Variables

Example : List

Object of CIS created

Create datacenter -> Hosts + Characteristics

Datacenter broker instance (communication between datacenter and submissions of cloudlet)

STEPS

Virtual machine instance -> Submitted to broker

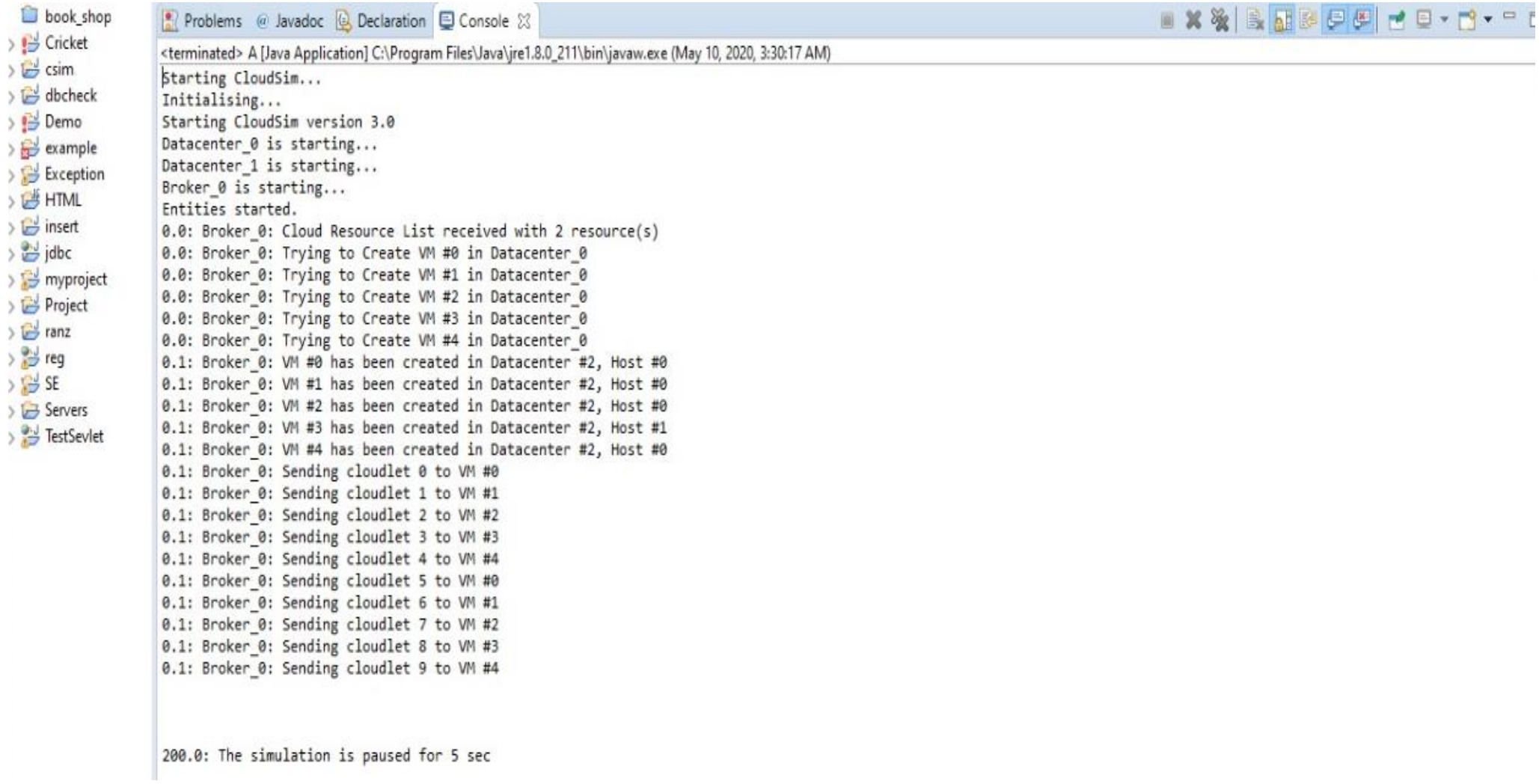
Cloudlets should be specified (tasks) -> mips , computing capacity , bandwidth

Submit these cloudlets to broker

Now broker has both broker and cloudlets

- To start the simulation
- Stop simulation process
- Print the status of the simulation

FLOW OF EXECUTION



```
200.0: The simulation is paused for 5 sec


Adding: Broker_1
Broker_1 is starting...
200.0: Broker_1: Cloud Resource List received with 2 resource(s)
200.0: Broker_1: Trying to Create VM #100 in Datacenter_0
200.0: Broker_1: Trying to Create VM #101 in Datacenter_0
200.0: Broker_1: Trying to Create VM #102 in Datacenter_0
200.0: Broker_1: Trying to Create VM #103 in Datacenter_0
200.0: Broker_1: Trying to Create VM #104 in Datacenter_0
200.1: Broker_1: VM #100 has been created in Datacenter #2, Host #1
200.1: Broker_1: VM #101 has been created in Datacenter #2, Host #0
200.1: Broker_1: VM #102 has been created in Datacenter #2, Host #1
200.1: Broker_1: VM #103 has been created in Datacenter #2, Host #0
200.1: Broker_1: VM #104 has been created in Datacenter #2, Host #1
200.1: Broker_1: Sending cloudlet 100 to VM #100
200.1: Broker_1: Sending cloudlet 101 to VM #101
200.1: Broker_1: Sending cloudlet 102 to VM #102
200.1: Broker_1: Sending cloudlet 103 to VM #103
200.1: Broker_1: Sending cloudlet 104 to VM #104
200.1: Broker_1: Sending cloudlet 105 to VM #100
200.1: Broker_1: Sending cloudlet 106 to VM #101
200.1: Broker_1: Sending cloudlet 107 to VM #102
200.1: Broker_1: Sending cloudlet 108 to VM #103
200.1: Broker_1: Sending cloudlet 109 to VM #104
320.096: Broker_0: Cloudlet 0 received
320.096: Broker_0: Cloudlet 5 received
320.096: Broker_0: Cloudlet 1 received
320.096: Broker_0: Cloudlet 6 received
320.096: Broker_0: Cloudlet 2 received
320.096: Broker_0: Cloudlet 7 received
```

```
519.996: Broker_1: Destroying VM #104
Broker_1 is shutting down...
Simulation: No more future events
CloudInformationService: Notify all CloudSim entities for shutting down.
Datacenter_0 is shutting down...
Datacenter_1 is shutting down...
Broker_0 is shutting down...
Broker_1 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            320        0.1            320.1
    5        SUCCESS        2            0            320        0.1            320.1
    1        SUCCESS        2            1            320        0.1            320.1
    6        SUCCESS        2            1            320        0.1            320.1
    2        SUCCESS        2            2            320        0.1            320.1
    7        SUCCESS        2            2            320        0.1            320.1
    4        SUCCESS        2            4            320        0.1            320.1
    9        SUCCESS        2            4            320        0.1            320.1
    3        SUCCESS        2            3            320        0.1            320.1
    8        SUCCESS        2            3            320        0.1            320.1
*****Datacenter: Datacenter_0*****
User id         Debt
4               5128
5               5128
**********************************
*****Datacenter: Datacenter_1*****
User id         Debt
**********************************
CloudSim finished!
```

KLE TECH

KLE Technological University

Creating Value
Leveraging Knowledge

THANK YOU...