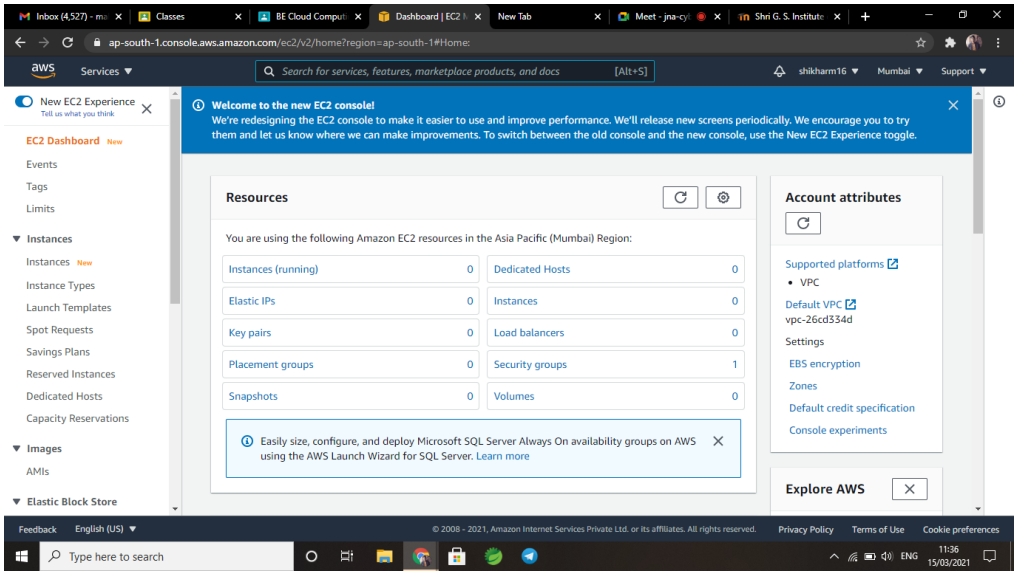
ASSIGNMENT - 01

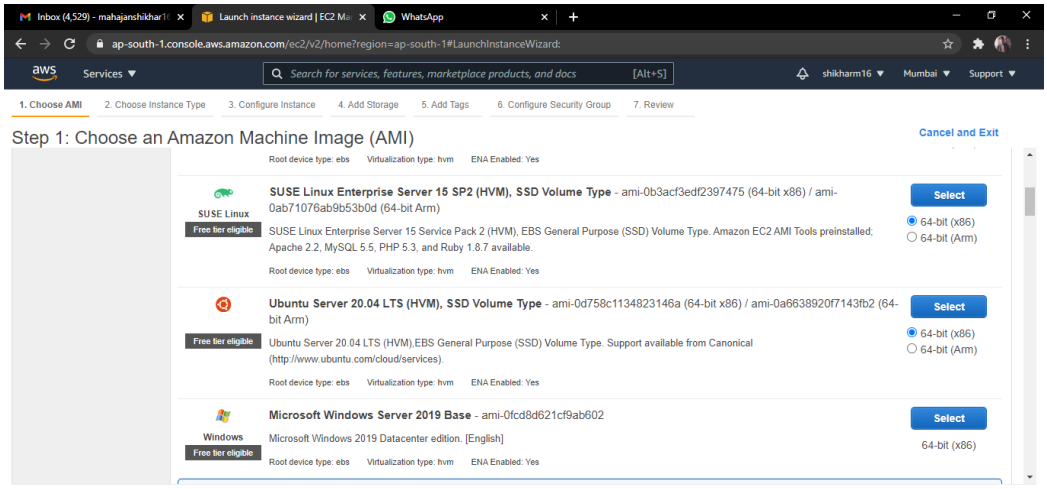
Question 1:

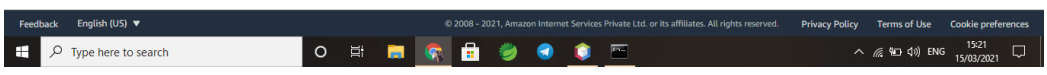
Objective: To learn about Amazon/Google cloud. Use Public cloud computing platforms and learn their virtual computing platform that allows users to rent virtual machines on which they can run their applications.

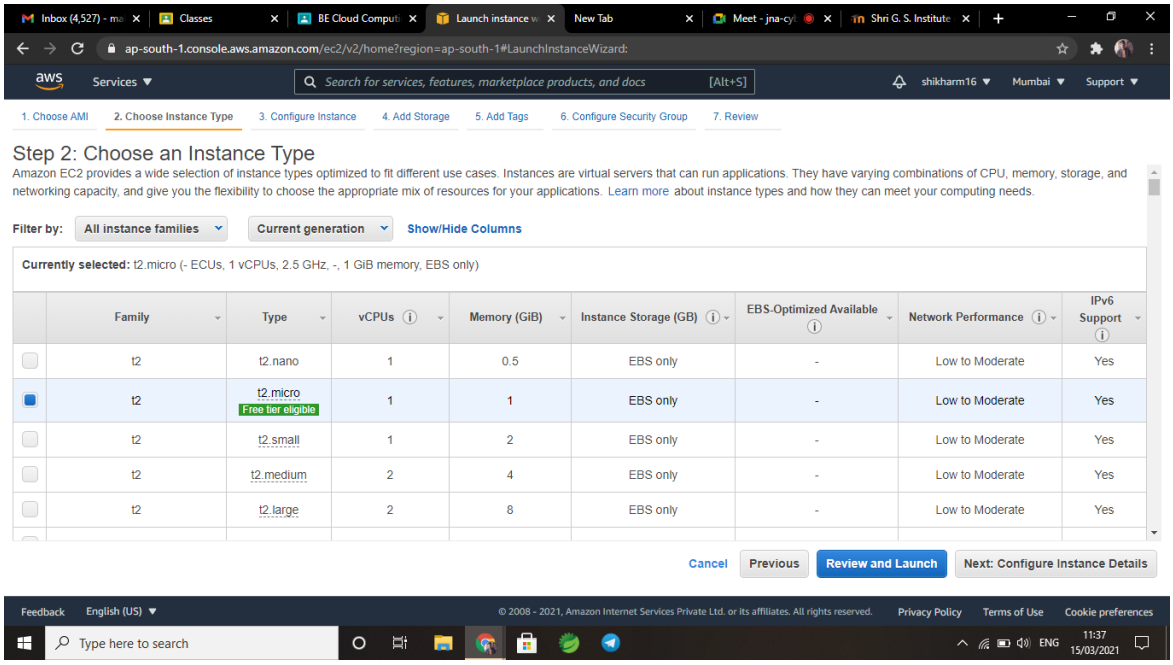
Title: Getting Started in the Public Cloud Computing Platform like AWS/Google.

Task: Create AWS instances,Connecting to Your Linux Instance Using SSH and Run a Linux OS in a Virtual Machine .Explore its Computing and Storage.








Inbox (4,527) - ma
Classes
BE Cloud Computi
Launch instance w
New Tab
Meet - jna-cyt
Shri G. S. Institute
ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:
aws
Services
Search for services, features, marketplace products, and docs [Alt+S]
shikharm16
Mumbai
Support
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 2: Choose an Instance Type
Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. Learn more about instance types and how they can meet your computing needs.
Filter by:
All instance families
Current generation
Show/Hide Columns
Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, -, 1 GiB memory, EBS only)
Family
Type
vCPUs
Memory (GiB)
Instance Storage (GB)
EBS-Optimized Available
Network Performance
IPv6 Support
t2 t2.nano 1 0.5 EBS only - Low to Moderate Yes
t2 t2.micro Free tier eligible 1 1 EBS only - Low to Moderate Yes
t2 t2.small 1 2 EBS only - Low to Moderate Yes
t2 t2.medium 2 4 EBS only - Low to Moderate Yes
t2 t2.large 2 8 EBS only - Low to Moderate Yes
Cancel
Previous
Review and Launch
Next: Configure Instance Details
Feedback
English (US)
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ENG
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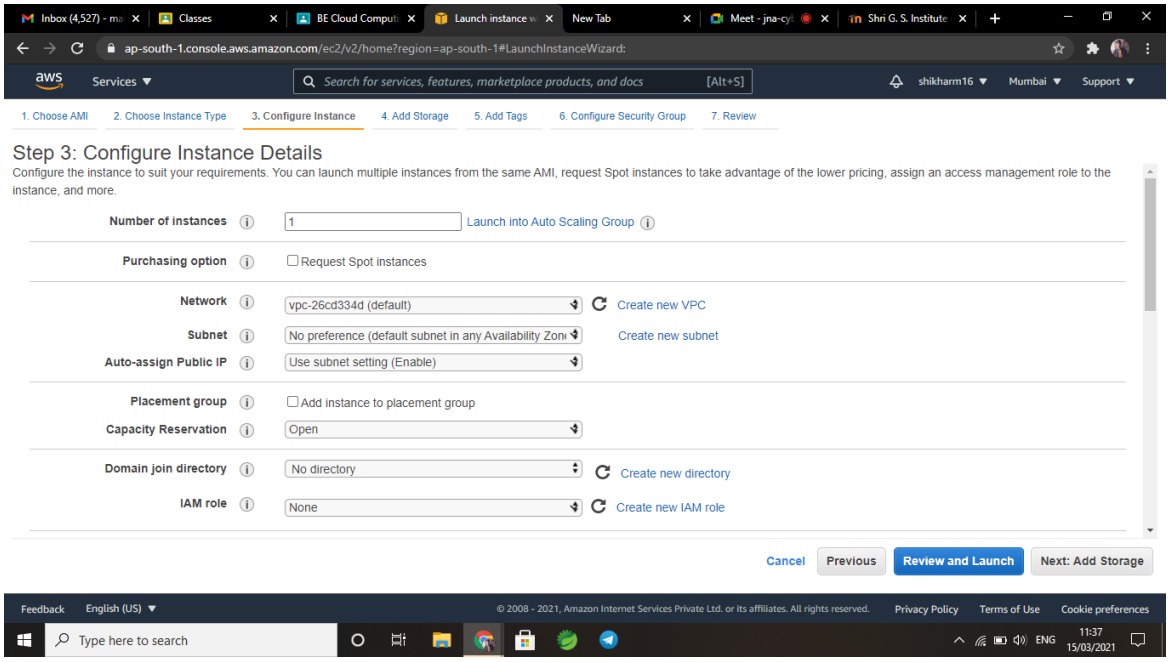
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ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:
aws
Services
Search for services, features, marketplace products, and docs [Alt+S]
shikharm16
Mumbai
Support
1. Choose AMI
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7. Review
Step 3: Configure Instance Details
Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.
Number of instances 1 Launch into Auto Scaling Group
Purchasing option Request Spot instances
Network vpc-26cd334d (default) Create new VPC
Subnet No preference (default subnet in any Availability Zone) Create new subnet
Auto-assign Public IP Use subnet setting (Enable)
Placement group Add instance to placement group
Capacity Reservation Open
Domain join directory No directory Create new directory
IAM role None Create new IAM role
Cancel
Previous
Review and Launch
Next: Add Storage
Feedback
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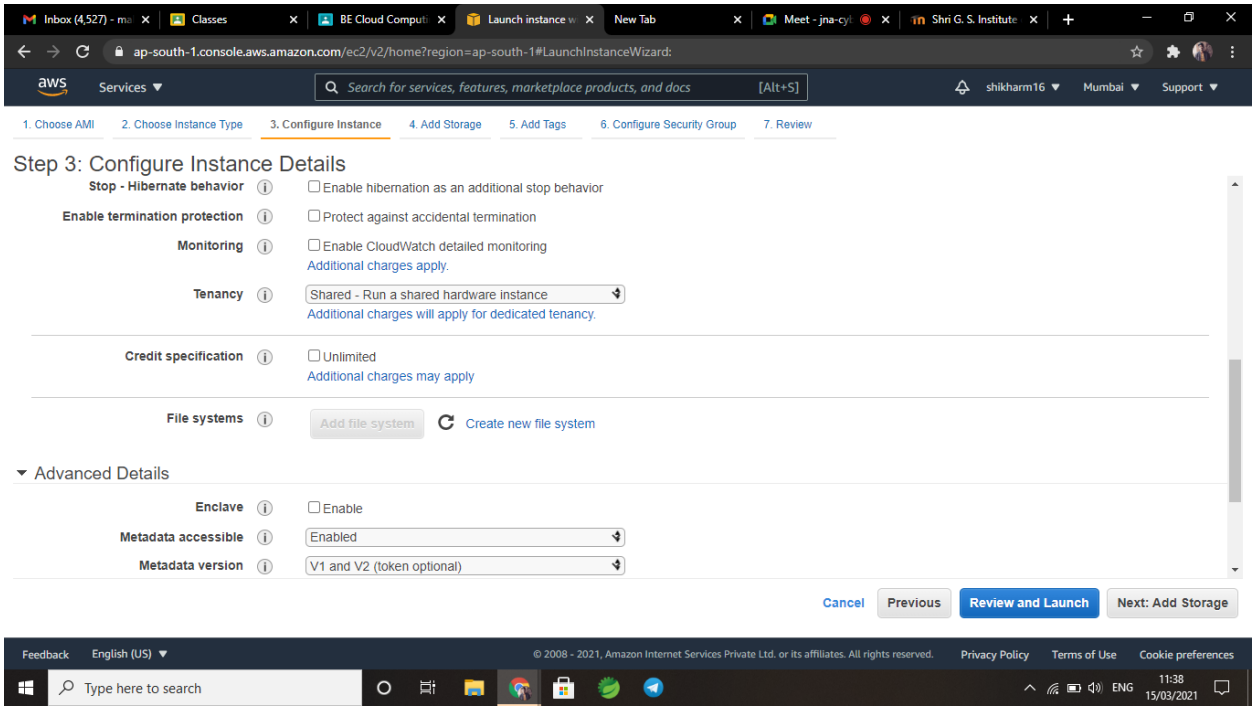
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Launch instance w
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ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:
aws
Services
Search for services, features, marketplace products, and docs [Alt+S]
shikharm16
Mumbai
Support
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 3: Configure Instance Details
Stop - Hibernate behavior
Enable hibernation as an additional stop behavior
Enable termination protection
Protect against accidental termination
Monitoring
Enable CloudWatch detailed monitoring
Additional charges apply.
Tenancy
Shared - Run a shared hardware instance
Additional charges will apply for dedicated tenancy.
Credit specification
Unlimited
Additional charges may apply
File systems
Add file system
Create new file system
Advanced Details
Enclave
Enable
Metadata accessible
Enabled
Metadata version
V1 and V2 (token optional)
Cancel
Previous
Review and Launch
Next: Add Storage
Feedback
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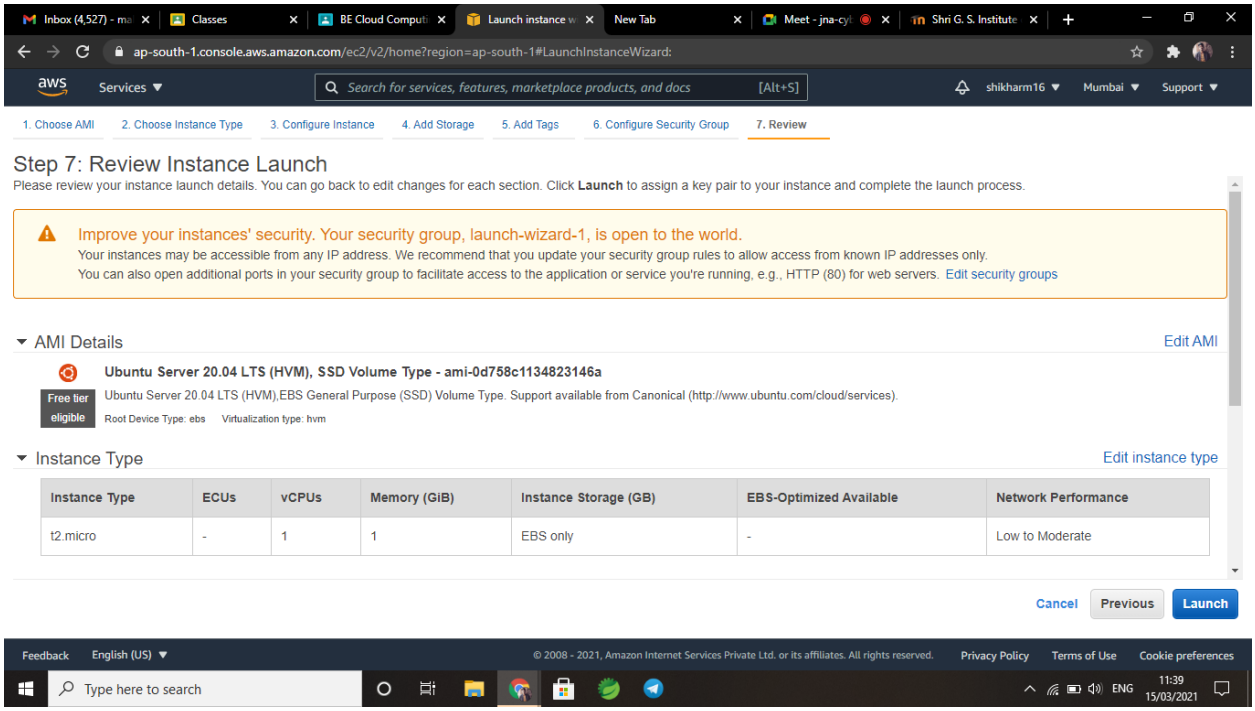
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Launch instance w
New Tab
Meet - jna-cyl
Shri G. S. Institute
ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#LaunchInstanceWizard:
aws
Services
Search for services, features, marketplace products, and docs [Alt+S]
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Mumbai
Support
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
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5. Add Tags
6. Configure Security Group
7. Review
Step 7: Review Instance Launch
Please review your instance launch details. You can go back to edit changes for each section. Click Launch to assign a key pair to your instance and complete the launch process.
Improve your instances' security. Your security group, launch-wizard-1, is open to the world.
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.
You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. Edit security groups
AMI Details
Edit AMI
Ubuntu Server 20.04 LTS (HVM), SSD Volume Type - ami-0d758c1134823146a
Free tier eligible
Ubuntu Server 20.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services).
Root Device Type: ebs
Virtualization type: hvm
Instance Type
Edit instance type
Instance Type
ECUs
vCPUs
Memory (GiB)
Instance Storage (GB)
EBS-Optimized Available
Network Performance
t2.micro
-
1
1
EBS only
-
Low to Moderate
Cancel
Previous
Launch
Feedback
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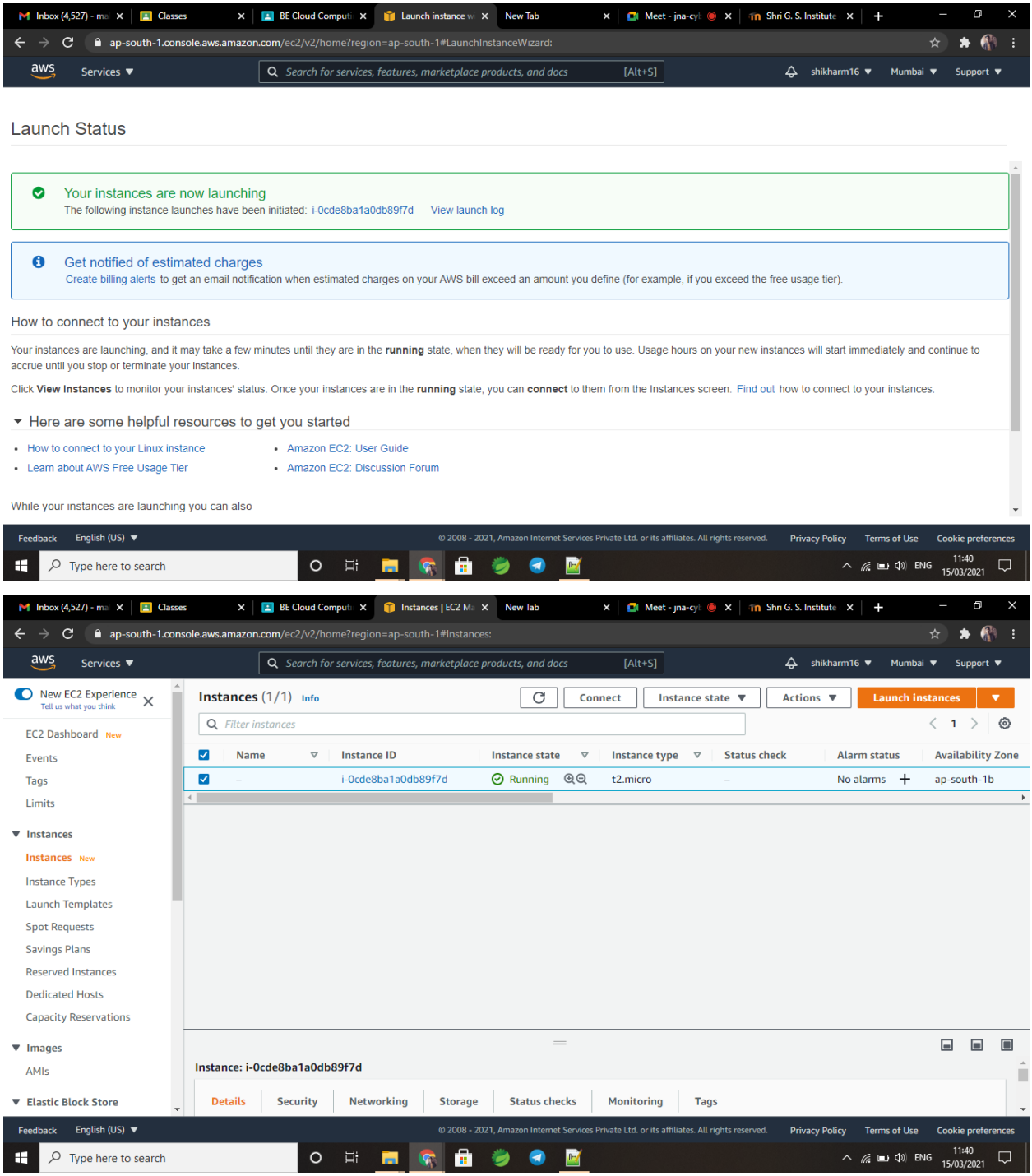
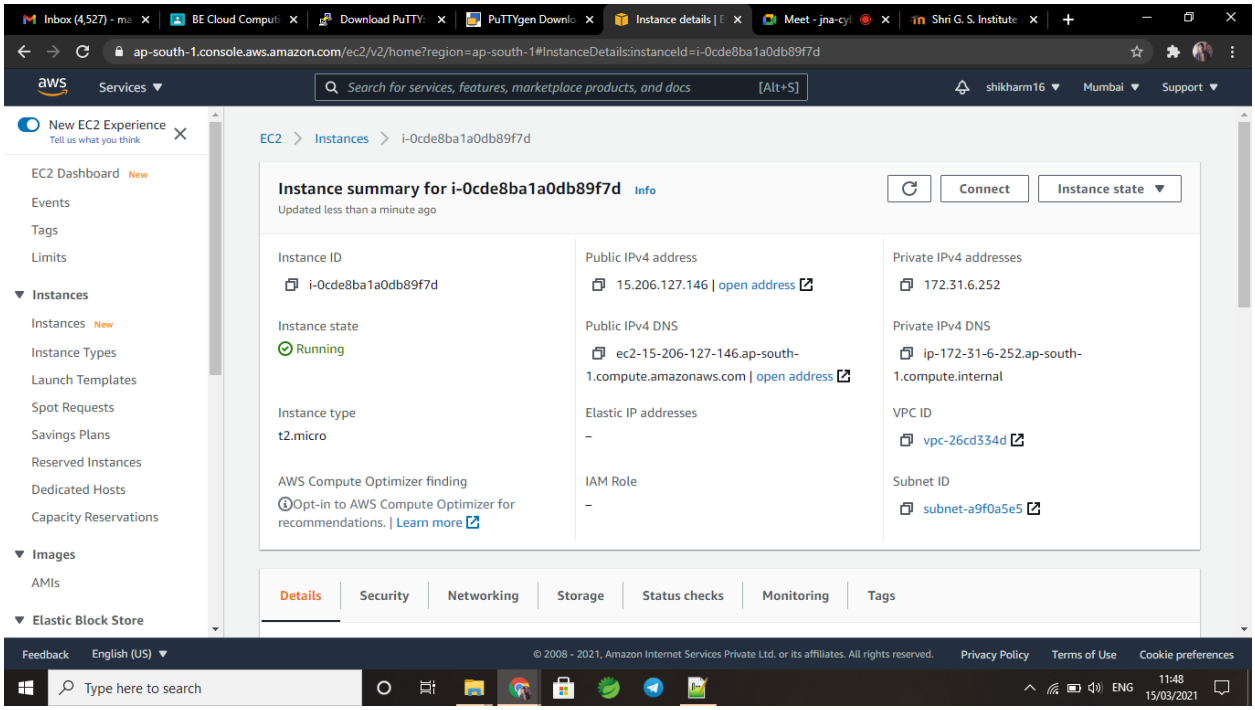

Launch Status
Your instances are now launching
The following instance launches have been initiated: i-0cde8ba1a0db89f7d View launch log
Get notified of estimated charges
Create billing alerts to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier).
How to connect to your instances
Your instances are launching, and it may take a few minutes until they are in the running state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances.
Click View Instances to monitor your instances' status. Once your instances are in the running state, you can connect to them from the Instances screen. Find out how to connect to your instances.
Here are some helpful resources to get you started
How to connect to your Linux instance
Learn about AWS Free Usage Tier
Amazon EC2: User Guide
Amazon EC2: Discussion Forum
While your instances are launching you can also
Instances (1/1)
Connect
Instance state
Actions
Launch instances
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
i-0cde8ba1a0db89f7d
Running
t2.micro
No alarms
ap-south-1b
Instance: i-0cde8ba1a0db89f7d
Details
Security
Networking
Storage
Status checks
Monitoring
Tags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Download PuTTY:
PuTTYgen Downlo
Instance details | E
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Shri G. S. Institute
ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#InstanceDetails:instanceId=i-0cde8ba1a0db89f7d
Services
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Mumbai
Support
New EC2 Experience
Tell us what you think
EC2 Dashboard New
Events
Tags
Limits
Instances
Instances New
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
Elastic Block Store
EC2 > Instances > i-0cde8ba1a0db89f7d
Instance summary for i-0cde8ba1a0db89f7d Info
Updated less than a minute ago
Connect
Instance state
Instance ID
i-0cde8ba1a0db89f7d
Instance state
Running
Instance type
t2.micro
AWS Compute Optimizer finding
Opt-in to AWS Compute Optimizer for recommendations. | Learn more
Public IPv4 address
15.206.127.146 | open address
Public IPv4 DNS
ec2-15-206-127-146.ap-south-1.compute.amazonaws.com | open address
Elastic IP addresses
-
IAM Role
-
Private IPv4 addresses
172.31.6.252
Private IPv4 DNS
ip-172-31-6-252.ap-south-1.compute.internal
VPC ID
vpc-26cd334d
Subnet ID
subnet-a9f0a5e5
Details
Security
Networking
Storage
Status checks
Monitoring
Tags
Feedback
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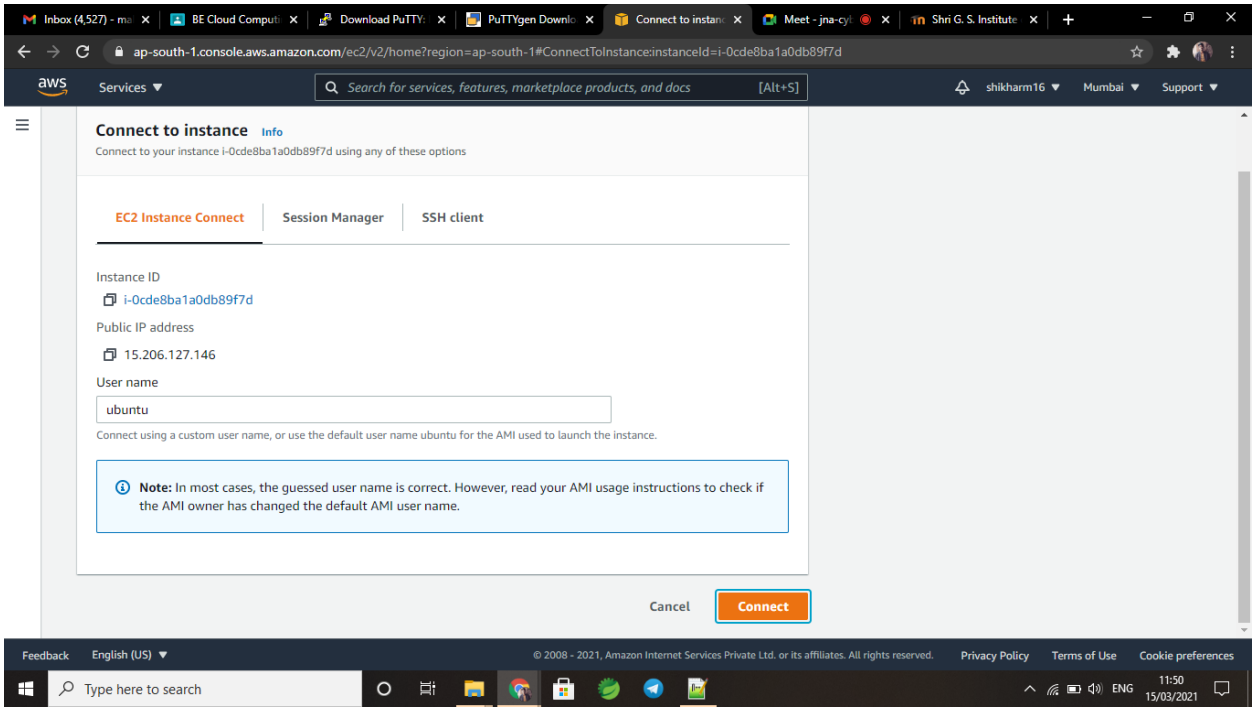
Inbox (4,527) - ma
BE Cloud Computi
Download PuTTY:
PuTTYgen Downlo
Connect to instanc
Meet - jna-cyl
Shri G. S. Institute
ap-south-1.console.aws.amazon.com/ec2/v2/home?region=ap-south-1#ConnectToInstance:instanceId=i-0cde8ba1a0db89f7d
Services
Search for services, features, marketplace products, and docs [Alt+S]
shikharm16
Mumbai
Support
Connect to instance Info
Connect to your instance i-0cde8ba1a0db89f7d using any of these options
EC2 Instance Connect
Session Manager
SSH client
Instance ID
i-0cde8ba1a0db89f7d
Public IP address
15.206.127.146
User name
ubuntu
Connect using a custom user name, or use the default user name ubuntu for the AMI used to launch the instance.
Note: In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.
Cancel
Connect
Feedback
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Question 2

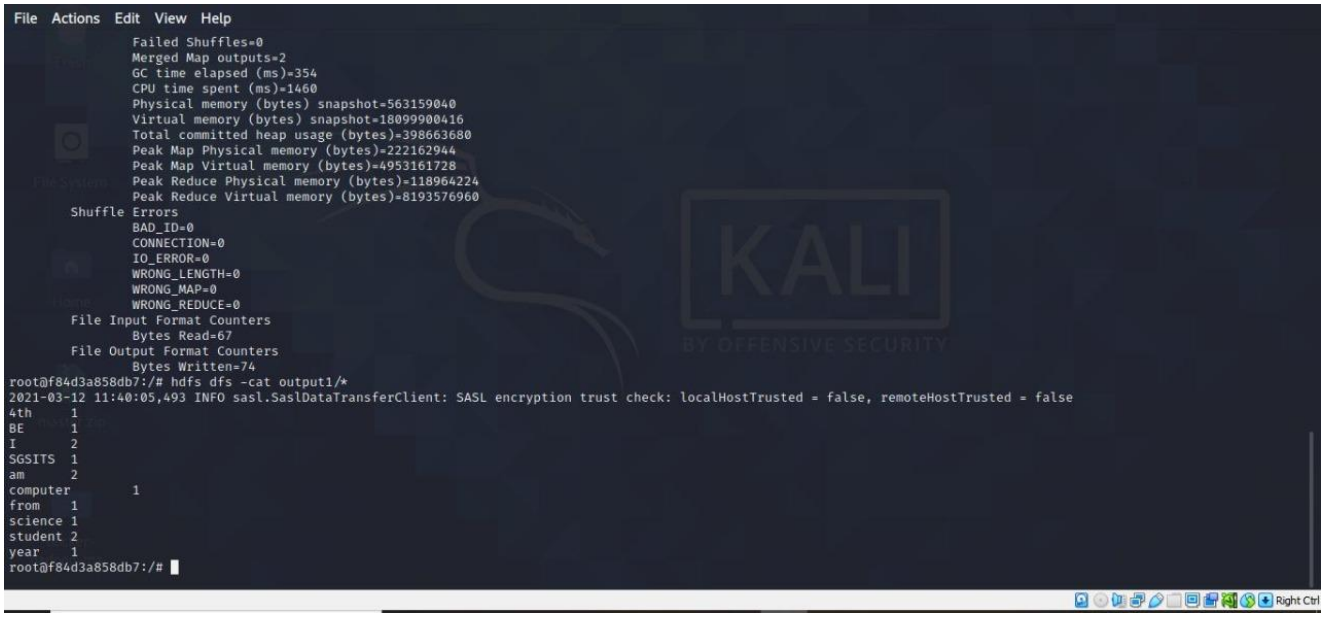
Objective: To learn HDFS commands and design Map Reduce Algorithms.

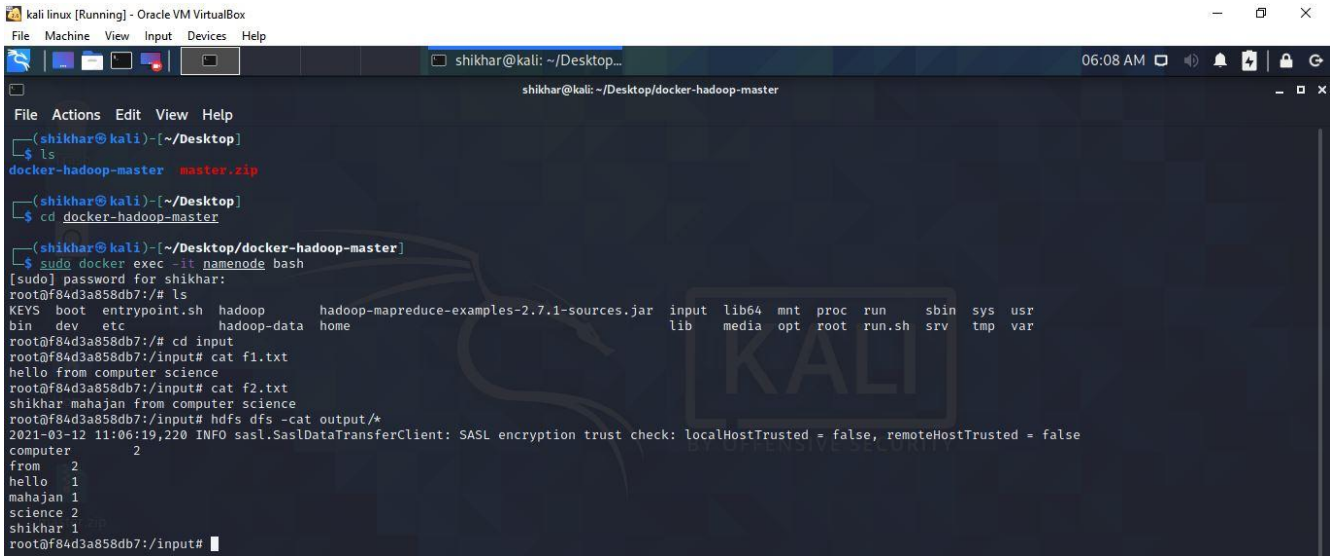
Title: Explore HDFS and design Map Reduce algorithm.

Task: Write Map reduce code for some basic problems like word count problem.

```
root@f84d3a858db7:/# mkdir input1
root@f84d3a858db7:/# echo "I am computer science student from SGSITS">input1/f1.txt
root@f84d3a858db7:/# echo "I am BE 4th year student">input1/f2.txt
root@f84d3a858db7:/# hadoop fs -mkdir -p input1
root@f84d3a858db7:/# hdfs dfs -put ./input1/* input1
2021-03-12 11:35:05,626 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2021-03-12 11:35:05,916 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
root@f84d3a858db7:/# ls
KEYS  boot  entrypoint.sh  hadoop       hadoop-mapreduce-examples-2.7.1-sources.jar  input   lib    media  opt   root  run.sh  srv  tmp  var
bin   dev   etc            hadoop-data  home                                         input1  lib64  mnt    proc  run   sbin    sys  usr
root@f84d3a858db7:/# hadoop jar hadoop-mapreduce-examples-2.7.1-sources.jar org.apace.hadoop.examples.WordCount input1 output1
Exception in thread "main" java.lang.ClassNotFoundException: org.apace.hadoop.examples.WordCount
        at java.net.URLClassLoader.findClass(URLClassLoader.java:382)
        at java.lang.ClassLoader.loadClass(ClassLoader.java:418)
        at java.lang.ClassLoader.loadClass(ClassLoader.java:351)
        at java.lang.Class.forName0(Native Method)
        at java.lang.Class.forName(Class.java:348)
        at org.apache.hadoop.util.RunJar.run(RunJar.java:316)
        at org.apache.hadoop.util.RunJar.main(RunJar.java:236)
root@f84d3a858db7:/# hdfs dfs -cat output1/*
cat: `output1/*': No such file or directory
root@f84d3a858db7:/# hadoop jar hadoop-mapreduce-examples-2.7.1-sources.jar org.apache.hadoop.examples.WordCount input1 output1
2021-03-12 11:39:22,277 INFO client.RMProxy: Connecting to ResourceManager at resourcemanager/172.18.0.2:8032
2021-03-12 11:39:22,583 INFO client.AHSProxy: Connecting to Application History server at historyserver/172.18.0.5:10200
2021-03-12 11:39:23,045 INFO mapreduce.JobResourceUploader: Disabling Erasure Coding for path: /tmp/hadoop-yarn/staging/root/.staging/job_1615544228106_0002
2021-03-12 11:39:23,292 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2021-03-12 11:39:23,551 INFO input.FileInputFormat: Total input files to process : 2
2021-03-12 11:39:23,640 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2021-03-12 11:39:23,724 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2021-03-12 11:39:23,764 INFO mapreduce.JobSubmitter: number of splits:2
2021-03-12 11:39:24,062 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
```

```
File  Actions  Edit  View  Help
2021-03-12 11:39:23,764 INFO mapreduce.JobSubmitter: number of splits:2
2021-03-12 11:39:24,062 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
2021-03-12 11:39:24,136 INFO mapreduce.JobSubmitter: Submitting tokens for job: job_1615544228106_0002
2021-03-12 11:39:24,137 INFO mapreduce.JobSubmitter: Executing with tokens: []
2021-03-12 11:39:24,540 INFO conf.Configuration: resource-types.xml not found
2021-03-12 11:39:24,541 INFO resource.ResourceUtils: Unable to find 'resource-types.xml'.
2021-03-12 11:39:25,315 INFO impl.YarnClientImpl: Submitted application application_1615544228106_0002
2021-03-12 11:39:25,384 INFO mapreduce.Job: The url to track the job: http://resourcemanager:8088/proxy/application_1615544228106_0002/
2021-03-12 11:39:25,385 INFO mapreduce.Job: Running job: job_1615544228106_0002
2021-03-12 11:39:36,718 INFO mapreduce.Job: Job job_1615544228106_0002 running in uber mode : false
2021-03-12 11:39:36,720 INFO mapreduce.Job:  map 0% reduce 0%
2021-03-12 11:39:47,911 INFO mapreduce.Job:  map 50% reduce 0%
2021-03-12 11:39:48,919 INFO mapreduce.Job:  map 100% reduce 0%
2021-03-12 11:39:55,008 INFO mapreduce.Job:  map 100% reduce 100%
2021-03-12 11:39:56,033 INFO mapreduce.Job: Job job_1615544228106_0002 completed successfully
2021-03-12 11:39:56,193 INFO mapreduce.Job: Counters: 54
        File System Counters
                FILE: Number of bytes read=107
                FILE: Number of bytes written=688111
                FILE: Number of read operations=0
                FILE: Number of large read operations=0
                FILE: Number of write operations=0
                HDFS: Number of bytes read=285
                HDFS: Number of bytes written=74
                HDFS: Number of read operations=11
                HDFS: Number of large read operations=0
                HDFS: Number of write operations=2
                HDFS: Number of bytes read erasure-coded=0
        Job Counters
                Launched map tasks=2
                Launched reduce tasks=1
                Rack-local map tasks=2
                Total time spent by all maps in occupied slots (ms)=63328
                Total time spent by all reduces in occupied slots (ms)=34232
                Total time spent by all map tasks (ms)=15832
```


File Actions Edit View Help
Failed Shuffles=0
Merged Map outputs=2
GC time elapsed (ms)=354
CPU time spent (ms)=1460
Physical memory (bytes) snapshot=563159040
Virtual memory (bytes) snapshot=18099900416
Total committed heap usage (bytes)=398663680
Peak Map Physical memory (bytes)=222162944
Peak Map Virtual memory (bytes)=4953161728
Peak Reduce Physical memory (bytes)=118964224
Peak Reduce Virtual memory (bytes)=8193576960
Shuffle Errors
BAD_ID=0
CONNECTION=0
IO_ERROR=0
WRONG_LENGTH=0
WRONG_MAP=0
WRONG_REDUCE=0
File Input Format Counters
Bytes Read=67
File Output Format Counters
Bytes Written=74
root@f84d3a858db7:/# hdfs dfs -cat output1/*
2021-03-12 11:40:05,493 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
4th 1
BE 1
I 2
SGSITS 1
am 2
computer 1
from 1
science 1
student 2
year 1
root@f84d3a858db7:/#
Right Ctrl


kali linux [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
shikhar@kali: ~/Desktop...
06:08 AM
shikhar@kali: ~/Desktop/docker-hadoop-master
File Actions Edit View Help
(shikhar㉿kali)-[~/Desktop]
$ ls
docker-hadoop-master master.zip
(shikhar㉿kali)-[~/Desktop]
$ cd docker-hadoop-master
(shikhar㉿kali)-[~/Desktop/docker-hadoop-master]
$ sudo docker exec -it namenode bash
[sudo] password for shikhar:
root@f84d3a858db7:/# ls
KEYS boot entrypoint.sh hadoop hadoop-mapreduce-examples-2.7.1-sources.jar input lib64 mnt proc run sbin sys usr
bin dev etc hadoop-data home lib media opt root run.sh srv tmp var
root@f84d3a858db7:/# cd input
root@f84d3a858db7:/input# cat f1.txt
hello from computer science
root@f84d3a858db7:/input# cat f2.txt
shikhar mahajan from computer science
root@f84d3a858db7:/input# hdfs dfs -cat output/*
2021-03-12 11:06:19,220 INFO sasl.SaslDataTransferClient: SASL encryption trust check: localHostTrusted = false, remoteHostTrusted = false
computer 2
from 2
hello 1
mahajan 1
science 2
shikhar 1
root@f84d3a858db7:/input#

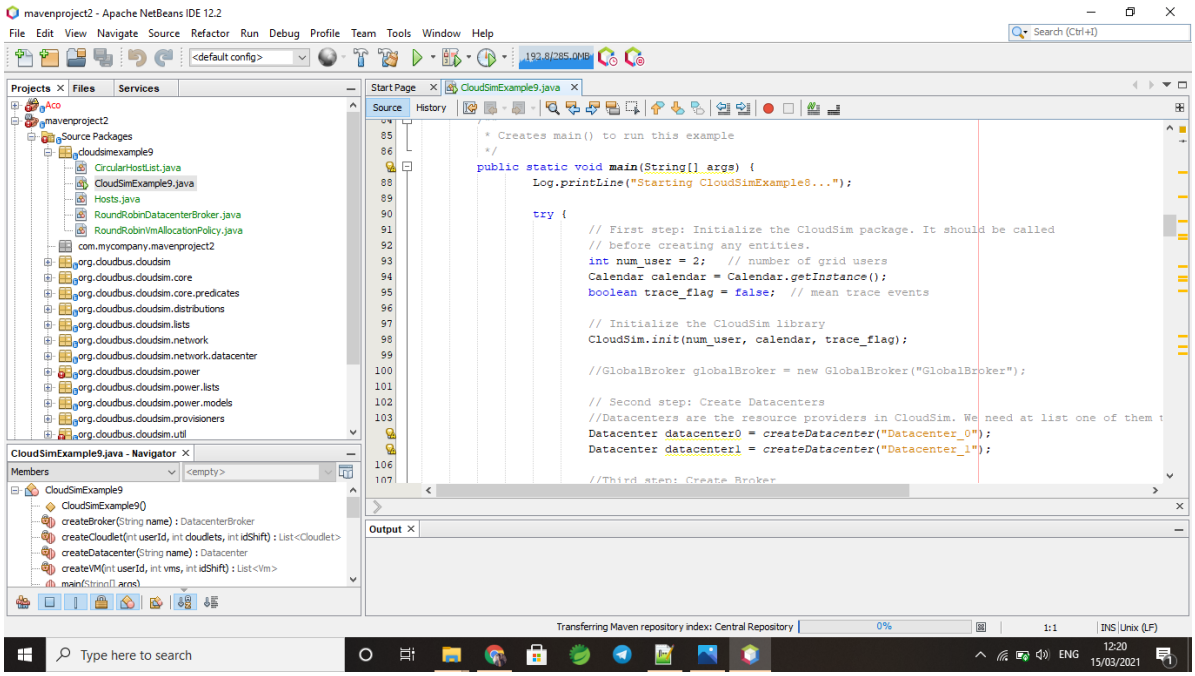
Question 3 :

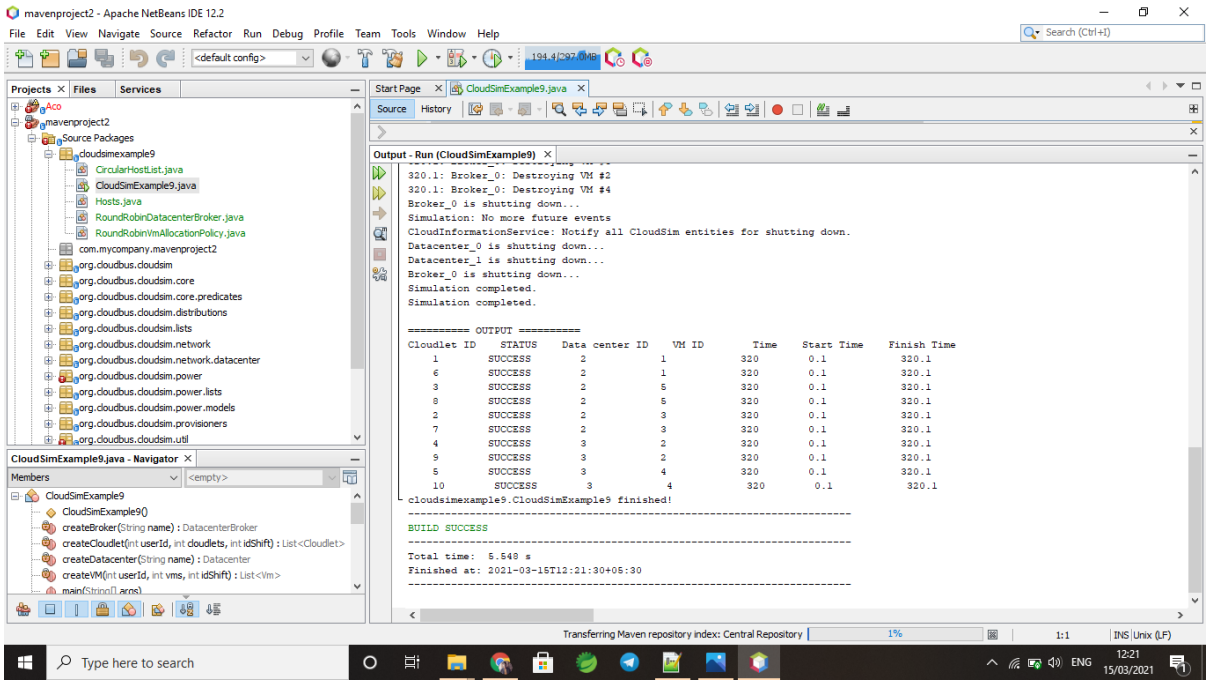
Objective: To learn basic Task scheduling algorithms in the cloud .

Title: Implement cloud Task Scheduling algorithm using cloud simulator.

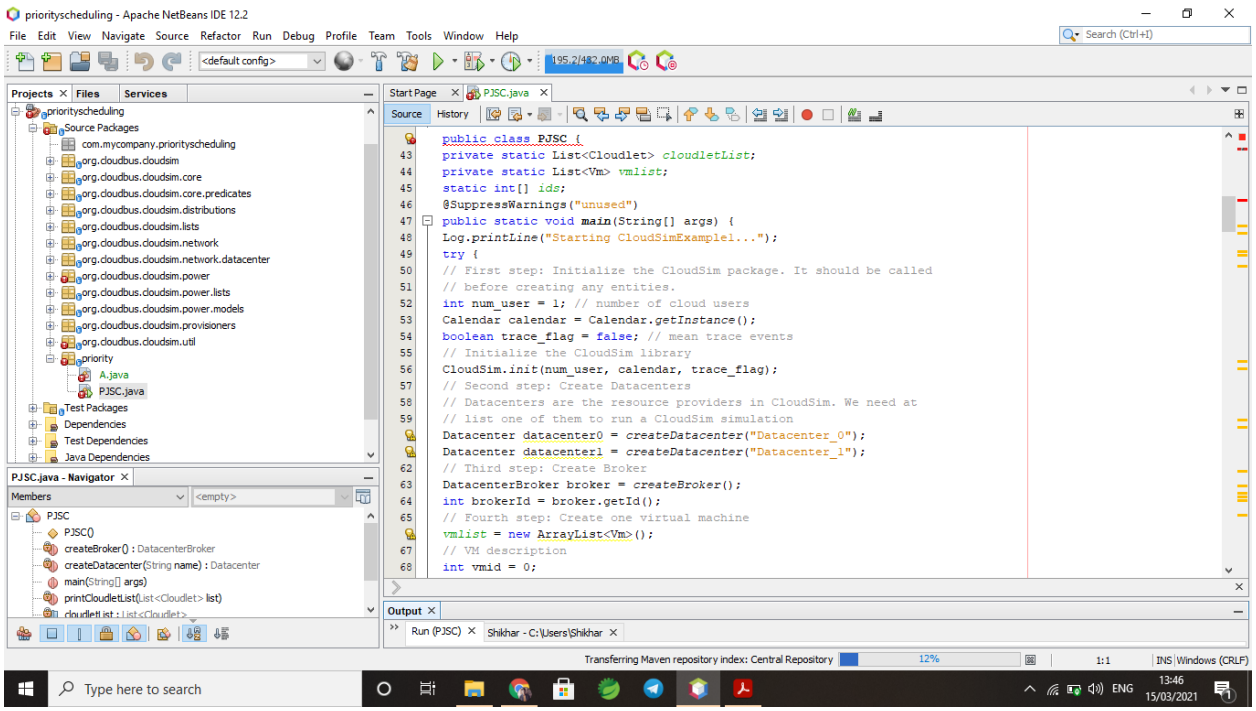
Task: Install cloudsim and implement basic task scheduling algorithm.

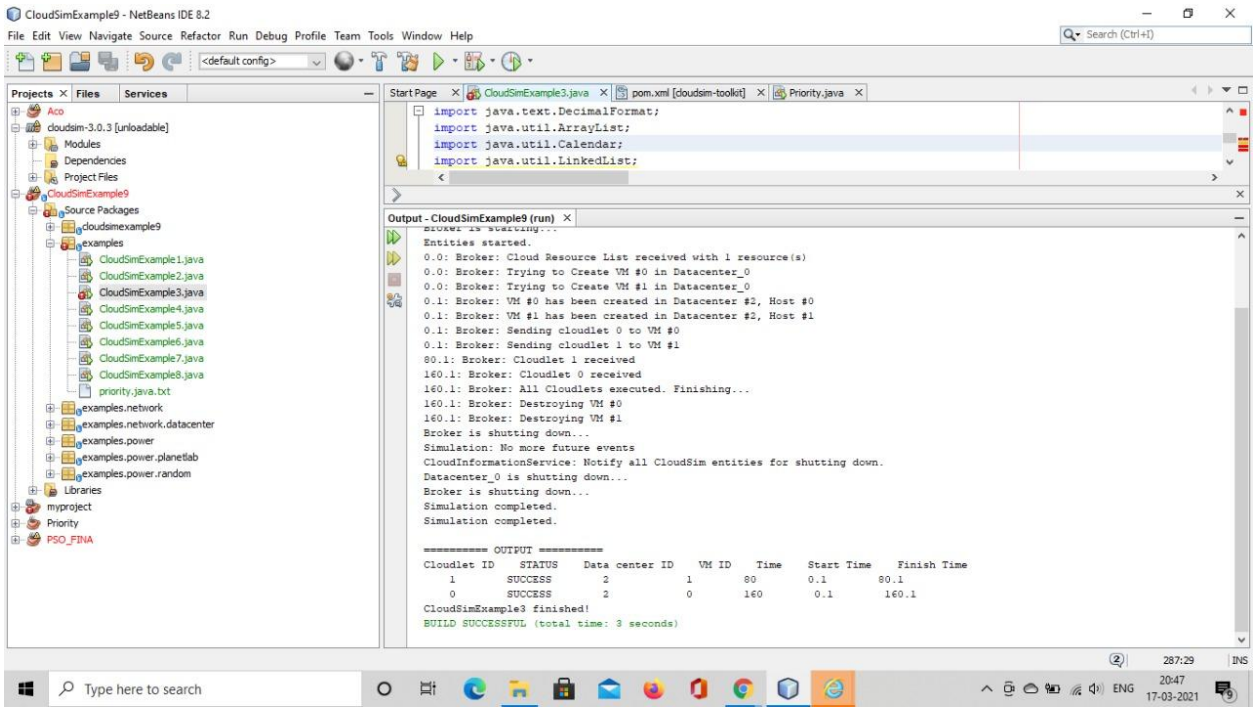
1. **Round Robin**





2. Priority Scheduling





Question 4:

Objective : To learn use and design of REST APIs

Title: Designing a web application that uses REST API's .

Task: Design any application that uses the REST interface in json format and xml format.

REST-API in **python** using **django framework**

Project Name: CloudRest

Two files were used:

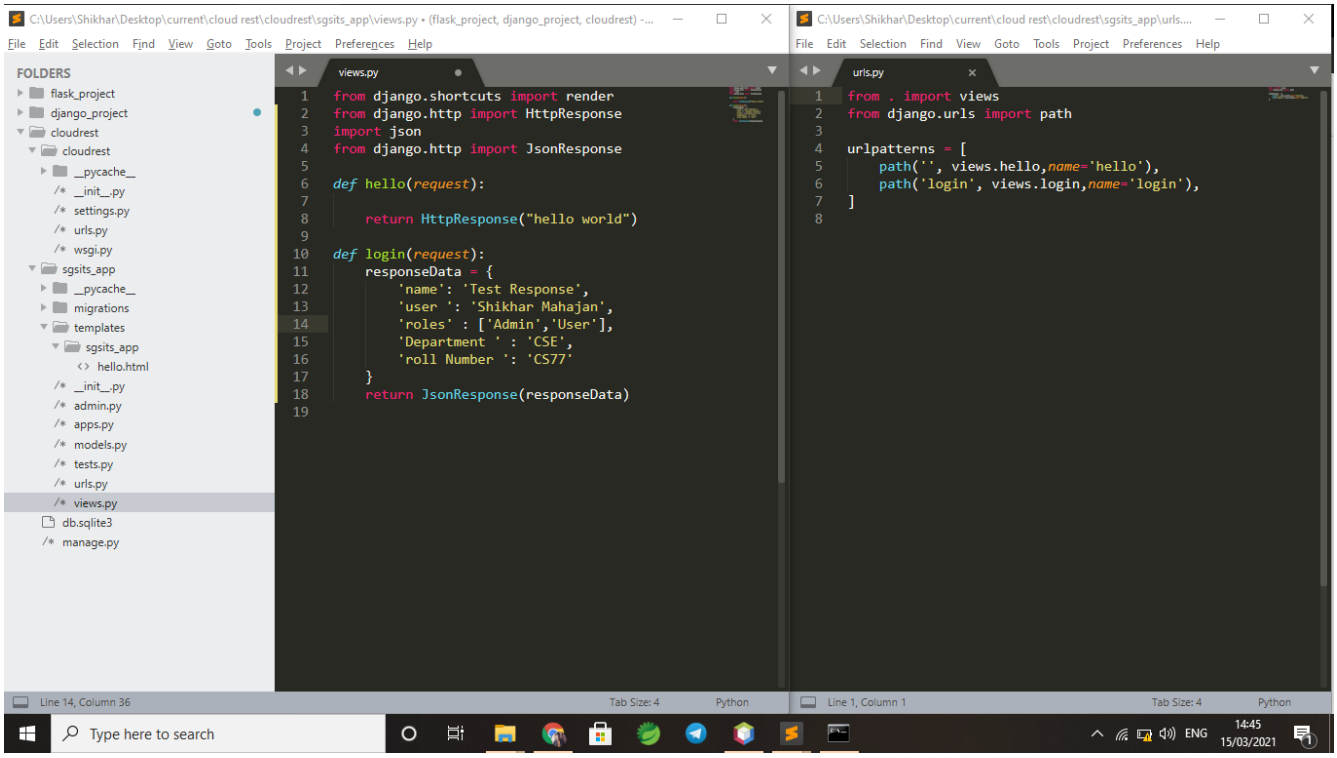
1. **Views.py :** Here functionality of api is coded.
2. **Urls.py** : Url of api is mentioned.

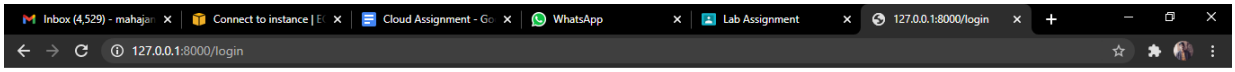
Two **GET METHOD** url are their:

"/" - Home url , prints hello world as http response

"Login" - JSON response url where user data is printed (data is hardcoded)

Server port: http://127.0.0.1:8000/





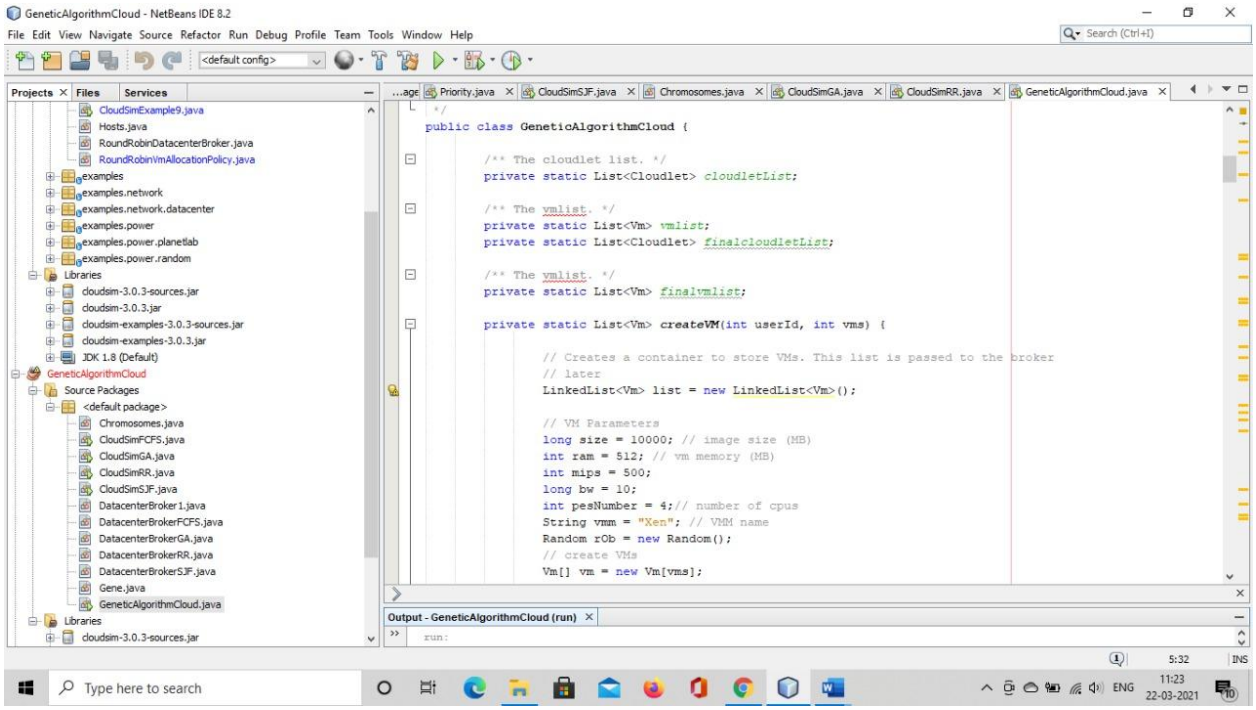

```
{
    name: "Test Response",
    user : "Shikhar Mahajan",
  - roles: [
        "Admin",
        "User"
    ],
    Department : "CSE",
    roll Number : "CS77"
}
```

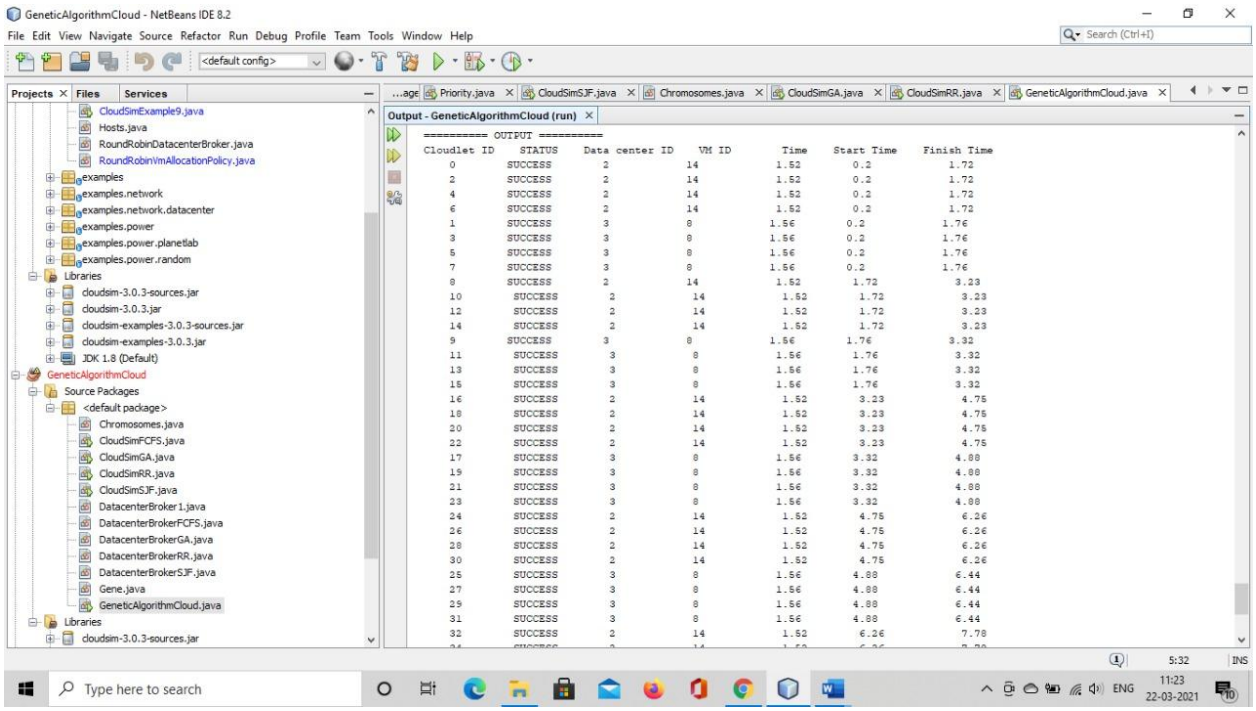

Question 5:

Objective: To learn Resource Management techniques in cloud likeLoad Management .

Title: Study and implementation of cloud load management techniques.

Task: Install cloudsim and simulate load balancing algorithm.





Question 6:

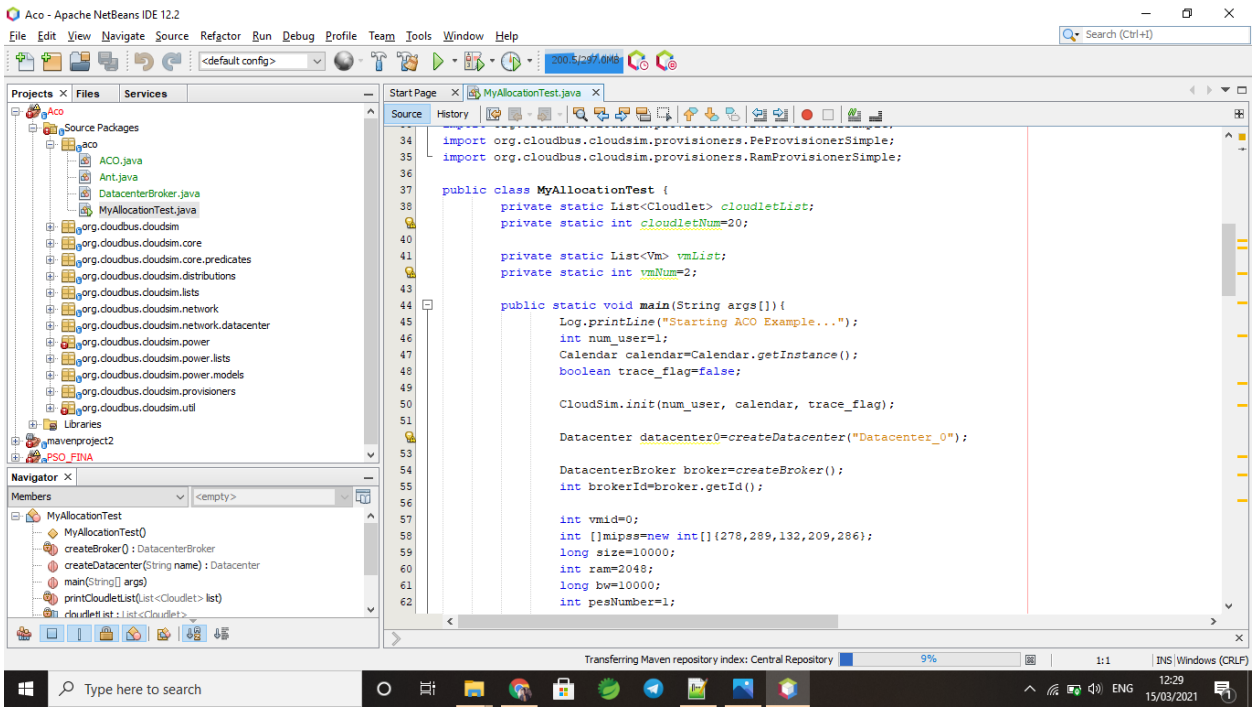
Objective: To learn Task Optimization in cloud environment

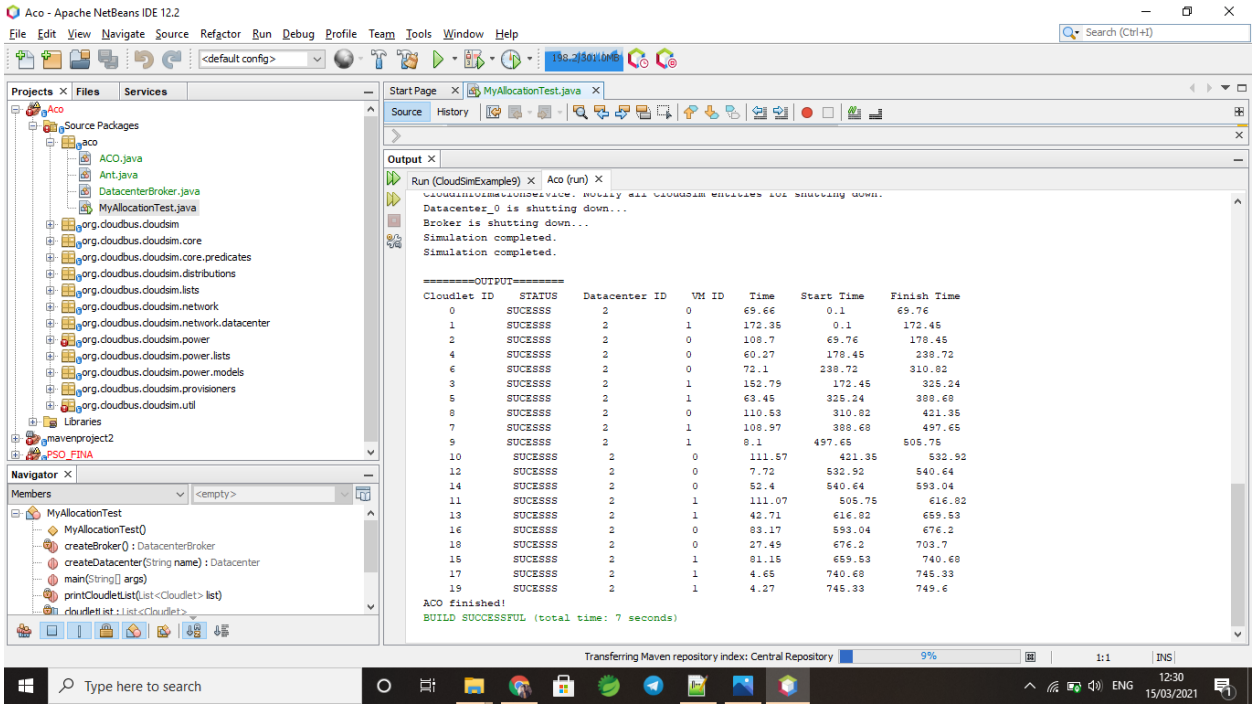
Title: Explore workflow simulator and run workflow application redesign the code with some optimization algorithm like ACO,PSO.

1. **ACO**

Description ACO:

Ant Colony Optimization (ACO) was first used by M. Dorigo et al. to solve discrete optimization problems, in the late 1980s. ACO is based on the behavior of ants for finding food. Ants deposit pheromone as they walk and find their route by walking along the pheromone deposition. Density of pheromone deposition increases as ants walk back to the source with food. Pheromone deposition on the way back is dependent on quality and quantity of food taken to the source point. Pheromone deposition /evaporation is directly related to the number of ants traveling on that path. Ants find the optimal path by following maximum pheromone deposition

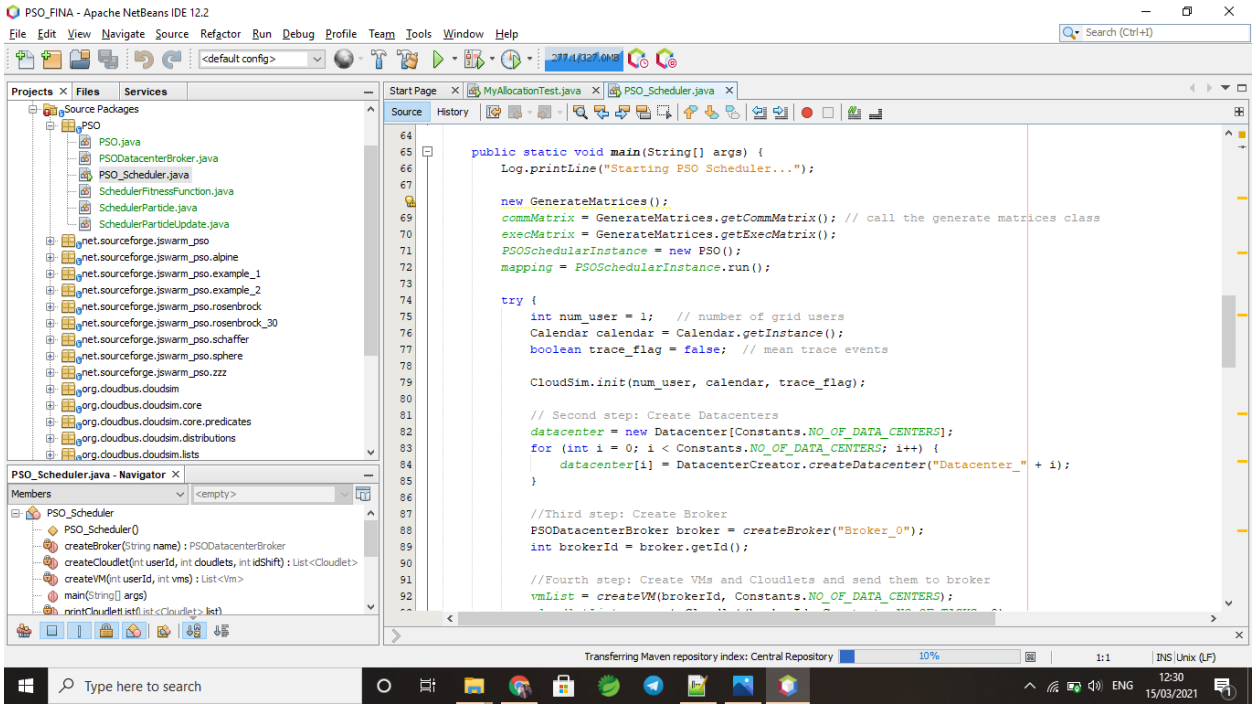


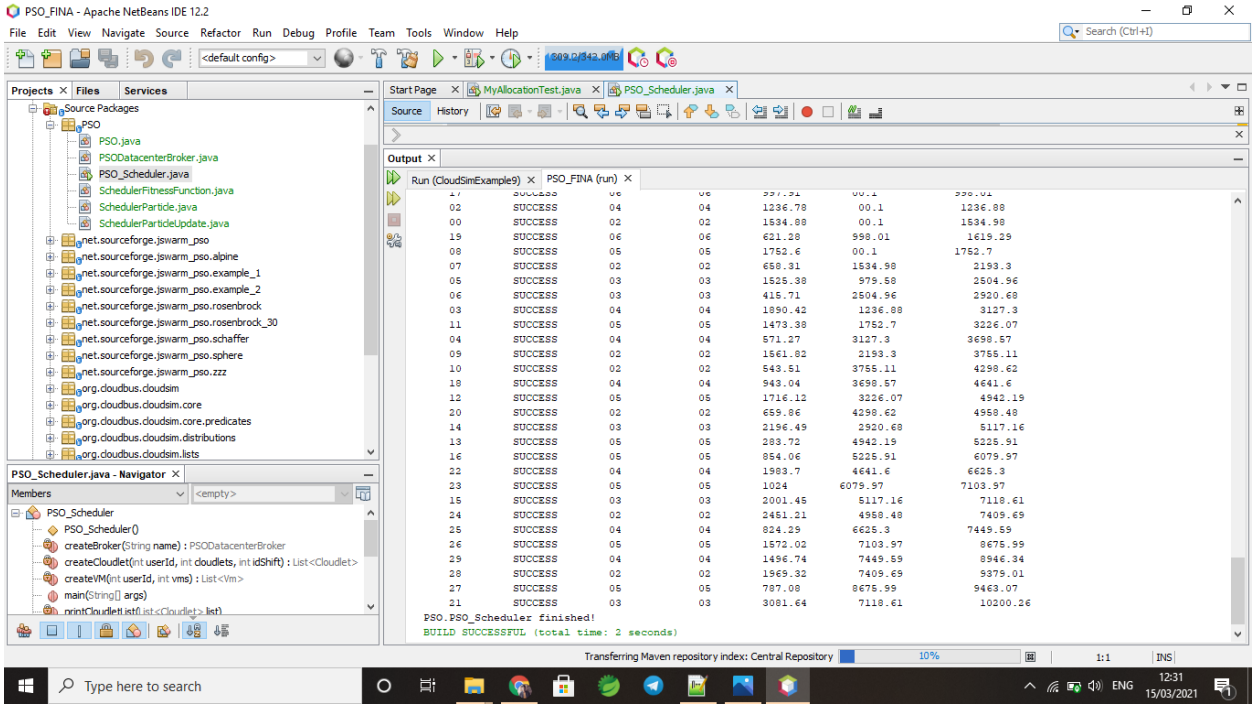


2. PSO

Description PSO:

PSO is a heuristic global optimization technique. Particle swarm optimization (PSO), originally developed by Kennedy and Eberhart. In PSO each possible solution is called particle and the group of these possible solutions is called population. PSO is based on how a group of birds will randomly search for food. Birds don't know where exactly the food is, so they follow the bird which is nearest to the food. Each bird is known as a particle and each particle has its fitness function (here it is square of error). A group of particles is known as swarm. In each iteration, first the best solution found in the swarm is stored and is known as pbest. Another best solution is also stored, which is the best solution found so far. Values of pbest and gbest are updated.


PSO_FINA - Apache NetBeans IDE 12.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
Search (Ctrl+I)
<default config>
Projects Files Services
Source Packages
PSO
PSO.java
PSODatacenterBroker.java
PSO_Scheduler.java
SchedulerFitnessFunction.java
SchedulerParticle.java
SchedulerParticleUpdate.java
net.sourceforge.jswarm_pso
net.sourceforge.jswarm_pso.alpine
net.sourceforge.jswarm_pso.example_1
net.sourceforge.jswarm_pso.example_2
net.sourceforge.jswarm_pso.rosenbrock
net.sourceforge.jswarm_pso.rosenbrock_30
net.sourceforge.jswarm_pso.schaffer
net.sourceforge.jswarm_pso.sphere
net.sourceforge.jswarm_pso.zzz
org.cloudbus.cloudsim
org.cloudbus.cloudsim.core
org.cloudbus.cloudsim.core.predicates
org.cloudbus.cloudsim.distributions
org.cloudbus.cloudsim.lists
PSO_Scheduler.java - Navigator
Members
<empty>
PSO_Scheduler
PSO_Scheduler()
createBroker(String name) : PSODatacenterBroker
createCloudlet(int userId, int cloudlets, int idShift) : List<Cloudlet>
createVM(int userId, int vms) : List<Vm>
main(String[] args)
Start Page
MyAllocationTest.java
PSO_Scheduler.java
Source
History
64
65 public static void main(String[] args) {
66 Log.printLine("Starting PSO Scheduler...");
67
69 new GenerateMatrices();
70 commMatrix = GenerateMatrices.getCommMatrix(); // call the generate matrices class
71 execMatrix = GenerateMatrices.getExecMatrix();
72 PSOSchedularInstance = new PSO();
73 mapping = PSOSchedularInstance.run();
74
75 try {
76 int num_user = 1; // number of grid users
77 Calendar calendar = Calendar.getInstance();
78 boolean trace_flag = false; // mean trace events
79
80 CloudSim.init(num_user, calendar, trace_flag);
81
82 // Second step: Create Datacenters
83 datacenter = new Datacenter[Constants.NO_OF_DATA_CENTERS];
84 for (int i = 0; i < Constants.NO_OF_DATA_CENTERS; i++) {
85 datacenter[i] = DatacenterCreator.createDatacenter("Datacenter_" + i);
86 }
87
88 //Third step: Create Broker
89 PSODatacenterBroker broker = createBroker("Broker_0");
90 int brokerId = broker.getId();
91
92 //Fourth step: Create VMs and Cloudlets and send them to broker
vmList = createVM(brokerId, Constants.NO_OF_DATA_CENTERS);
Transferring Maven repository index: Central Repository
10%
1:1
INS Unix (LF)
Type here to search
ENG
12:30
15/03/2021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<default config>
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Source Packages
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SchedulerParticle.java
SchedulerParticleUpdate.java
net.sourceforge.jswarm_pso
net.sourceforge.jswarm_pso.alpine
net.sourceforge.jswarm_pso.example_1
net.sourceforge.jswarm_pso.example_2
net.sourceforge.jswarm_pso.rosenbrock
net.sourceforge.jswarm_pso.rosenbrock_30
net.sourceforge.jswarm_pso.schaffer
net.sourceforge.jswarm_pso.sphere
net.sourceforge.jswarm_pso.zzz
org.cloudbus.cloudsim
org.cloudbus.cloudsim.core
org.cloudbus.cloudsim.core.predicates
org.cloudbus.cloudsim.distributions
org.cloudbus.cloudsim.lists
PSO_Scheduler.java - Navigator
Members
<empty>
PSO_Scheduler
PSO_Scheduler()
createBroker(String name) : PSODatacenterBroker
createCloudlet(int userId, int cloudlets, int idShift) : List<Cloudlet>
createVM(int userId, int vms) : List<Vm>
main(String[] args)
Start Page
MyAllocationTest.java
PSO_Scheduler.java
Source
History
Output
Run (CloudSimExample9)
PSO_FINA (run)
02 SUCCESS 04 04 1236.78 00.1 1236.88
00 SUCCESS 02 02 1534.88 00.1 1534.98
19 SUCCESS 06 06 621.28 998.01 1619.29
08 SUCCESS 05 05 1752.6 00.1 1752.7
07 SUCCESS 02 02 658.31 1534.98 2193.3
05 SUCCESS 03 03 1525.38 979.58 2504.96
06 SUCCESS 03 03 415.71 2504.96 2920.68
03 SUCCESS 04 04 1890.42 1236.88 3127.3
11 SUCCESS 05 05 1473.38 1752.7 3226.07
04 SUCCESS 04 04 571.27 3127.3 3698.57
09 SUCCESS 02 02 1561.82 2193.3 3755.11
10 SUCCESS 02 02 543.51 3755.11 4298.62
18 SUCCESS 04 04 943.04 3698.57 4641.6
12 SUCCESS 05 05 1716.12 3226.07 4942.19
20 SUCCESS 02 02 659.86 4298.62 4958.48
14 SUCCESS 03 03 2196.49 2920.68 5117.16
13 SUCCESS 05 05 283.72 4942.19 5225.91
16 SUCCESS 05 05 854.06 5225.91 6079.97
22 SUCCESS 04 04 1983.7 4641.6 6625.3
23 SUCCESS 05 05 1024 6079.97 7103.97
15 SUCCESS 03 03 2001.45 5117.16 7118.61
24 SUCCESS 02 02 2451.21 4958.48 7409.69
25 SUCCESS 04 04 824.29 6625.3 7449.59
26 SUCCESS 05 05 1572.02 7103.97 8675.99
29 SUCCESS 04 04 1496.74 7449.59 8946.34
28 SUCCESS 02 02 1969.32 7409.69 9379.01
27 SUCCESS 05 05 787.08 8675.99 9463.07
21 SUCCESS 03 03 3081.64 7118.61 10200.26
PSO.PSO_Scheduler finished!
BUILD SUCCESSFUL (total time: 2 seconds)
Transferring Maven repository index: Central Repository
10%
1:1
INS
Type here to search
ENG
12:31
15/03/2021