# CS553 Cloud Computing

# Programming Assignment 3

## Manual

Submitted by:
Chiranjeevi Ankamreddy
A20359837

The assignment is consists Local System and Remote System, both the Frameworks were done in Java and Remote framework runs on Amazon AWS Resources like Ec2 instances,Sqs,s3 and DynamoDb,Here are following frameworks consists of:.

## 1.Local System

- Client.java
- Sqs.java
- Tasks.txt

## 2. Remote System

- Client.java
- Workerrun.java

1.**Local System**: The Local System Framework code has been written in java. It consists of two parts.one is client side and another is Local BackEnd Workers(Sqs.java).

Execution:

The program is run on Local System.

To execute the program in Linux systems.

First Open terminal and compile the both the programs i.e run the command **javac Client.java and java Sqs.java.**

To execute the Main programs as follow:

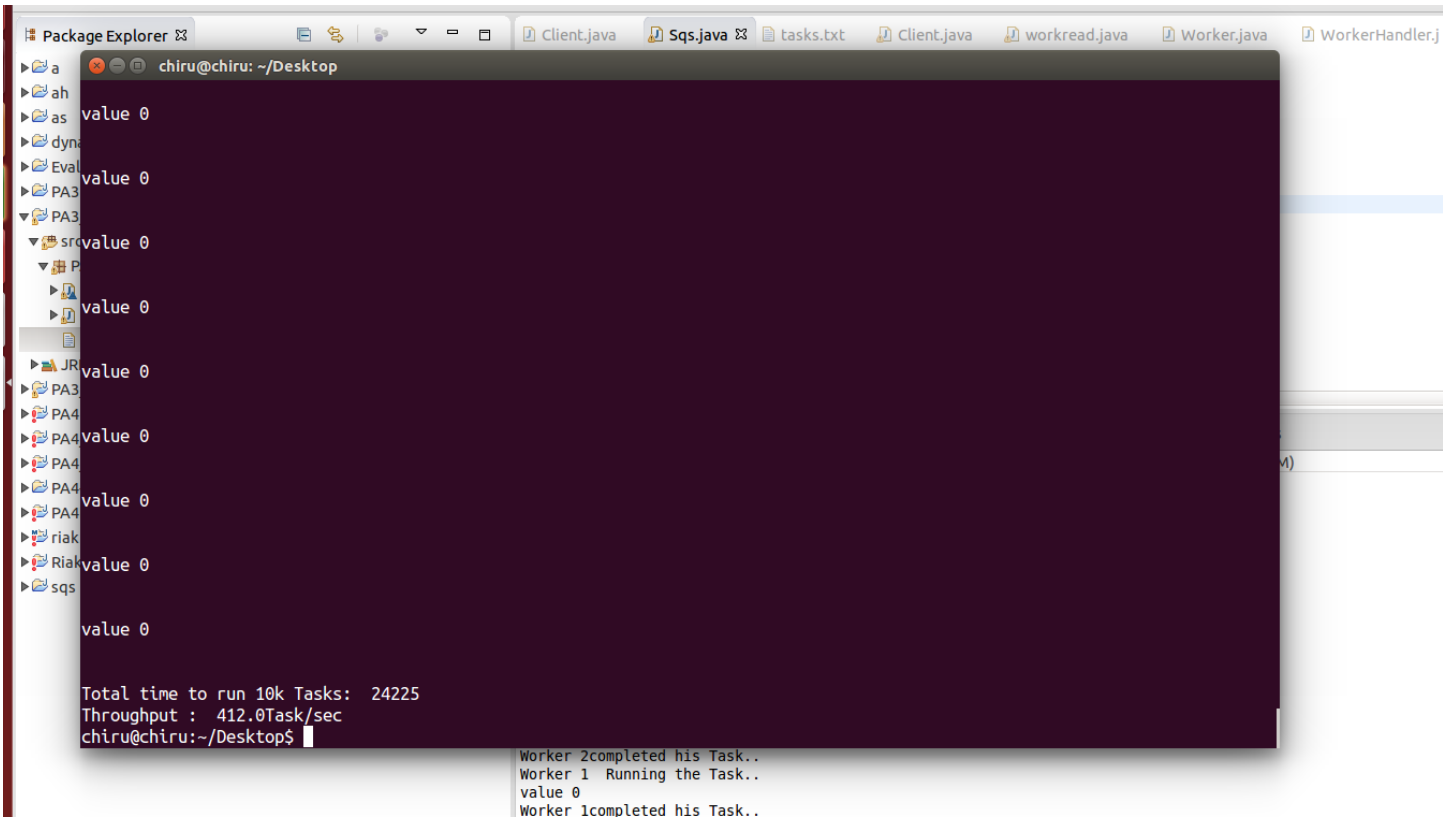
1. **Client.java**

Client .java program can be executed and users would have the choice to enter the Queue name and the local file which contains all the tasks to be executed..

After Running the above command,All the tasks in a tasks,txt will be read and sent the all tasks to Sqs.

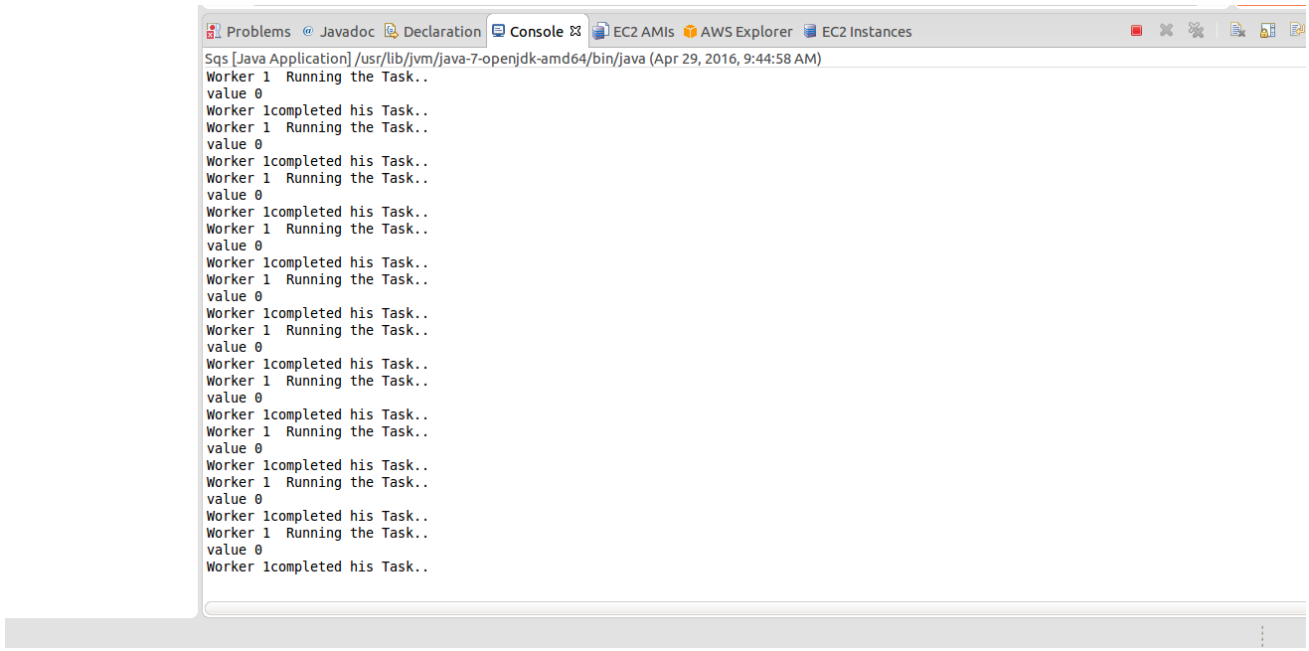
The sample output of the program would be like:

When Sqs Performs all the Tasks and gives the result About the Task Execution:

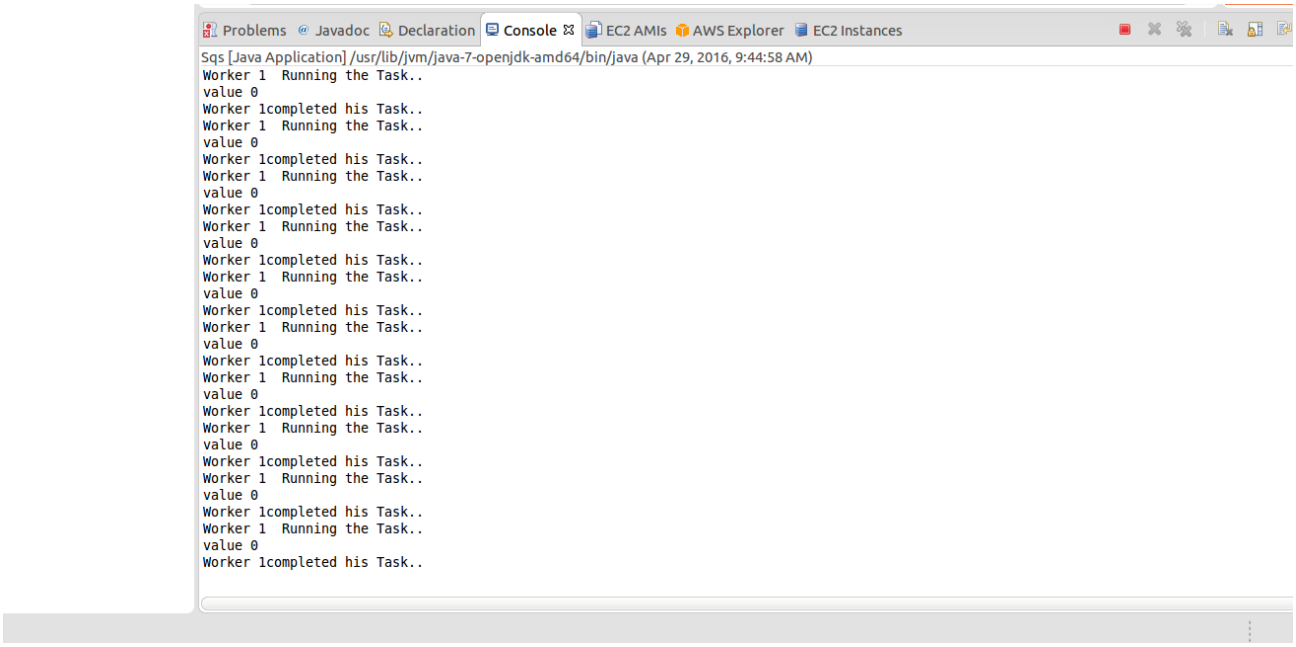



**Sqs.java**

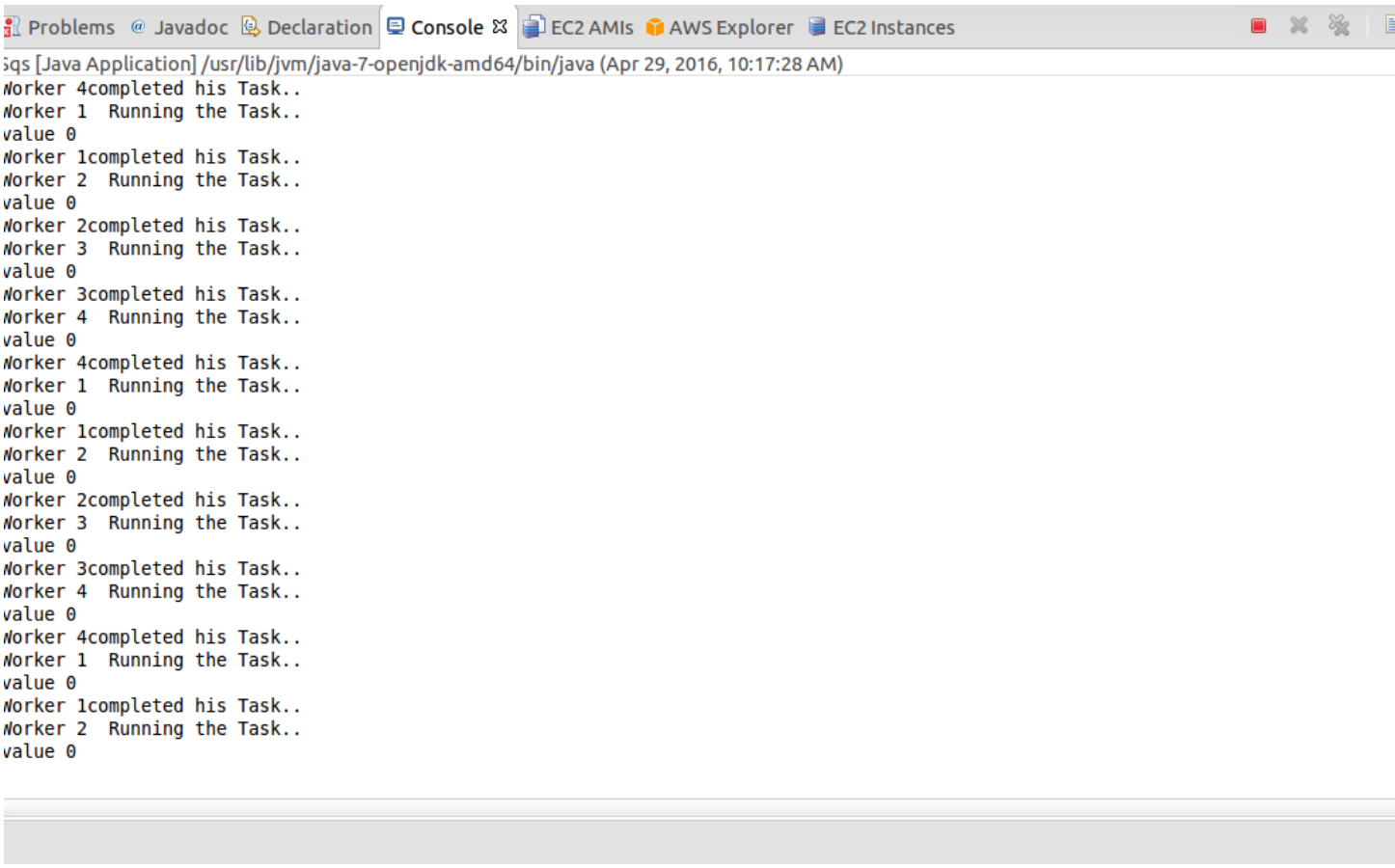
To run the Sqs program,First Open terminal and run the command **javac Sqs.java and .**Select the Nuber of threads:



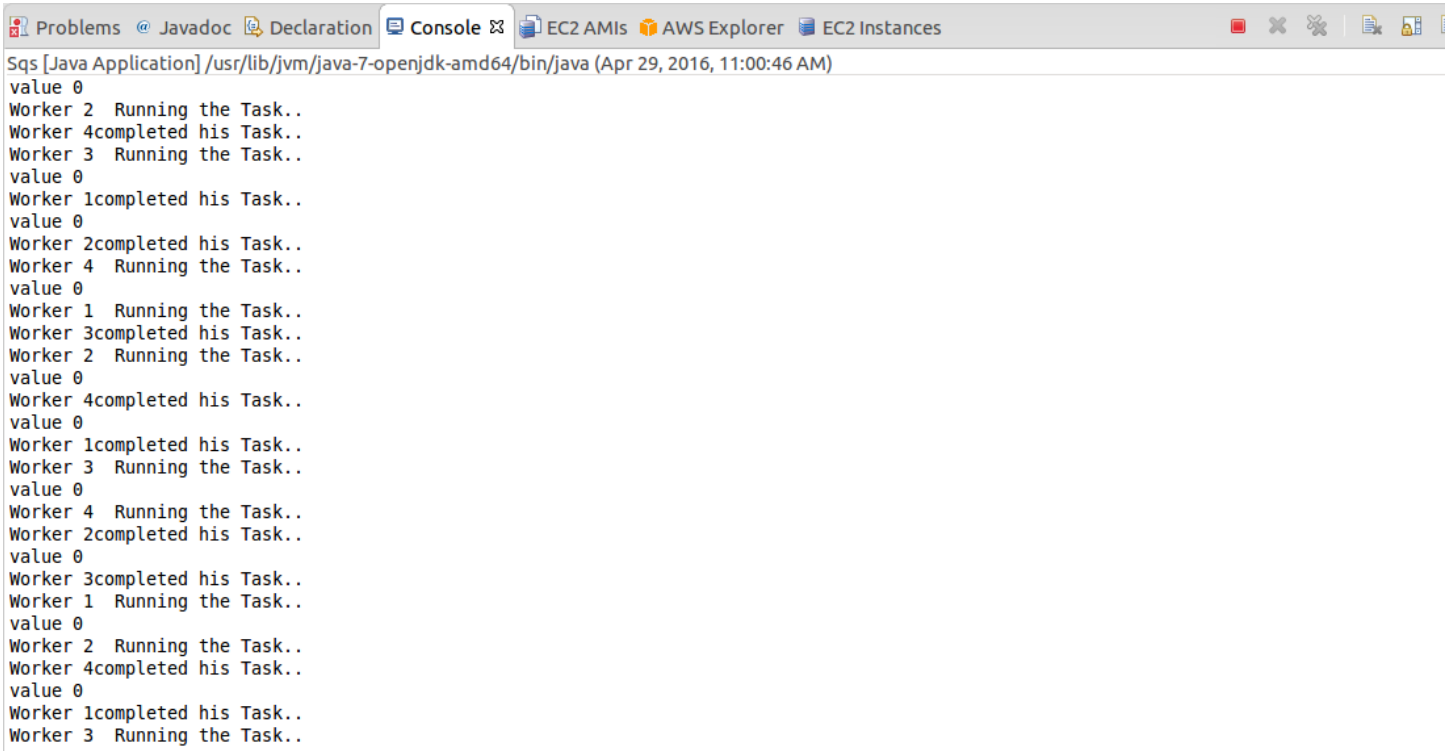

## Number of workers/threads:1



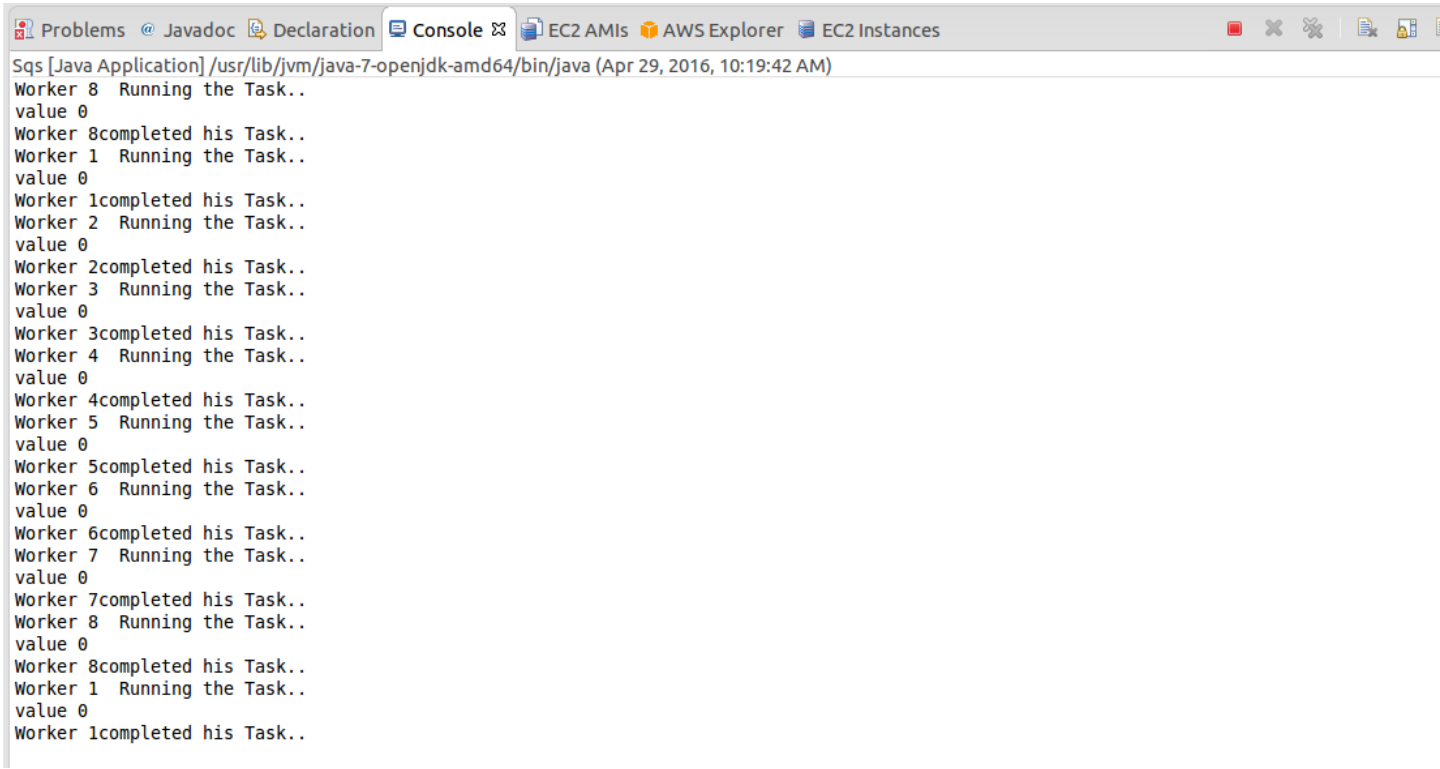
## Number of workers/threads:2



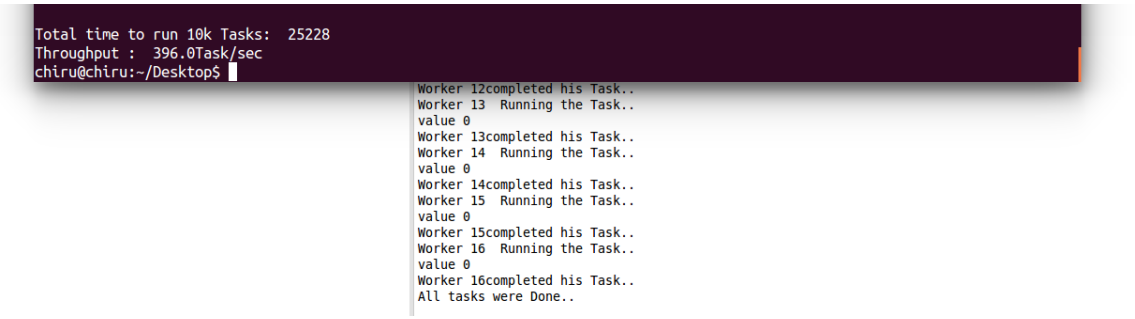
## Number of workers/threads:4



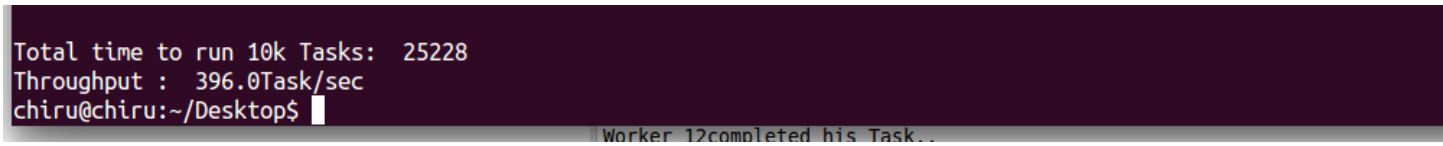

## Number of workers/threads:8



**Number of workers/threads:16**




We are Performing Both Throughput and Efficiency on the Different Tasks:




2.**Remote System**: The Remote System Framework code has been written in java. It consists of two parts.I have used Amazon Aws Services Ec2 instance,Sqs,S3,and DynamoDb.one is client side and another is Remote BackEnd Workers(Sqs.java).

Execution:

The program is run on Local System.

To execute the program in Linux systems.

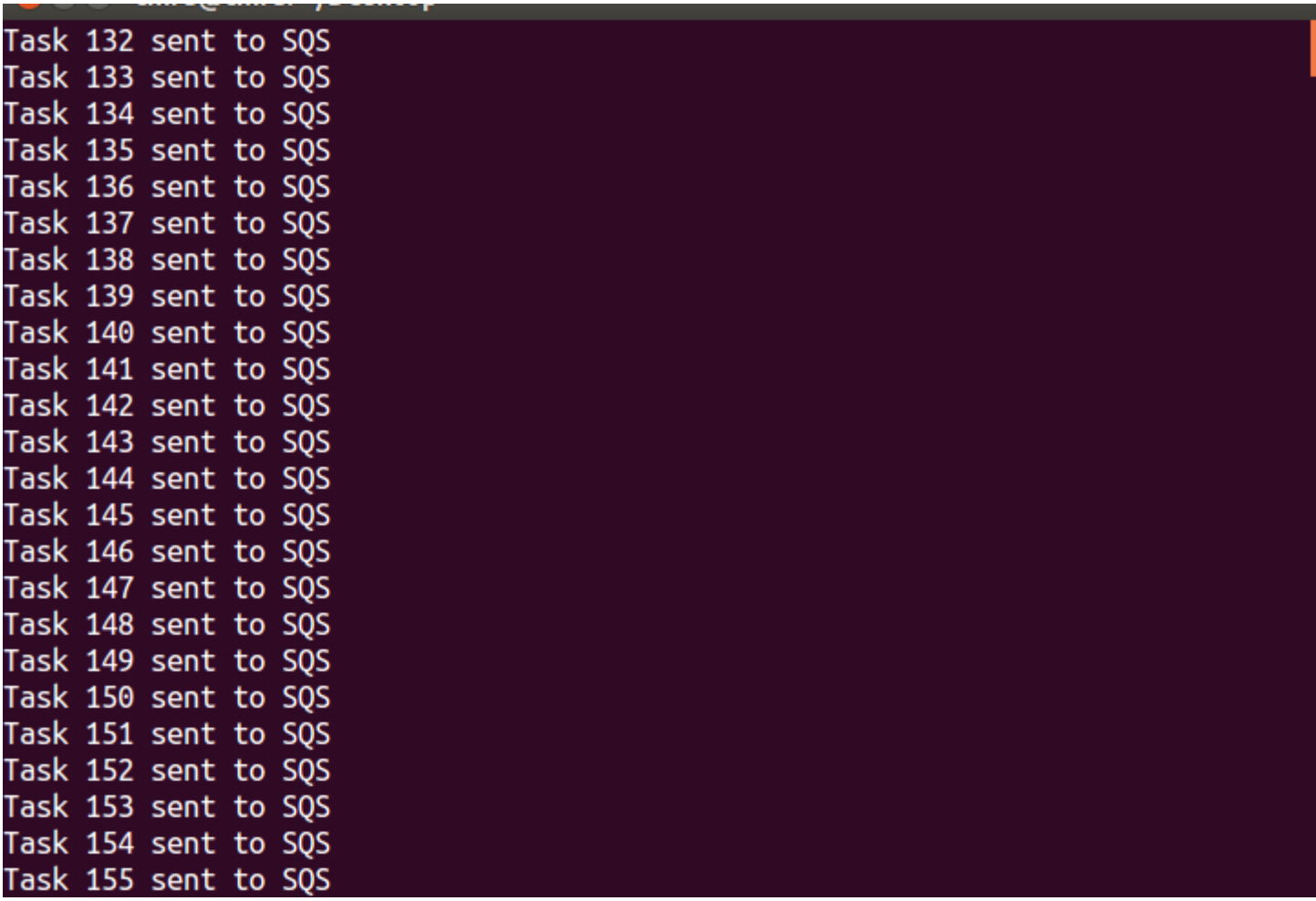
First Open terminal and compile the both the programs i.e run the command **javac Client.java and java Sqs.java.**

To execute the Main programs as follow:

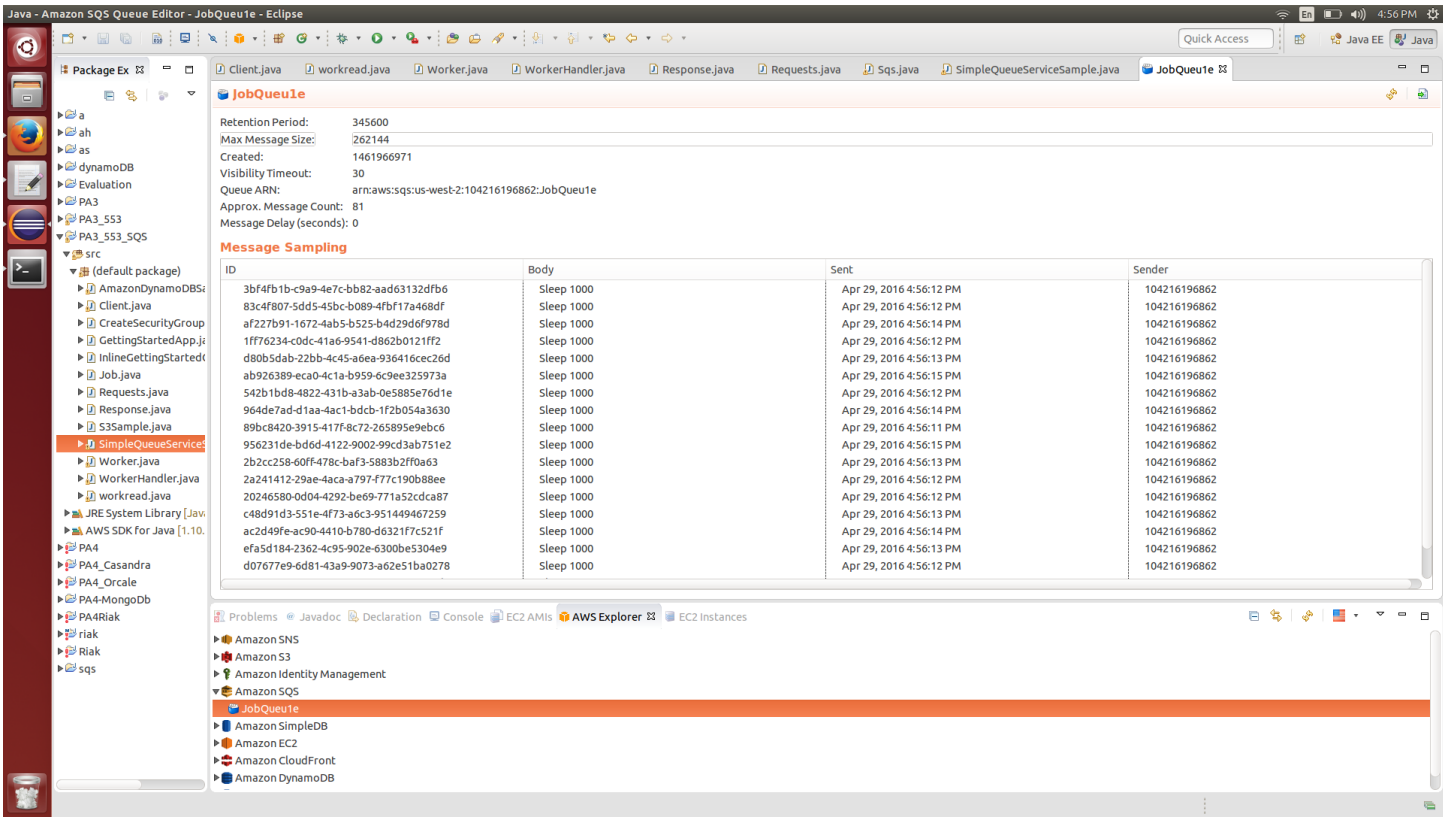
1. **Client.java**

Client .java program can be executed and users would have the choice to enter the Queue name(I have created Sqs i.e SQSqueue and the local file which contains all the tasks to be executed..

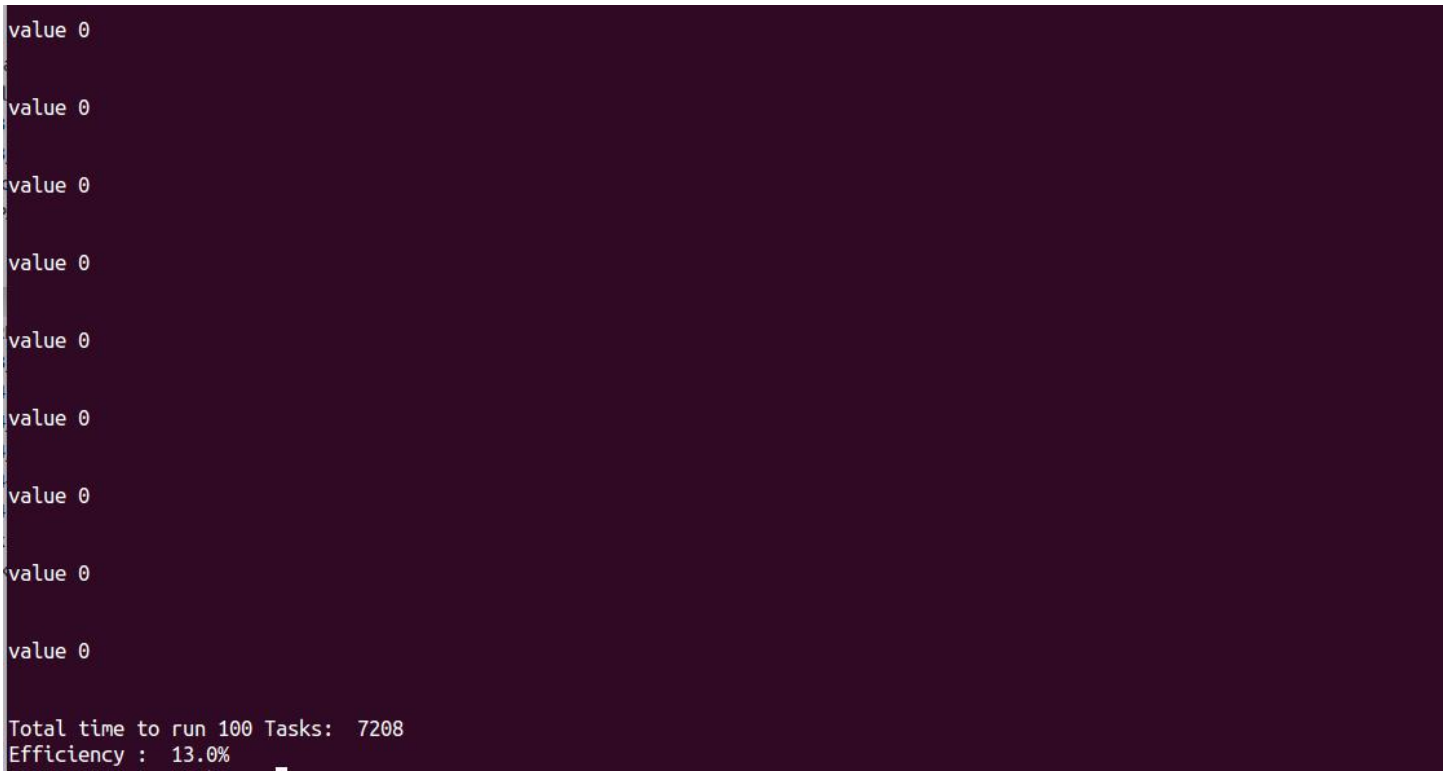
The sample output of the program would be like: After Running the above command,All the tasks in a tasks,txt will be read and sent the all tasks to Sqs.




When Sqs Performs all the Tasks and gives the result About the Task Execution:




We are Performing Both Throughput and Efficiency on the Different Tasks:

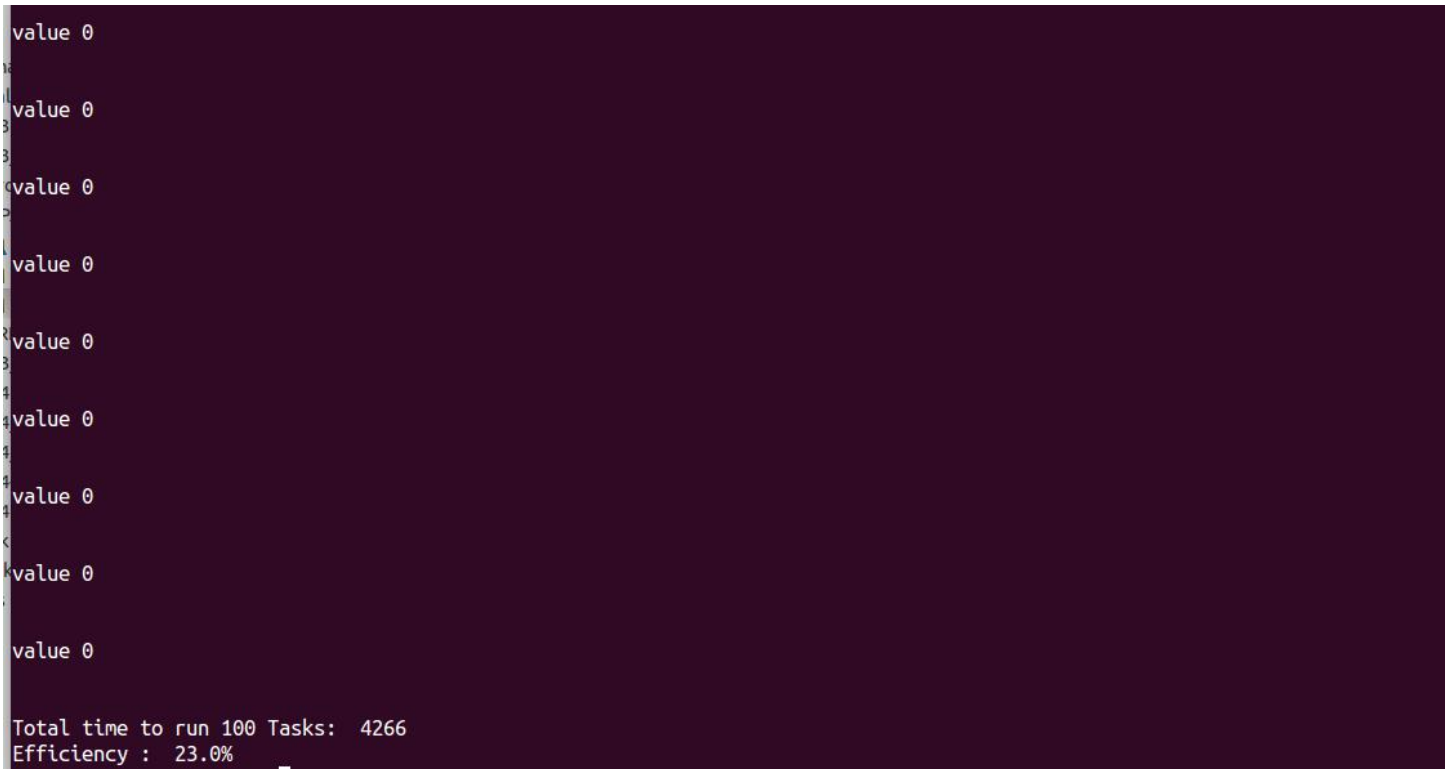



- **Workerrun.java**

To run the Sqs program,First Open terminal and run the command **javac Sqs.java and** Select the Number of threads:

## Number of workers/threads:1

## Number of workers/threads:2



**Number of workers/threads:4**

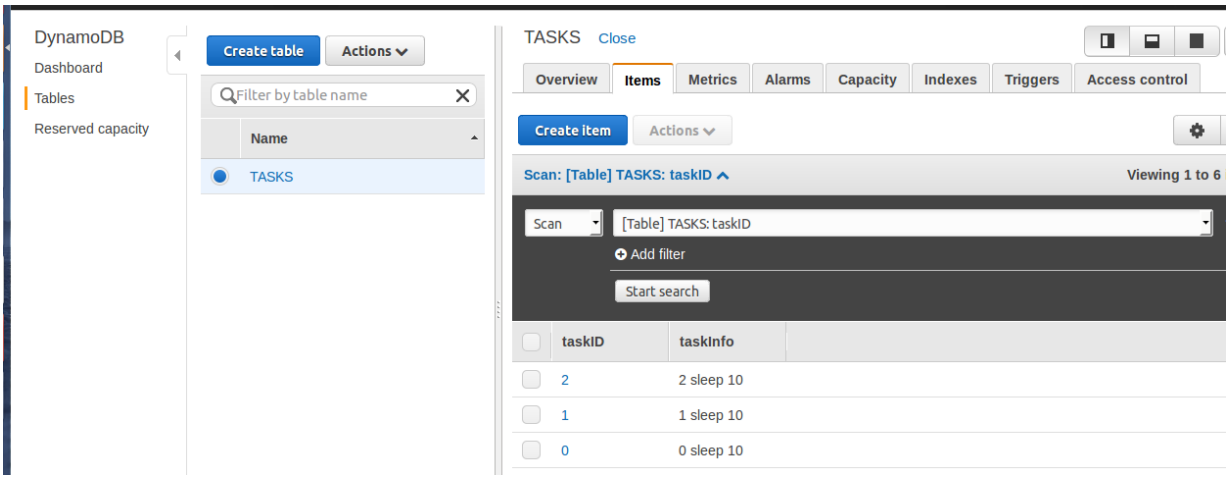
```
value 0

value 0

value 0

value 0

value 0

value 0

value 0

value 0

value 0

Total time to run 100 Tasks:  4872
Efficiency :  20.0%
```

**Number of workers/threads:8**

```
value 0

value 0

value 0

value 0

value 0

value 0

value 0

value 0

value 0

Total time to run 100 Tasks:  7208
Efficiency :  13.0%
```

## Number of workers/threads:16

DyanamoDb:It was to used to Eliminate Duplicate Task Execution.


DynamoDB
Dashboard
Tables
Reserved capacity
Create table
Actions
Filter by table name
Name
TASKS
TASKS
Close
Overview
Items
Metrics
Alarms
Capacity
Indexes
Triggers
Access control
Create item
Actions
Scan: [Table] TASKS: taskID
Viewing 1 to 6
Scan
[Table] TASKS: taskID
Add filter
Start search
taskID
taskInfo
2
2 sleep 10
1
1 sleep 10
0
0 sleep 10