Programming Assignment-1
Benchmarking
Manual

Unzip the files and in the source folder there are different java files for each part of benchmarking
Open the EC2 t2 micro instance on Amazon AWS. Install the java compiler in AWS with command
sudo yum install java-devil
Transfer all the java files to AWS and then compile all the files and run the files.
The networking benchmark will need two instance and we have to follow the same procedure as described earlier for the second instance.

----------Network----------

Open the folder source code and open in the network folder open the terminal
For compiling the program
For TCP Client -:
javac TcpClient.java
For UDP Client
javac clientUDP.java

In other instance start the server
For TCP Server -:
javac TcpSever.java
For UDP server -:
javac serverUDP.java

For Running -:
For TCP Client -:
java TcpClient
For UDP Client
java clientUDP

In other instance start the server
For TCP Server -:
java TcpSever
For UDP server -:

java serverUDP

In the client side it will ask to start the number of threads and will ask for the server Ip to connect and once connected it will give the throughput and latency values.

----------Disk Performance----------

1. Go the disk folder and open the terminal from that folder
2. In terminal window type command **javac diskPerformance.java**
3. To run the program type command **java diskPerformance**

It will ask for the number of threads to execute from the user and will return the throughput and latency of sequential write, sequential read, random write and random read.

----------CPU Performance----------

There are three different java files for calculating IOPS, FLOPS each and the last program runs for 10 minutes giving 600 samples in the text file in the current directory.

1. Go to CPU folder and open the terminal window from that folder.

2. In the terminal type command **javac Cpu2.java Cpu2float.java CpuBenchmarkFloat.java CpuBenchmar.java**

3. To run the program in different terminal type command

java CpuBenchmarkFloat

java CpuBenchmark

java Cpu2

java Cpu2flaot

CpuBenchmarkFloat will give FLOPS value, CpuBenchmark will give IOPS value and Cpu2 and Cpu2float will run for 10 minutes and will create the text file containing 600 samples by collecting samples at every second.