Aim-14

14. Write a program for congestion control using Leaky bucket algorithm.

Code:

```
voing leaky built algorithm.
 import java. et il Scanner;
 public class Leaky Bucket Algorithm 1
  Public Static void main(String E) augs) !
   geanner deanner = new deanner (dystem:in);
  int buck et size, outgoing Rate, total Time;
Jystem. out. print ("Enter the boulet size
helet Sige 2 Scanner nest Int (1)
lystem out paint (Enter the outgoing rate
Outgoing Rate : Scanner neut Intel;
lysten out paint ("Enter the total time (in
Seconds):)
otal Time = Scanner nest Intli;
 Circent Bucket Size =0;
Int time = 0;
```

```
while (time < totalTime) /
   System out print ("Enter Packet size
            (in packets ): ");
 int Packet Size = Scanner neut Int (1;
 i f (Packet Size 2: budket Size) {
if (Parket Size 2 = (burket size = coment Burket size)
    Coment Bucket Size + = packet Size;
System. out print ("parket of size" + parket size+
     gibbehad et atroj dring transmitted.")
int remaining Empty Size : bucket Size - Current
            (1) Inthon . Buket Size jildel.
System out println ("Bucket Size: " + bucket Size
System. out. println ("Remaining Empty Size: "+
   ni) mit latot allemaining Empty Size +" paeluti
 1 elged
  System out printle l'packet discarded : Insufficient
                Space in the bucket. "!
```

system out printh l'aparlet discarded: Exceeds the bucket sige."); output 1: "); Enter the burdet size (in padents 1: 5 t enter the outgoing nate (Padents per Second): 2 Enter the total time (in Seconds): 5 get fit the parket sign (in parkets):3 lacket of size 3 fransmitted. Budet size:5 tij knoining Empty Size: 2 packets Inter packet sige & (in packets): 10 ent what discarded: Exceeds the builted sign. Inter parket size (in parkets): 3 Parket disconded: In Sufficient Space in the budie Enter parket size (In parkets): 2

parkets of size 2 transmitted.

Burlet size: 5 parkets

Remaining Empty size = 0 p parkets.

output 2!

Enter the bucket size (in packets): 10 Enter the outgoing nate (paduts per second) 1,2 Enter the total time (in Seconds): 5 Enter paelet Size (in paelets): 3 Padul of size 3 transmitted Buelet Size: 10 Parlets Remaining Empty Size: 7 packets Enter parket size (in parkets 1:5 Parlet of Sign of fransmitted Bucket sige: 10 packets
Remaining Empty size: 2 packets Enter paeled size (in paelets): 4

discarded: Insufficient space in the bulket (nter parlet size (in parlets): 12
pullet disconded: Exceeds the budget size inter partet size (In partets 1:2 pullet of size 2 transmitted. Budet size : 10 padents Remaining Empty Size: 0 paeluts. Sever Tep. Py

Output:

Fig1: Output 1

```
Clear

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CurrentBucketSize ** packetSize;

System.out.println("Packet of size " * packetSize * "
transmitted.");

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System.out.println("Bucket Size: " * bucketSize * "
packets");

System.out.println("Bucket Size: " * bucketSize * "
packets");

System.out.println("Bucket Size: " * bucketSize * "
packets");

System.out.println("Remaining Empty Size: " *
packets");

System.out.println("Packet discarded: Insufficient space in
the bucket.");

System.out.println("Packet discarded: Exceeds the bucket size."
);

Java -cp /tap/RthiStRAMM LeakyBucketAlgorithm
Enter the bucket size (in packets): 10
Enter the bucket size (in packets): 10
Enter the outgoing rate (packets per second): 2
Enter the bucket size (in packets): 3
Packet of size 3 transmitted.

Bucket Size: 10 packets
Remaining Empty Size: 7 packets
Enter packet size (in packets): 5
Packet of size 5 transmitted.

Bucket Size: 10 packets
Remaining Empty Size: 2 packets
Enter packet size (in packets): 4
Packet discarded: Insufficient space in the bucket.
Insufficient space in t
```

Fig 2: Output 2