

Program 12:- Write a program for congestion control using a leaky bucket algorithm

```
import java.util.Scanner;
import java.lang.*;
public class lab7 {
public static void main(String[] args)
{
int i;
int a[]=new int[20];
int buck_rem=0,buck_cap=4,rate=3,sent,recv;
Scanner in = new Scanner(System.in);
System.out.println("Enter the number of packets");
int n = in.nextInt();
System.out.println("Enter the packets");
for(i=1;i<=n;i++)
a[i]= in.nextInt();
System.out.println("Clock \t packet size \t accept \t sent \t remaining");
for(i=1;i<=n;i++)
{
if(a[i]!=0)
{
if(buck_rem+a[i]>buck_cap)
recv=-1;
else
{
recv=a[i];
buck_rem+=a[i];
}
}
else
recv=0;
if(buck_rem!=0)
{
if(buck_rem<rate)
{sent=buck_rem;
buck_rem=0;
}
else
{
sent=rate;
buck_rem=buck_rem-rate;
}
}
else
sent=0;
if(recv==-1)
System.out.println(+i+ "\t\t" +a[i]+ "\t dropped \t" + sent +"\t" +buck_rem);
else
System.out.println(+i+ "\t\t" +a[i]+ "\t\t" +recv +"\t" +sent + "\t" +buck_rem);
}
```

}
}
}