Develop 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);
}
}
}
```