

```
    }  
}
```

12. Write a program for congestion control using leaky bucket algorithm.

filename:Licky.java

```
import java.io.*;  
import java.util.*;  
  
class Queue  
{  
    int q[],f=0,r=0,size;  
    void insert(int n)  
    {  
        Scanner in = new Scanner(System.in);  
        q=new int[10];  
        for(int i=0;i<n;i++)  
        {  
            System.out.print("\nEnter " + i + " element: ");  
            int ele=in.nextInt();  
  
            if(r+1>10)  
            {  
                System.out.println("\nQueue is full \nLost Packet: "+ele);  
                break;  
            }  
            else  
            {  
                r++;  
                q[i]=ele;  
            }  
        }  
    }  
}
```

```
void delete()
{
    Scanner in = new Scanner(System.in);
    Thread t=new Thread();
    if(r==0)
        System.out.print("\nQueue empty ");

        else
        {
            for(int i=f;i<r;i++)
            {
                try
                {
                    t.sleep(1000);
                }
                catch(Exception e){ }
                System.out.print("\nLeaked Packet: "+q[i]);
                f++;
            }
        }
        System.out.println();
    }

}

class Licky extends Thread
{
    public static void main(String ar[])throws Exception
    {
        Queue q=new Queue();
        Scanner src=new Scanner(System.in);
        System.out.println("\nEnter the packets to be sent:");
        int size=src.nextInt();
        q.insert(size);
    }
}
```

```
q.delete();
```

```
}
```

```
}
```

```
/*
```

OUTPUT

```
bash-3.00$ javac Licky.java
```

```
bash-3.00$ java Licky
```

Enter the packets to be sent:

11

Enter 0 element: 1

Enter 1 element: 0

Enter 2 element: 2

Enter 3 element: 3

Enter 4 element: 4

Enter 5 element: 5

Enter 6 element: 6

Enter 7 element: 7

Enter 8 element: 8

Enter 9 element: 9

Enter 10 element: 10

Queue is full

Lost Packet: 10

Leaked Packet: 1

Leaked Packet: 0

Leaked Packet: 2

Leaked Packet: 3

Leaked Packet: 4

Leaked Packet: 5

Leaked Packet: 6

Leaked Packet: 7

Leaked Packet: 8

Leaked Packet: 9