**PROGRAM CODE**

#include<stdio.h>

#include<stdlib.h>

void main()

{

int n,in,out,bsize,bucket=0,dropped\_packets;

printf("Enter Bucket size = ");

scanf("%d",&bsize);

printf("Enter Number of inputs = ");

scanf("%d",&n);

printf("Enter Outgoing packet rate = ");

scanf("%d",&out);

while(n!=0)

{

printf("\nEnter Incoming Packet Size = ");

scanf("%d",&in);

if(in+bucket>=bsize)

{

dropped\_packets=(in+bucket)-bsize;

printf("Dropped packet = %d\n",dropped\_packets);

bucket=bsize;

printf("Bucket status :: %d packets out of %d\n",bucket,bsize);

}

else

{

bucket= bucket+in;

printf("Bucket status :: %d packets out of %d\n",bucket,bsize);

}

bucket=bucket-out;

if(bucket<0)

{

printf("After Outgoing Bucket status :: 0 out of %d\n",bsize);

bucket=0;

}

else

{

printf("After Outgoing Bucket status :: %d out of %d\n",bucket,bsize);

n--;

}

}

}

**OUTPUT**

