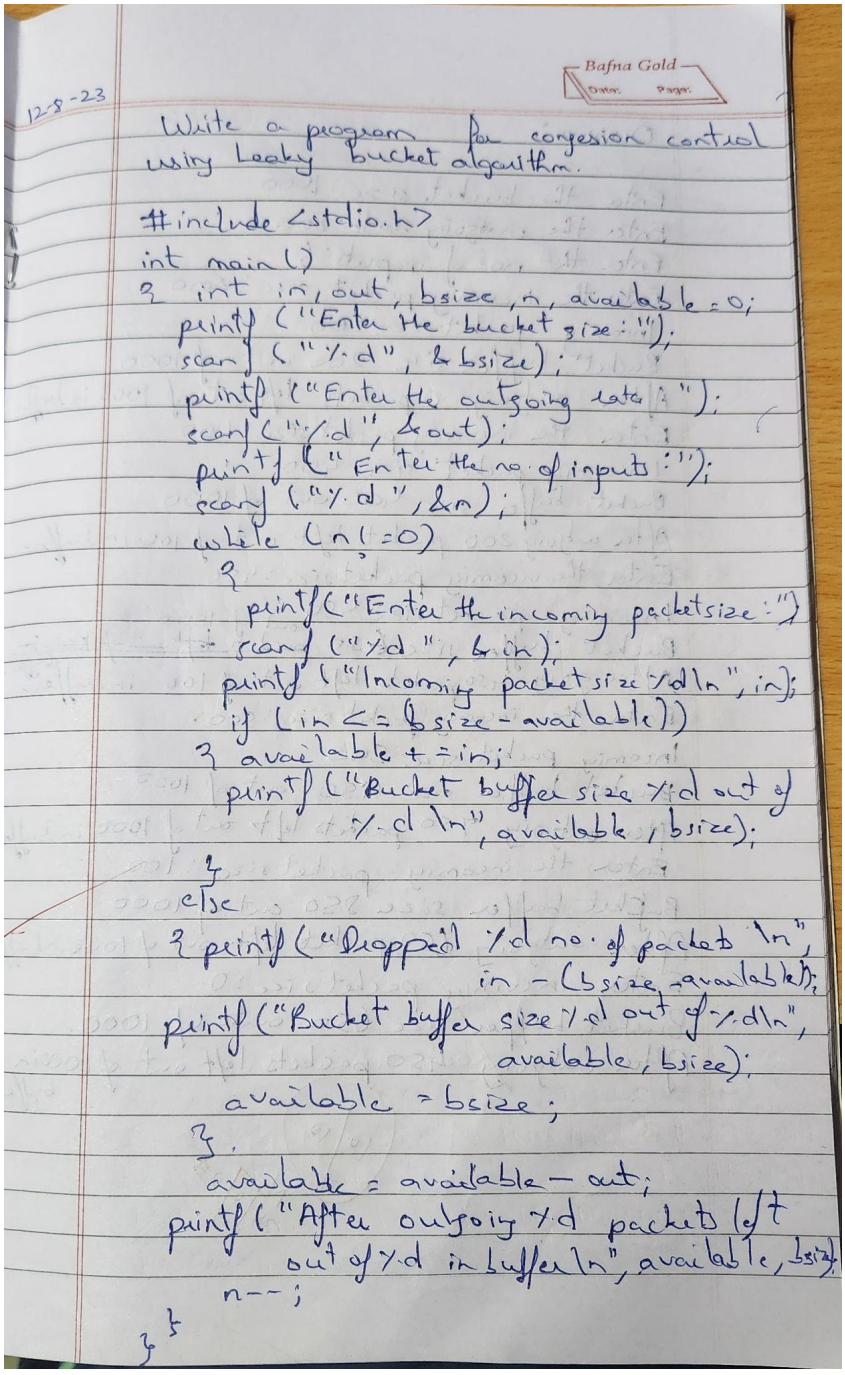
CYCLE 2

AIM:

Write a program for congestion control using Leaky bucket algorithm.

PROGRAM:



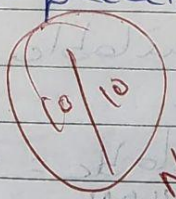
```
12-8-23

Write a program for congesion control
using Leaky bucket algorithm.

#include <stdio.h>
int main()
{ int in, out, bsize, n, available = 0;
  printf ("Enter the bucket size: ");
  scanf ("%d", &bsize);
  printf ("Enter the outgoing rate: ");
  scanf ("%d", &out);
  printf ("Enter the no. of inputs: ");
  scanf ("%d", &n);
  while (n!=0)
   {
     printf("Enter the incoming packetsize:")
     scanf ("%d", &in);
     printf ("Incoming packetsize %d\n", in);
     if (in <= bsize - available))
  { available += in;
     printf ("Bucket buffer size %d out of
              %d \n", available, bsize);
   }
  else
  { printf ("Dropped %d no. of packets \n",
                  in - (bsize - available));
  printf ("Bucket buffer size %d out of %d\n",
                  available, bsize);
     available = bsize;
  }
     available = available - out;
  printf ("After outgoing %d packets left
          out of %d in buffer\n", available, bsize);
     n--;
}}
```

OUTPUT:

Enter the bucket size: 1000
Enter the outgoing rate: 200
Enter the no. of inputs: 6
Enter the incoming packet size: 200
Incoming packet size 200
Bucket buffer size 200 out of 1000
After outgoing 0 packets left out of 1000 in buffer
Enter the incoming packet size: 400
Incoming packet size 400
Bucket buffer size 400 out of 1000
After outgoing 200 packets left out of 1000 in buffer.
Enter the incoming packet size: 450
Incoming packet size 450 out of 1000
Bucket buffer size 650 ~~packets left out of 1000 in buffer~~
After going 450 packets left out of 100 in buffer.
Enter the incoming packet size: 500
Incoming packet size 500
Bucket buffer size 950 out of 1000
After outgoing 750 packets left out of 1000 in buffer
Enter the incoming packet size: 100
Bucket buffer size 850 out of 1000
After outgoing 650 packets left out of 1000 in buffer
Enter incoming packet size: 0
Bucket buffer size 650 out of 1000.
After outgoing 450 packets left out of 1000 in buffer.



28/8/23

PROGRAM:

```
#include<stdio.h>

int main(){
    int in, out, bsize, n, available = 0;
    printf("Enter the bucket size: ");
    scanf("%d", &bsize);
    printf("Enter the outgoing rate: ");
    scanf("%d", &out);
    printf("Enter the no of inputs: ");
    scanf("%d", &n);

    while (n != 0) {
        printf("Enter the incoming packet size : ");
        scanf("%d", &in);
        printf("Incoming packet size %d\n", in);
        if (in <= (bsize - available)){
            available += in;
            printf("Bucket buffer size %d out of %d\n", available, bsize);
        } else {
            printf("Dropped %d no of packets\n", in - (bsize - available));
            printf("Bucket buffer size %d out of %d\n", available, bsize);
            available = bsize;
        }
        available = available - out;
        printf("After outgoing %d packets left out of %d in buffer\n", available, bsize);
        n--;
    }
}
```

Output:

```
Enter the bucket size: 1000
Enter the outgoing rate: 200
Enter the no of inputs: 6
Enter the incoming packet size : 200
Incoming packet size 200
Bucket buffer size 200 out of 1000
After outgoing 0 packets left out of 1000 in buffer
Enter the incoming packet size : 200
Incoming packet size 200
Bucket buffer size 200 out of 1000
After outgoing 0 packets left out of 1000 in buffer
Enter the incoming packet size : 400
Incoming packet size 400
Bucket buffer size 400 out of 1000
After outgoing 200 packets left out of 1000 in buffer
Enter the incoming packet size : 450
Incoming packet size 450
Bucket buffer size 650 out of 1000
After outgoing 450 packets left out of 1000 in buffer
Enter the incoming packet size : 500
Incoming packet size 500
Bucket buffer size 950 out of 1000
After outgoing 750 packets left out of 1000 in buffer
Enter the incoming packet size : 100
Incoming packet size 100
Bucket buffer size 850 out of 1000
```