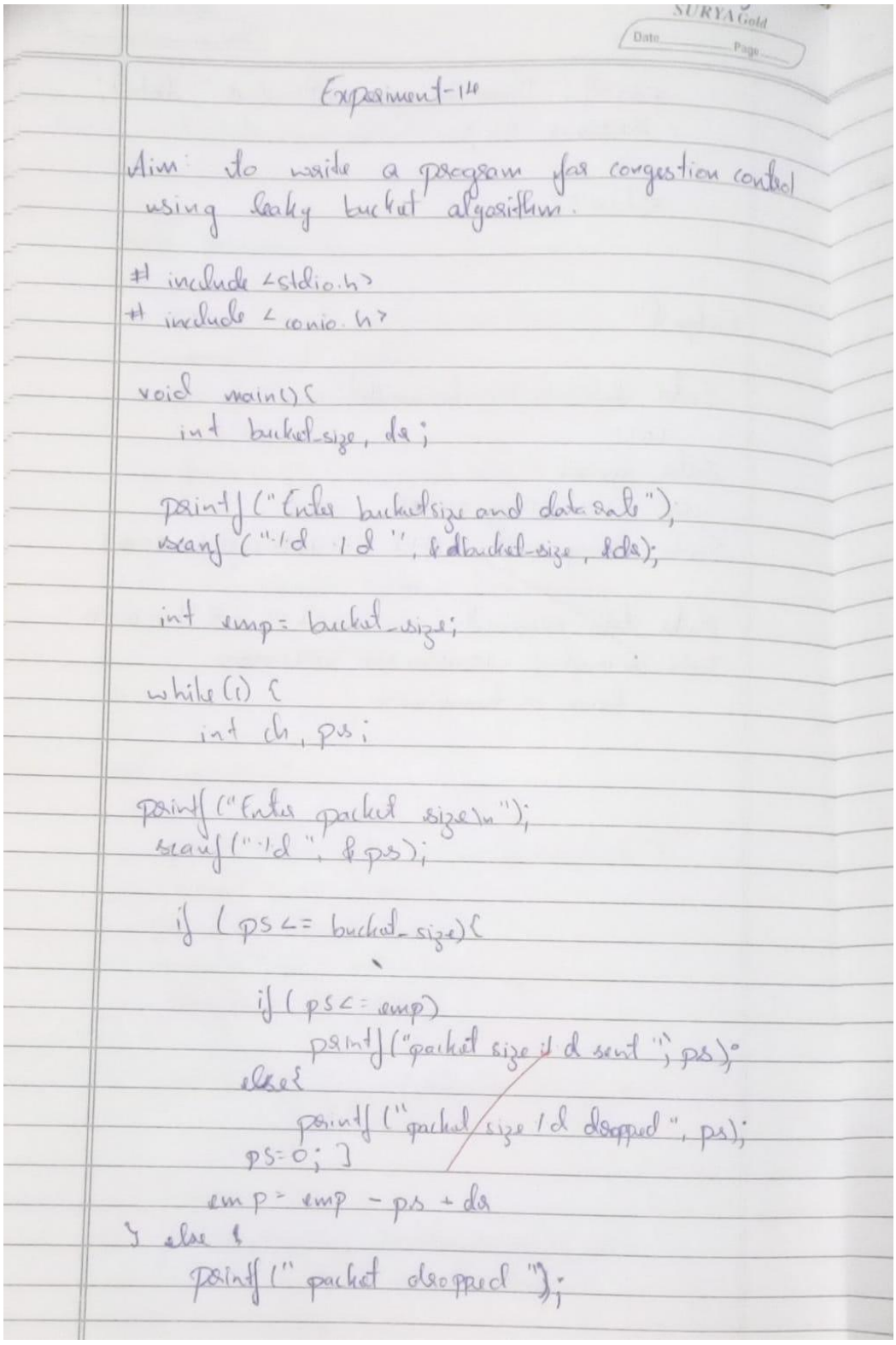
EXPERIMENT- 14

Write a program for congestion control using Leaky bucket algorithm.



Experiment-14

Aim: to write a program for congestion control using leaky bucket algorithm.

```
#include <stdio.h>
#include <conio.h>

void main(){
  int bucket_size, da;

  printf("Enter bucketsize and data sab");
  scanf("%d %d", &bucket_size, &da);

  int emp = bucket_size;

  while(1) {
    int ch, ps;

  printf("Enter packet size\n");
  scanf("%d", &ps);

    if (ps <= bucket_size){

        if (ps <= emp)
            printf("packet size %d sent", ps);
        else{
            printf("packet size %d dropped", ps);
        ps=0; }
      emp = emp - ps + da
  } else {
    printf("packet dropped");
```

```
    printf("Continue transmission? ");
    scanf("%d", &ch);

    if (ch == 0)
        break;
  }
}
```

Output:

```
Enter bucketsize and data rate
  4000  250
Enter packet size
  5000
packet dropped
Continue transmission?
  1
Enter packet size
  1000
packet size 1000 sent
Continue transmission? 1
Enter packet size
  3000
packet size 3000 sent
Continue transmission?
  1
Enter packet size
  750
packet size 750 dropped
Continue transmission?
  0
```

Code:

```
bucket=int(input("Enter bucket capacity "))

rate=int(input("Enter rate of data transmission "))

remaining=bucket

while True:

    packet=int(input("Enter packet size(-1 for no packets, -2 for end of
transmission) "))



    if packet==-2:

        break




    if packet>bucket:

        print("Packet can't be sent")

    else:

        if remaining+rate>=packet:

            remaining-=packet

            print("Packet sent")

        else:

            print("Packet can't be sent")
```

```
    if remaining==bucket:

        continue



    if bucket-remaining<rate:

        remaining=bucket

        continue

    remaining+=rate
```

Result:

```
PS C:\Users\aravi\OneDrive\Desktop\notes\CN> & C:/Python311/python.exe c:/Users/a
.py
Enter bucket capacity 4000
Enter rate of data transmission 250
Enter packet size(-1 for no packets, -2 for end of transmission)5000
Packet can't be sent
Enter packet size(-1 for no packets, -2 for end of transmission)1000
Packet sent
Enter packet size(-1 for no packets, -2 for end of transmission)3000
Packet sent
Enter packet size(-1 for no packets, -2 for end of transmission)750
Packet sent
Enter packet size(-1 for no packets, -2 for end of transmission)500
Packet can't be sent
Enter packet size(-1 for no packets, -2 for end of transmission)-1
Packet sent
Enter packet size(-1 for no packets, -2 for end of transmission)500
Packet sent
Enter packet size(-1 for no packets, -2 for end of transmission)-2
```