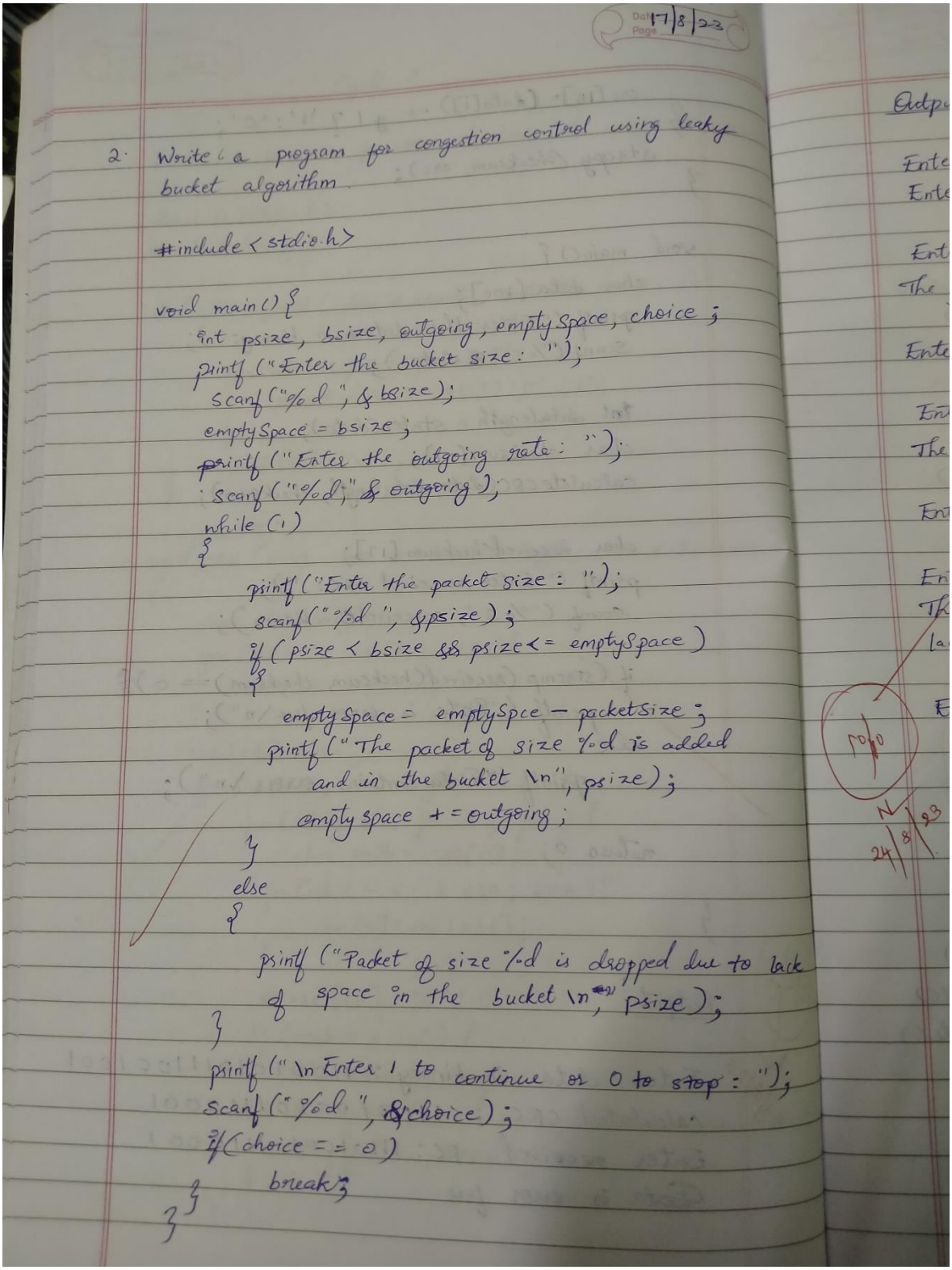
Experiment 14:

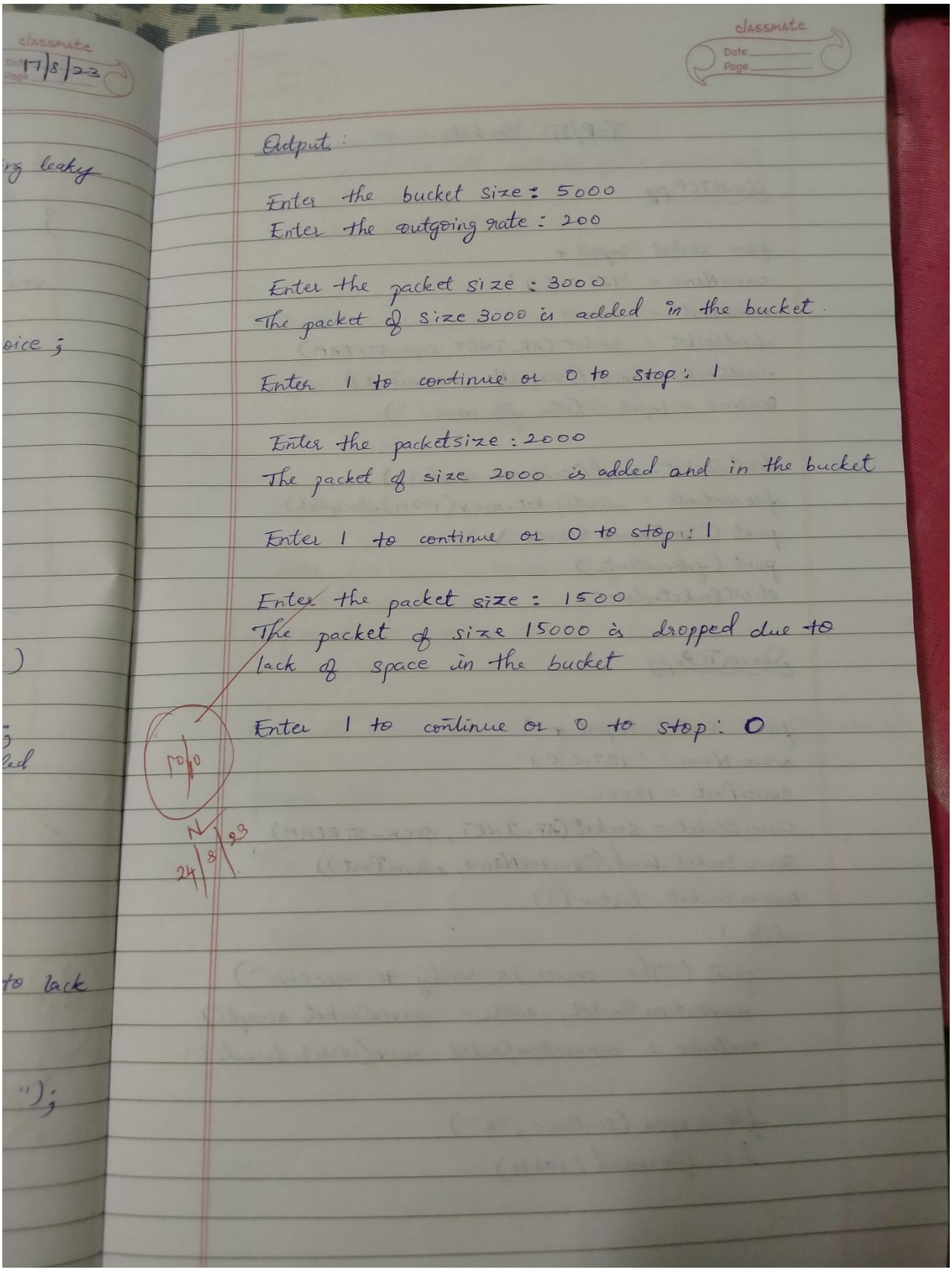
Write a program for congestion control using Leaky bucket algorithm.



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

```
#include <stdio.h>

void main(){
    int psize, bsize, outgoing, emptySpace, choice;
    printf("Enter the bucket size: ");
    scanf("%d", &bsize);
    emptySpace = bsize;
    printf("Enter the outgoing rate: ");
    scanf("%d", &outgoing);
    while(1)
    {
        printf("Enter the packet size: ");
        scanf("%d", &psize);
        if(psize < bsize && psize <= emptySpace)
        {
            emptySpace = emptySpce - packetSize;
            printf("The packet of size %d is added
                and in the bucket \n", psize);
            emptyspace += outgoing;
        }
        else
        {
            printf("Packet of size %d is dropped due to lack
                of space in the bucket \n", psize);
        }
        printf("\n Enter 1 to continue or 0 to stop: ");
        scanf("%d", &choice);
        if(choice == 0)
            break;
    }
}
```



Outputs:

Enter the bucket size: 5000
Enter the outgoing rate: 200

Enter the packet size: 3000
The packet of size 3000 is added in the bucket.

Enter 1 to continue or 0 to stop: 1

Enter the packetsize: 2000
The packet of size 2000 is added and in the bucket

Enter 1 to continue or 0 to stop: 1

Enter the packet size: 1500
The packet of size 15000 is dropped due to lack of space in the bucket

Enter 1 to continue or 0 to stop: 0

10/10

24/8/23

Screenshots:

```c
#include <stdio.h>

void main()
{
  int psize, bsize, outgoing, emptyspace, choice;
  printf("Enter the Bucket size = ");
  scanf("%d", &bsize);
  emptyspace = bsize;
  printf("Enter the outgoing rate = ");
  scanf("%d", &outgoing);
  while (1)
  {
    printf("\nEnter the packet size = ");
    scanf("%d", &psize);
    if (psize <= bsize && psize <= emptyspace)
    {
      emptyspace = emptyspace - psize;
      printf("The Packet of size %d is added and in the bucket \n", psize);
    }
    else
      printf("The Packet of size %d is dropped due to lack of space in the bucket\n");
    if ((emptyspace + outgoing) < bsize)
      emptyspace += outgoing;
    else if (bsize - emptyspace > 0)
      emptyspace = bsize;
    printf("\nEnter 1 to Continue or 0 to Stop: ");
    scanf("%d", &choice);
    if (choice == 0)
      break;
  }
}
```

```
PS D:\BMSCE\Academics\Semester IV\Computer networks\Lab\Leaky bucket> gcc leakybucket.c -o leakybucket
PS D:\BMSCE\Academics\Semester IV\Computer networks\Lab\Leaky bucket> ./leakybucket
Enter the Bucket size = 5000
Enter the outgoing rate = 200

Enter the packet size = 3000
The Packet of size 3000 is added and in the bucket

Enter 1 to Continue or 0 to Stop: 1

Enter the packet size = 2000
The Packet of size 2000 is added and in the bucket

Enter 1 to Continue or 0 to Stop: 1

Enter the packet size = 1500
The Packet of size 1500 is dropped due to lack of space in the bucket

Enter 1 to Continue or 0 to Stop: 0
PS D:\BMSCE\Academics\Semester IV\Computer networks\Lab\Leaky bucket>
```