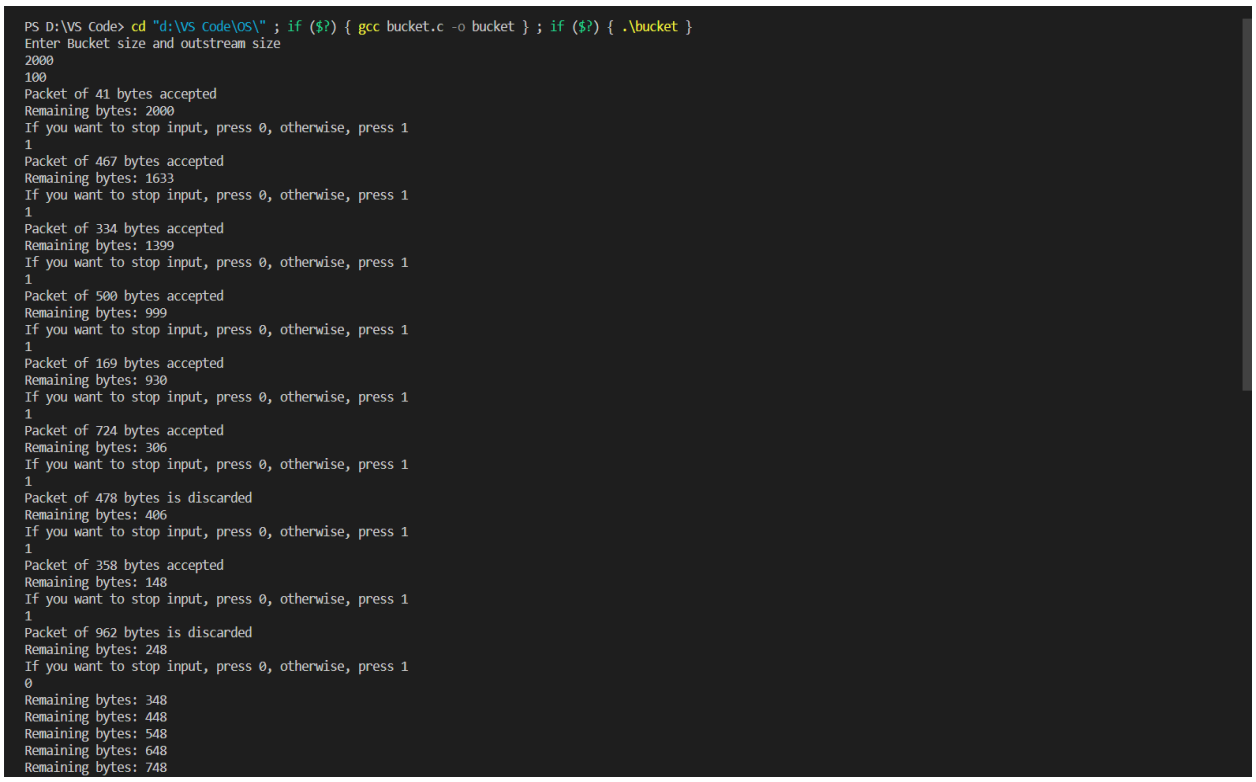
14. Write a program for congestion control using Leaky bucket algorithm.

Code:

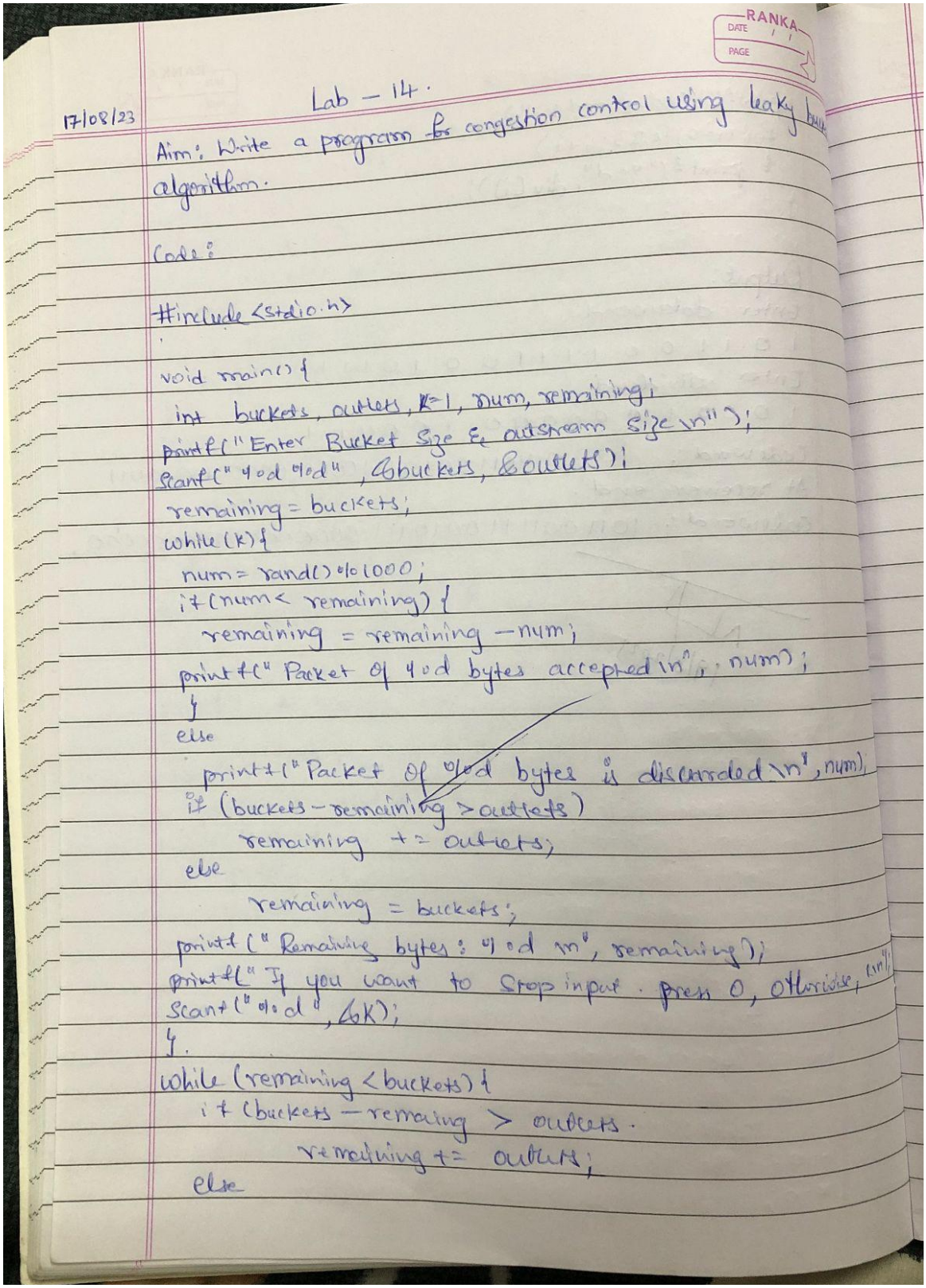
```
#include <stdio.h>
#include <stdlib.h> // Include this for the rand() function


int main()
{
   int buckets, outlets, k = 1, num, remaining;


   printf("Enter Bucket size and outstream size\n");
   scanf("%d %d", &buckets, &outlets);
   remaining = buckets;


   while (k)
   {
      num = rand() % 1000; // Generate a random number between 0 and 999
      if (num < remaining)
      {
         remaining = remaining - num;
         printf("Packet of %d bytes accepted\n", num); // Added missing variable
      }
      else
      {
         printf("Packet of %d bytes is discarded\n", num);
      }
      if (buckets - remaining > outlets)
      {
         remaining += outlets; // Fixed the calculation
      }
      else
         remaining = buckets;
      printf("Remaining bytes: %d \n", remaining);
      printf("If you want to stop input, press 0, otherwise, press 1\n");
      scanf("%d", &k);
   }


   while (remaining < buckets) // Fixed the condition
   {
```

```
        if (buckets - remaining > outlets)
        {
            remaining += outlets; // Fixed the calculation
        }
        else
            remaining = buckets;
        printf("Remaining bytes: %d \n", remaining);
    }
    return 0; // Added a return statement to indicate successful completion
}
```

Output:



Observation:



17/08/23

Lab – 14.

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

Code:

```
#include<stdio.h>

void main(){
 int buckets, outlets, k=1, num, remaining;
 printf("Enter Bucket Size & outstream size\n");
 scanf("%d %d", &buckets, &outlets);
 remaining = buckets;
 while(k){
  num = rand()%1000;
  if(num< remaining){
    remaining = remaining -num;
  printf("Packet of %d bytes accepted\n", num);
  }
  else
    printf("Packet of %d bytes is discarded\n", num);
  if (buckets - remaining > outlets)
      remaining += outlets;
  else
      remaining = buckets;
  printf("Remaining bytes: %d\n", remaining);
  printf("If you want to Stop input. press 0, otherwise, \n");
  scanf("%d", &k);
 }.
 while (remaining < buckets){
   if (buckets - remaing > outlets.
          remaining += outlets;
   else
```

```
        remaining = buckets;
        printf("Remaining bytes: %d \n", remaining);
    }
}
```

Output:

Enter Bucket size & outstream size 2000 100.
Packet of 41 bytes accepted.
Remaining bytes: 2000.
If you want to stop input, press 0, Otherwise, press 1.
Packet of 467 bytes accepted. 1
Packet of 334 bytes accepted
Remaining bytes: 1399. 0.
Remaining bytes: 1499
Remaining bytes: 1599
Remaining bytes: 1699
Remaining bytes: 1799
Remaining bytes: 1899
Remaining bytes: 1999
Remaining bytes: 2000.

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