

Program 2

Aim of the program: Write a program for congestion control using Leaky bucket algorithm

Code:

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

```
int main(){
```

```
    int incoming, outgoing, buck_size, n, store = 0;
```

```
    printf("Enter bucket size, outgoing rate and no of inputs: ");
```

```
    scanf("%d %d %d", &buck_size, &outgoing, &n);
```

```
    while (n != 0) {
```

```
        printf("Enter the incoming packet size : ");
```

```
        scanf("%d", &incoming);
```

```
        printf("Incoming packet size %d\n", incoming);
```

```
        if (incoming <= (buck_size - store)){
```

```
            store += incoming;
```

```
            printf("Bucket buffer size %d out of %d\n", store, buck_size);
```

```
        } else {
```

```
            printf("Dropped %d no of packets\n", incoming - (buck_size - store));
```

```
            printf("Bucket buffer size %d out of %d\n", store, buck_size);
```

```
            store = buck_size;
```

```
        }
```

```
        store = store - outgoing;
```

```
        printf("After outgoing %d bytes left out of %d in buffer\n", store, buck_size);
```

```
        n--;
```

```
    }
```

```
}
```

```
1  #include<stdio.h>
2  int main(){
3      int incoming, outgoing, buck_size, n, store = 0;
4      printf("Enter bucket size, outgoing rate and no of inputs: ");
5      scanf("%d %d %d", &buck_size, &outgoing, &n);
6      while (n != 0) {
7          printf("Enter the incoming packet size : ");
8          scanf("%d", &incoming);
9          printf("Incoming packet size %d\n", incoming);
10         if (incoming <= (buck_size - store)){
11             store += incoming;
12             printf("Bucket buffer size %d out of %d\n", store, buck_size);
13         } else {
14             printf("Dropped %d no of packets\n", incoming - (buck_size - store));
15             printf("Bucket buffer size %d out of %d\n", store, buck_size);
16             store = buck_size;
17         }
18         store = store - outgoing;
19         printf("After outgoing %d bytes left out of %d in buffer\n", store, buck_size);
20         n--;
21     }
22 }
```

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Write a program for congestion control using
leaky bucket algorithm

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

```
int main() {
```

```
    int incoming, outgoing, bucket_size, n, store = 0;
```

```
    printf("Enter bucket_size, outgoing rate and no. of  
    inputs:");
```

```
    scanf("%d %d %d", &bucket_size, &outgoing, &n);
```

```
    while (n != 0) {
```

```
        printf("Enter the incoming packet size:");
```

```
        scanf("%d", &incoming);
```

```
        printf("In coming packet size +d\n", incoming);
```

```
        if (incoming <= (bucket_size - store)) {
```

```
            store += incoming;
```

```
            printf("Bucket buffer size +d out of  
            +d\n", store, bucket_size);
```

```
        } else {
```

```
            printf("Dropped +d no. of packets\n",
```

```
            incoming - (bucket_size - store));
```

```
            printf("Bucket buffer size +d out of  
            +d\n", store, bucket_size);
```

```
            store = bucket_size;
```

```
            store = store - outgoing;
```

```
            printf("After outgoing +d bytes left  
            out of +d in buffer\n", store,
```

```
            bucket_size);
```

```
            n--;
```

Output:

```
Enter bucket size, outgoing rate and no of inputs: 5 2 2
Enter the incoming packet size : 3
Incoming packet size 3
Bucket buffer size 3 out of 5
After outgoing 1 bytes left out of 5 in buffer
Enter the incoming packet size : 2
Incoming packet size 2
Bucket buffer size 3 out of 5
After outgoing 1 bytes left out of 5 in buffer
```

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OUTPUT
Enter bucket size, outgoing rate and no. of inputs: 5 2
Enter the incoming packet size: 3
Incoming packet size 3
Bucket buffer size 3 out of 5
After outgoing 1 bytes left out of 5 in buffer
Enter incoming packet size = 2
Incoming packet size 2
Bucket buffer size 3 out of 5
After outgoing 1 byte left out of 5 in buffer

[Signature]