Experiment 14

AIM: Write a program for congestion control using Leaky bucket algorithm.

C++ code

```
#include <bits/stdc++.h>
using namespace std;

int main()
{
    int n, storage, input_pkt_size, bucket_size;

    storage = 0;
    int output_pkt_size = 1;

    cout << "enter no. of queries";
    cin >> n;
    cout << "enter bucket_size"
     cin >> bucket_size;

    while(n) {

        int left = bucket_size - storage;
        cout << "enter input pkt_size" << endl;
        cin >> input_pkt_size;
        if (input_pkt_size <= left) storage += input_pkt_size
        else { cout << "packet lost : " << input_pkt_size ; }
        cout << "current stye:" << storage << "/" << buck_size;
        storage -= output_pkt_size;
        n--;

    }
    return 0;
}
```

PROGRAM:

```
// program to implement leakybucket

#include <bits/stdc++.h>
using namespace std;

int main()
{
    int n, output_size, input_size, bucket_size;


  int storage = 0;

    cout<<"Enter the no. of queries: ";
    cin>>n;

    t
  cout<<"Enter the Bucket size: ";
    cin>>bucket_size;


    input_pkt_size = 4;

    // no. of packets that exits the bucket at a time
  cout<<"Packet Output Rate: ";
  cin>>output_size;

    for (int i = 0; i < no_of_queries; i++) // space left
    {

    cout<<"Enter the Input packet size: ";
    cin>>input_size;
        int size_left = bucket_size - storage;
        if (input_pkt_size <= size_left) {
            // update storage
            storage += input_size;
        }
        else {
            printf("Packet loss = %d\n", input_size);
        }
        printf("Buffer size= %d out of bucket size= %d\n",
            storage, bucket_size);
        storage -= output_size;
    }

    return 0;
}
```

OUTPUT :

```
Enter the no. of queries: 4
Enter the Bucket size: 10
Packet Output Rate: 1
Enter the Input packet size: 3
Buffer size= 3 out of bucket size= 10
Enter the Input packet size: 6
Buffer size= 8 out of bucket size= 10
Enter the Input packet size: 4
Packet loss = 4
Buffer size= 7 out of bucket size= 10
Enter the Input packet size: 1
Buffer size= 7 out of bucket size= 10
```