LAB ASSIGNMENT – 3

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Q1. Sliding Window

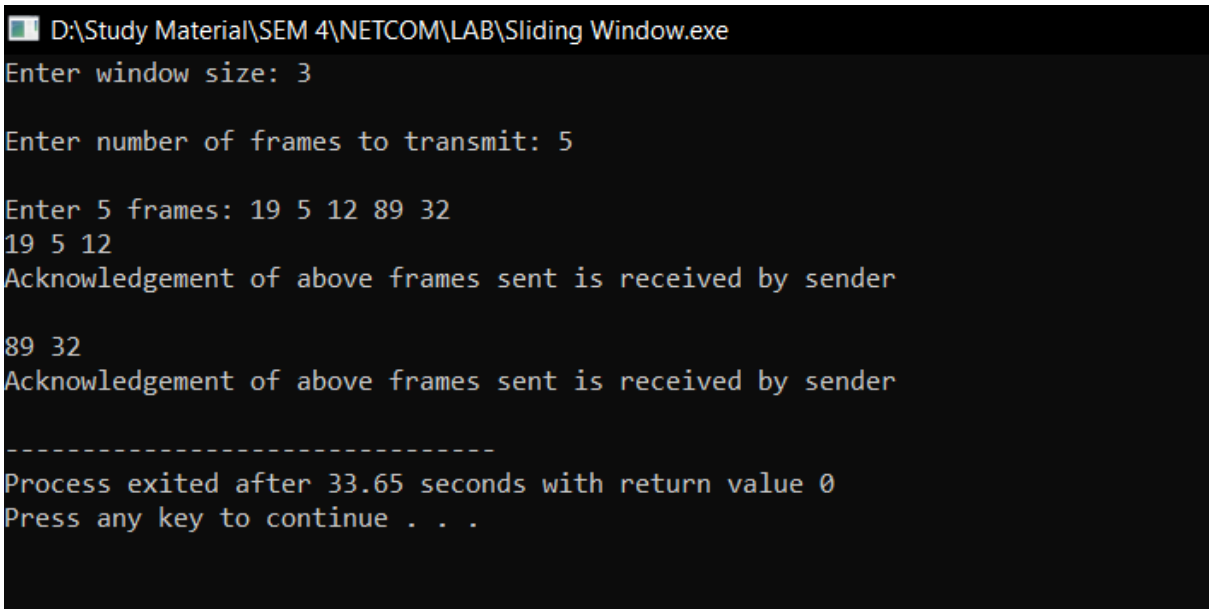
Code –

```
#include <bits/stdc++.h>

using namespace std;
int frames[50];

void receiver(int s, int f)
{
   int i = (rand() % f);
   for (i; i <= f; i++)
   {
      if (i % s == 0)
      {
         cout << frames[i] << "\n";
         cout << "Acknowledgement of above frames sent is received by sender\n\n";
      }
      else
      {
```

```
            cout << frames[i] << " ";
        }
    }

    if (f % s != 0)
        cout << "\nAcknowledgement of above frames sent is received by
sender\n";
}

void sender(int s, int f, int i)
{
    cout << "\nEnter " << f << " frames: ";
    for (i = 1; i <= f; i++)
    {
        cin >> frames[i];
    }
    receiver(s, f);
}

int main()
{
    int s, i, f;

    cout << "Enter window size: ";
    cin >> s;

    cout << "\nEnter number of frames to transmit: ";
```

```
    cin >> f;

    sender(s, f, i);

    return 0;
}
```

Output –



Q2. Go back N

Code –

```
#include <iostream>
#include <ctime>
#include <cstdlib>
using namespace std;
int nf, N, x = 0;
int ntr = 0;
void receiver(int i, int x)
```

```
{
 for (int j = i; j < i + N && j <= nf; j++)
 {
 int flag = rand() % 2;
 if (!flag)
 {
 cout << "Acknowledgment for Frame " << j << endl;
 x++;
 }
 else
 {
cout << "Frame " << j << " Not Received" << endl;
 cout << "Retransmitting Window" << endl;
 break;
 }
 }
}
void sender(int i)
{
 for (int j = i; j < i + N && j <= nf; j++)
 {
 cout << "Sent Frame " << j << endl;
 ntr++;
 }
}
int main()
```

```
{
 srand(time(NULL));
 cout << "Enter the number of frames : ";
 cin >> nf;
 cout << "Enter the Window Size : ";
 cin >> N;
 int i = 1;
 while (i <= nf)
 {
 sender(i);
 for (int j = i; j < i + N && j <= nf; j++)
 {
 int flag = rand() % 2;
 if (!flag)
 {
 cout << "Acknowledgment for Frame " << j << endl;
 x++;
 }
 else
 {
 cout << "Frame " << j << " Not Received" << endl;
 cout << "Retransmitting Window" << endl;
 break;
 }
 }
 cout << endl;
```

```
 i += x;
}
 cout << "Total number of transmissions : " << ntr << endl;
 return 0;
}
```

Output –