COMPUTER NETWORKS AND SECURITY LABORATORY

Assignment No. 5 B

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Ques :- Write a program to simulate Selective Repeat Mode of Sliding Window Protocol in Peer-to-Peer mode.

Solution :-

Program :

1) Server =

```
//Lab Assignment 4: Write a program to simulate Selective Repeat Modes of Sliding Window Protocol in peer to peer mode.
//**** Server Code ****
import java.io.DataInputStream;
import java.io.DataOutputStream;
import java.io.IOException;
import java.net.ServerSocket;
import java.net.Socket;
import java.net.SocketException;

public class Server {
	static ServerSocket Serversocket;
	static DataInputStream dis;
	static DataOutputStream dos;

	public static void main(String[] args) throws SocketException {

		try {
```

```
                int a[] = { 30, 40, 50, 60, 70, 80, 90, 100 };
                Serversocket = new ServerSocket(8011);
                System.out.println("waiting for connection");
                Socket client = Serversocket.accept();
                dis = new DataInputStream(client.getInputStream());
                dos = new DataOutputStream(client.getOutputStream());
                System.out.println("The number of packets sent is:" +
a.length);
                int y = a.length;
                dos.write(y);
                dos.flush();

                for (int i = 0; i < a.length; i++) {
                        dos.write(a[i]);
                        dos.flush();
                }

                int k = dis.read();

                dos.write(a[k]);
                dos.flush();

        } catch (IOException e) {
                System.out.println(e);
        } finally {
```

```
                try {
                        dis.close();
                        dos.close();
                } catch (IOException e) {
                        // TODO Auto-generated catch block
                        e.printStackTrace();
                }

        }
    }
}
```

2) Client =

//Lab Assignment 4: Write a program to simulate Selective Repeat Modes of Sliding Window Protocol in peer to peer mode.

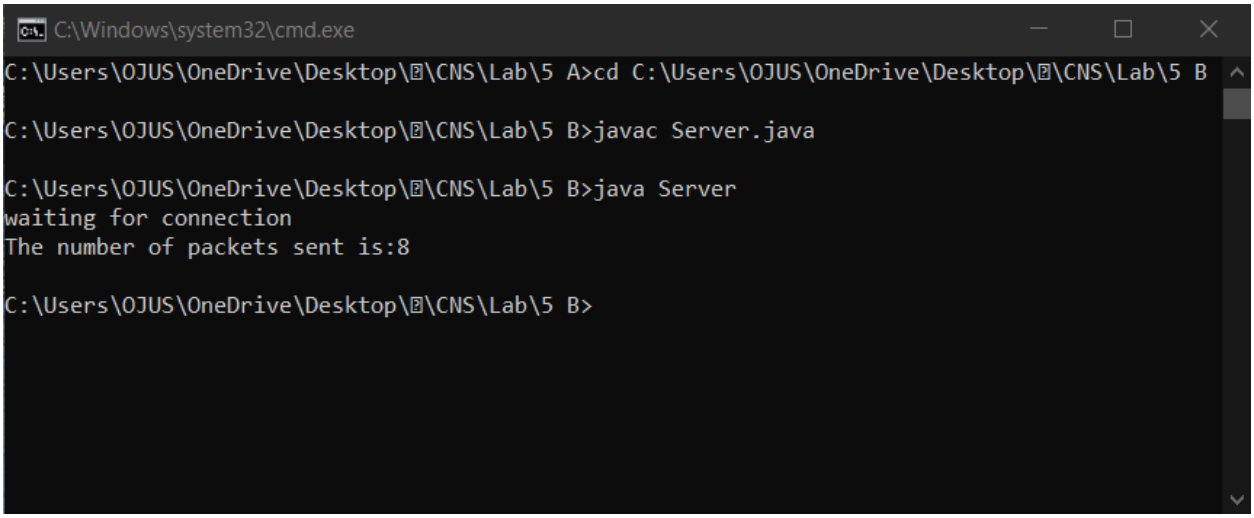
```
//**** Client Code ****

import java.lang.System;

import java.net.*;

import java.io.*;


public class Client {

	static Socket connection;


	public static void main(String a[]) throws SocketException {

		try {

			int v[] = new int[8];

			//int g[] = new int[8];

			int n = 0;

			InetAddress addr = InetAddress.getByName("Localhost");

			System.out.println(addr);

			connection = new Socket(addr, 8011);

			DataOutputStream out = new DataOutputStream(

					connection.getOutputStream());

			DataInputStream in = new DataInputStream(

					connection.getInputStream());

			int p = in.read();

			System.out.println("No of frame is:" + p);
```

```
for (int i = 0; i < p; i++) {
        v[i] = in.read();
        System.out.println(v[i]);
        //g[i] = v[i];
}
v[5] = -1;
for (int i = 0; i < p; i++)
 {
            System.out.println("Received frame is: " + v[i]);

        }
for (int i = 0; i < p; i++)
        if (v[i] == -1) {
            System.out.println("Request to retransmit from
packet no "
                        + (i+1) + " again!!");
            n = i;
            out.write(n);
            out.flush();
        }

System.out.println();

        v[n] = in.read();
```

```
                        System.out.println("Received frame is: " + v[n]);




                    System.out.println("quiting");
                } catch (Exception e) {
                    System.out.println(e);
                }

        }
}
```

Output :

Server



Client