

Ex: 07
Date: 11.09.24

Aim:

Write a program to implement flow control at data link layer using sliding window protocol. Simulate the flow of frames from one node to another.

Code:

```
import java.util.Scanner;  
public class main {
```

```
    public static void sender (
```

```
    {  
        int num Frames = message.length();
```

```
        char[] frames = message.toCharArray();
```

```
        int sent Frame = 0;
```

```
        while (sent Frame < num Frames) {
```

```
            System.out.println("In Sender: Sending frames from  
            position " + (sent Frame + 1) + " to " + Math.min(  
            sent Frame + window size, num Frames));
```

```
            for (int i = sent Frame; i < Math.min(sent Frame +  
            window size, num Frames); i++) {
```

```
                System.out.println("Frames " + (i + 1) + ": " + frames[i]  
                + " sent.");
```

System.out.println ("Receiver: Acknowledgment
received for frame " + (sentFrame + 1));
sentFrame++;

System.out.println ("All frames are sent
successfully");

Input

Enter window: 5

Enter input: Hello my name is gaur

sent \rightarrow ['h', 'e', 'l', 'l', 'o']

sending \rightarrow [' ', 'm', 'y', ' ', 'n']

Ack ~! h!

sending \rightarrow

Ack ~! e!

sending \rightarrow m

sent [' ', 'm', 'y', ' ', 'n']

sending \rightarrow ['a', 'm', 'e', ' ', 'i']

Ack ~! !

sending \rightarrow a

