

Exp 7
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 main (String  
        message, int window size) {  
        int numFrames = message.length();  
        char [] frames = message.toCharArray();  
        int sentFrame = 0;  
        while (sentFrame < numFrames) {  
            System.out.println("In sender: sending  
                frames from position " +  
                (sentFrame + 1) + " to " + Math.min(  
                    sentFrame + windowFrame, numFrames));  
            for (int i = sentFrame; i < Math.min (sentFrame +  
                window size, numFrames); i++) {
```



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

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

```
}  
System.out.println("Received. Acknowledgement  
received for frame " + sentFrame + 1);  
sentFrame++;
```

```
}  
System.out.println("\n All frames are  
sent successfully");
```

```
public static void main(String[]) {
```

```
Scanner a = new Scanner(System.in);  
System.out.print("Enter the message to send:");  
String message = a.nextLine();  
System.out.print("Enter the window size:");  
int windowSize = a.nextInt();
```

```
Sender(message, windowSize);
```

```
Receiver(message, windowSize);
```

```
}
```

```
}
```


Output:

Enter the message to send: cat

Enter the window size: 3

Sender: Sending Frames from position 1 to 3

Frame 1: 'c' sent

Frame 2: 'a' sent

Frame 3: 't' sent

Receiver: Acknowledgement received for frame 1

Sender: Sending frames from position 2 to 3

Frame 2: 'a' sent

Frame 3: 't' sent

Receiver: Acknowledgement received for frame 2

Sender: Sending frames from position 3 to 3

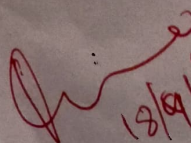
Frame 3: 't' sent

Receiver: Acknowledgement received for frame 3

Successfully

Result

Thus the sliding window protocol is executed and verified.

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