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

```
System.out.println("Frame " + (i+1) + ": " +
    frames[i] + " sent");
}
System.out.println("Received Acknowledgement
    frames[i] + " sent");
}
System.out.println("Received Acknowledgement
received for frame " + sentFrame+1));
    sentFrame+=2;
}
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 frame 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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