Networks Laboratory

Assignment 6

Sliding Window ARQ with congestion control

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Compilation instructions :-

Run make. It produces two executables myudpclient and myudpserver.

Running procedure :-

Client - ./myudpclient 127.0.0.1 <port>

Server- ./myudpserver <port>

Sample Input and Output :-

Client side :-

The program will ask for the name of the file to be sent to the server. The file must be present in the directory in which the client is running. Enter the file name and press enter.

```
Acknowledgement received : 8008
Acknowledgement received : 8008
Acknowledgement received : 8008
Acknowledgement received : 8008
Acknowledgement received : 8008
154
Retransmitted New packet sent 8009
Retransmitted New packet sent 8010
Retransmitted New packet sent 8011
Retransmitted New packet sent 8012
Retransmitted New packet sent 8013
```

Scenario when an acknowledgement is lost (154 is the new window size on halving)

```
Acknowledgement received : 7972
 Correct New packet sent 8243
 Correct New packet sent 8244
Acknowledgement received : 7973
 Correct New packet sent 8245
 Correct New packet sent 8246
Acknowledgement received : 7974
 Correct New packet sent 8247
 Correct New packet sent 8248
Acknowledgement received : 7975
 Correct New packet sent 8249
 Correct New packet sent 8250
Acknowledgement received : 7976
 Correct New packet sent 8251
 Correct New packet sent 8252
```

Scenario when correct acknowledgements are received(for each acknowledgement received window size is increased by 1)

Server side :-

```
Received packet number 1070
1069
Normal Acknowledgement sent :  1070
Received packet number 1072
1070
Normal Acknowledgement sent :  1070
Received packet number 1074
1070
Normal Acknowledgement sent :  1070
Received packet number 1076
1070
Normal Acknowledgement sent :  1070
Received packet number 1078
```

Scenario when a packet (1071) is lost in transmission. (1070 is the last acknowledged packet)