

# Assignment 6

## Sliding Window ARQ with Congestion Control

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### Compilation Instructions:

Run makefile using 'make' command for both the Client and Server. This will generate two executables: client and server.

### Running Instructions:

Client Side: ./client <IP> <port>

```
prajwal@prajwal-HP-Pavilion-Notebook:~/Downloads$ ./client localhost 8080
```

Server Side: ./server <port>

```
prajwal@prajwal-HP-Pavilion-Notebook:~/Downloads/Server$ ./server 8080
```

### File Input:

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.

```
prajwal@prajwal-HP-Pavilion-Notebook:~/Downloads$ ./client localhost 8080  
Please enter filename: 
```

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## Sample Input and Output:

We sent a PDF over this program of size 4.4 Mb.

Client Side:

```
Transmitting Bytes - 1024 Seq-no:4276  
Transmitting Bytes - 1024 Seq-no:4277  
Retransmitting  
Add to remaining seq no - 4277  
Add to remaining seq no - 4276
```

Case when timeout occurs.

Server Side:

```
Receiving 1024 Bytes - 4297  
Receiving 1024 Bytes - 4298  
Receiving 1024 Bytes - 4299  
Ack dropped - 4300  
Receiving 1024 Bytes - 4300  
Receiving 1024 Bytes - 4301  
Receiving 1024 Bytes - 4302  
Receiving 1024 Bytes - 4303
```

Case when Server drops an Ack.

```
Receiving 1024 Bytes - 4287  
Receiving 1024 Bytes - 4288  
Receiving 1024 Bytes - 4289  
Receiving 1024 Bytes - 4290  
Receiving 1024 Bytes - 4291  
Receiving 1024 Bytes - 4292  
Receiving 1024 Bytes - 4293
```

Case when packets are received.