

LAB 10

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C-Net

A

Lab Work 01

Server

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PS D:\6th Semester\Cnet\i220748_LAB10> g++ task1_server.cpp -o server -lws2_32
PS D:\6th Semester\Cnet\i220748_LAB10> ./server
Server listening on port 8080...
Client connected!
Sent: Data Packet (1), cwnd=1
Received: ACK
Sent: Data Packet (2), cwnd=2
Received: ACK
Sent: Data Packet (3), cwnd=4
Received: ACK
Sent: Data Packet (4), cwnd=8
Received: ACK
Packet loss detected! Multiplicative decrease.
Sent: Data Packet (5), cwnd=1
Received: ACK
Sent: Data Packet (6), cwnd=2
Received: ACK
Sent: Data Packet (7), cwnd=4
Received: ACK
Sent: Data Packet (8), cwnd=5
Received: ACK
Sent: Data Packet (9), cwnd=6
Received: ACK
Sent: Data Packet (10), cwnd=7
Received: ACK
Sent: Data Packet (11), cwnd=8
Received: ACK
Sent: Data Packet (12), cwnd=9
Received: ACK
Sent: Data Packet (13), cwnd=10
Received: ACK
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Sent: Data Packet (11), cwnd=8
Received: ACK
Sent: Data Packet (12), cwnd=9
Received: ACK
Sent: Data Packet (13), cwnd=10
Received: ACK
Sent: Data Packet (14), cwnd=11
Received: ACK
Sent: Data Packet (15), cwnd=12
Received: ACK
Sent: Data Packet (16), cwnd=13
Received: ACK
Sent: Data Packet (17), cwnd=14
Received: ACK
Sent: Data Packet (18), cwnd=15
Received: ACK
Sent: Data Packet (19), cwnd=16
Received: ACK
Sent: Data Packet (20), cwnd=17
Received: ACK
Server: Completed 20 packets. Closing connection.
```

Client

```
PS D:\6th Semester\Cnet\i220748_LAB10> g++ task1_client.cpp -o client -lws2_32
PS D:\6th Semester\Cnet\i220748_LAB10> ./client
Connected to server.
Server: Data Packet (1), cwnd=1
Server: Data Packet (2), cwnd=2
Server: Data Packet (3), cwnd=4
Server: Data Packet (4), cwnd=8
Server: Data Packet (5), cwnd=1
Server: Data Packet (6), cwnd=2
Server: Data Packet (7), cwnd=4
Server: Data Packet (8), cwnd=5
Server: Data Packet (9), cwnd=6
Server: Data Packet (10), cwnd=7
Server: Data Packet (11), cwnd=8
Server: Data Packet (12), cwnd=9
Server: Data Packet (13), cwnd=10
Server: Data Packet (14), cwnd=11
Server: Data Packet (15), cwnd=12
Server: Data Packet (16), cwnd=13
Server: Data Packet (17), cwnd=14
Server: Data Packet (18), cwnd=15
Server: Data Packet (19), cwnd=16
Server: Data Packet (20), cwnd=17
Client: Completed 20 packets. Closing connection.
```

Lab Work 02

Server

```
PS D:\6th Semester\Cnet\i220748_LAB10> g++ task2_server.cpp -o server -lws2_32
PS D:\6th Semester\Cnet\i220748_LAB10> ./server
Server listening on port 8080...
Client #1 connected!
Sent to Client #1: Client #1 - Data Packet (1), cwnd=1
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (2), cwnd=2
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (3), cwnd=4
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (4), cwnd=8
Received from Client #1: ACK
Client #1: Packet loss detected! Multiplicative decrease.
Sent to Client #1: Client #1 - Data Packet (5), cwnd=1
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (6), cwnd=2
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (7), cwnd=4
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (8), cwnd=5
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (9), cwnd=6
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (10), cwnd=7
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (11), cwnd=8
Received from Client #1: ACK
```

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Sent to Client #1: Client #1 - Data Packet (12), cwnd=9
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (13), cwnd=10
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (14), cwnd=11
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (15), cwnd=12
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (16), cwnd=13
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (17), cwnd=14
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (18), cwnd=15
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (19), cwnd=16
Received from Client #1: ACK
Sent to Client #1: Client #1 - Data Packet (20), cwnd=17
Received from Client #1: ACK
Client #1 session complete. Closing connection.
```

Client

```

PS D:\6th Semester\Cnet\i220748_LAB10> g++ task2_client.cpp -o client -lws2_32
PS D:\6th Semester\Cnet\i220748_LAB10> ./client
Connected to server.
Server: Client #1 - Data Packet (1), cwnd=1
Server: Client #1 - Data Packet (2), cwnd=2
Server: Client #1 - Data Packet (3), cwnd=4
Server: Client #1 - Data Packet (4), cwnd=8
Server: Client #1 - Data Packet (5), cwnd=1
Server: Client #1 - Data Packet (6), cwnd=2
Server: Client #1 - Data Packet (7), cwnd=4
Server: Client #1 - Data Packet (8), cwnd=5
Server: Client #1 - Data Packet (9), cwnd=6
Server: Client #1 - Data Packet (10), cwnd=7
Server: Client #1 - Data Packet (11), cwnd=8
Server: Client #1 - Data Packet (12), cwnd=9
Server: Client #1 - Data Packet (13), cwnd=10
Server: Client #1 - Data Packet (14), cwnd=11
Server: Client #1 - Data Packet (15), cwnd=12
Server: Client #1 - Data Packet (16), cwnd=13
Server: Client #1 - Data Packet (17), cwnd=14
Server: Client #1 - Data Packet (18), cwnd=15
Server: Client #1 - Data Packet (19), cwnd=16
Server: Client #1 - Data Packet (20), cwnd=17
Client: Completed 20 packets. Closing connection.

```

Lab Task 01

Server

```

PS D:\6th Semester\Cnet\i220748_LAB10> g++ task1_server.cpp -o server -lws2_32
PS D:\6th Semester\Cnet\i220748_LAB10> ./server
Server listening on port 8080...
Congestion: Max clients reached. Waiting...
Sent task to Client #1: Reverse this string: hello
Sent task to Client #1: Sum these numbers: 1,2,3,4
Client #1 session complete. Closing connection.

```

Client

```

PS D:\6th Semester\Cnet\i220748_LAB10> g++ task1_client.cpp -o client -lws2_32
PS D:\6th Semester\Cnet\i220748_LAB10> ./client
Connected to server.
Server: Reverse this string: hello
Server Response: Accepted!
Server: Sum these numbers: 1,2,3,4
Server Response: Accepted!

```