Mini Project

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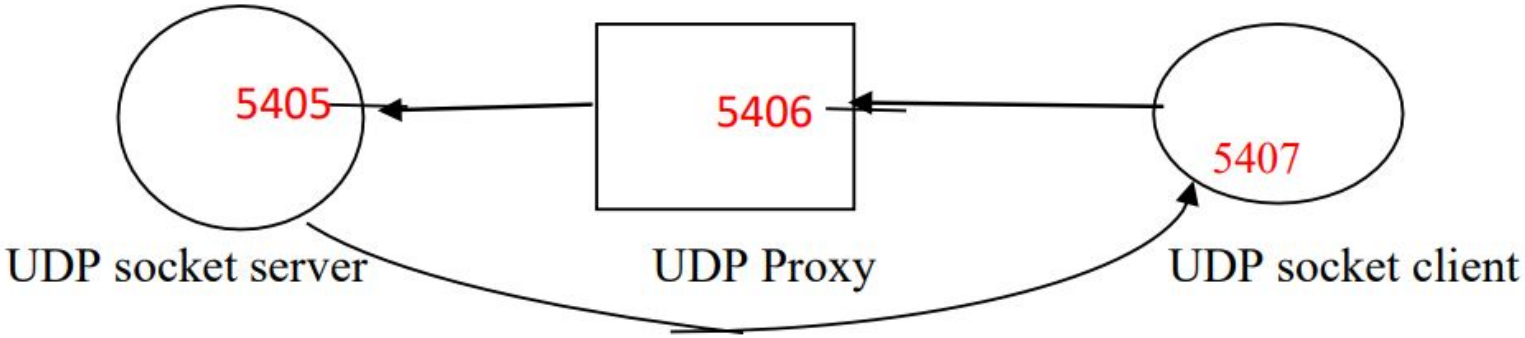
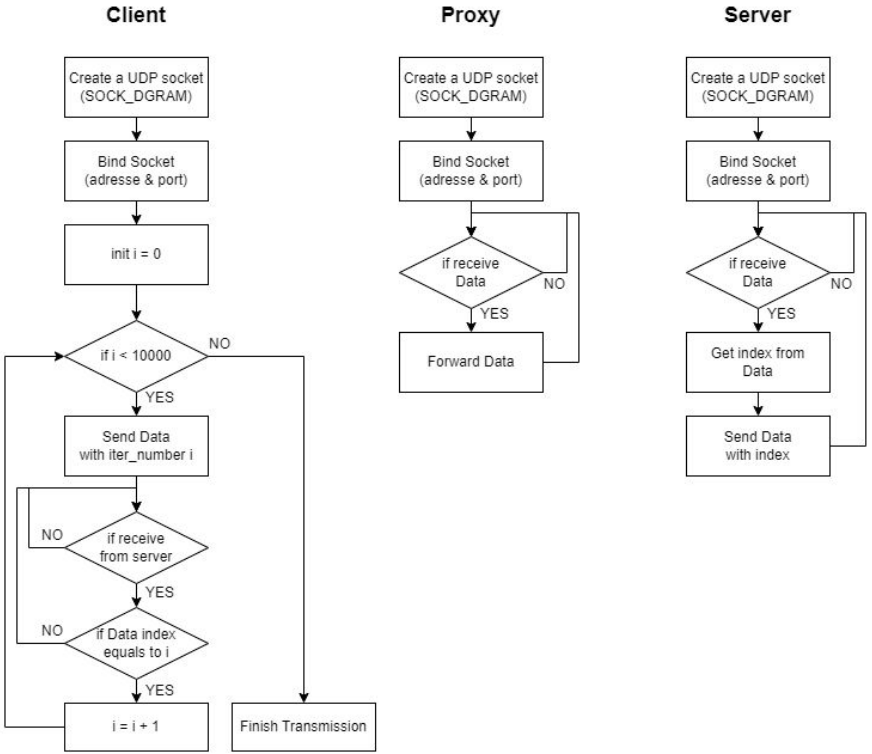
Contents

Basic Connection Setup

The server listens to the packets, and the socket client send “Hello” to the server. When the socket server receives a “Hello”, it returns a “World” back.

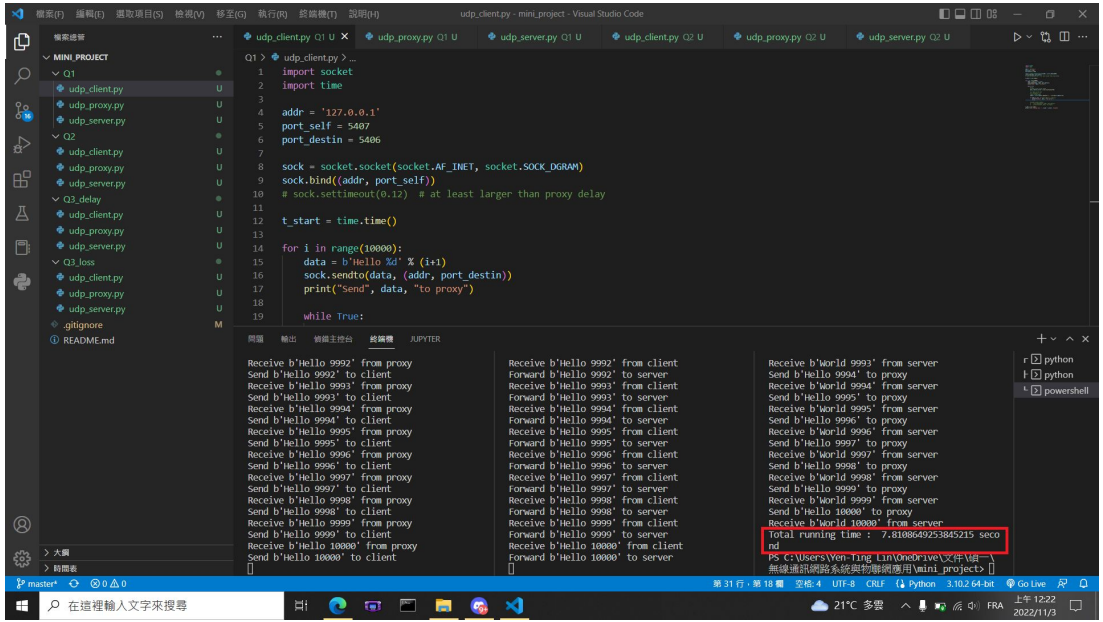


Basic Connection Setup



Basic Connection Setup

This figure shows that the total time to send the message is 7.81 seconds.



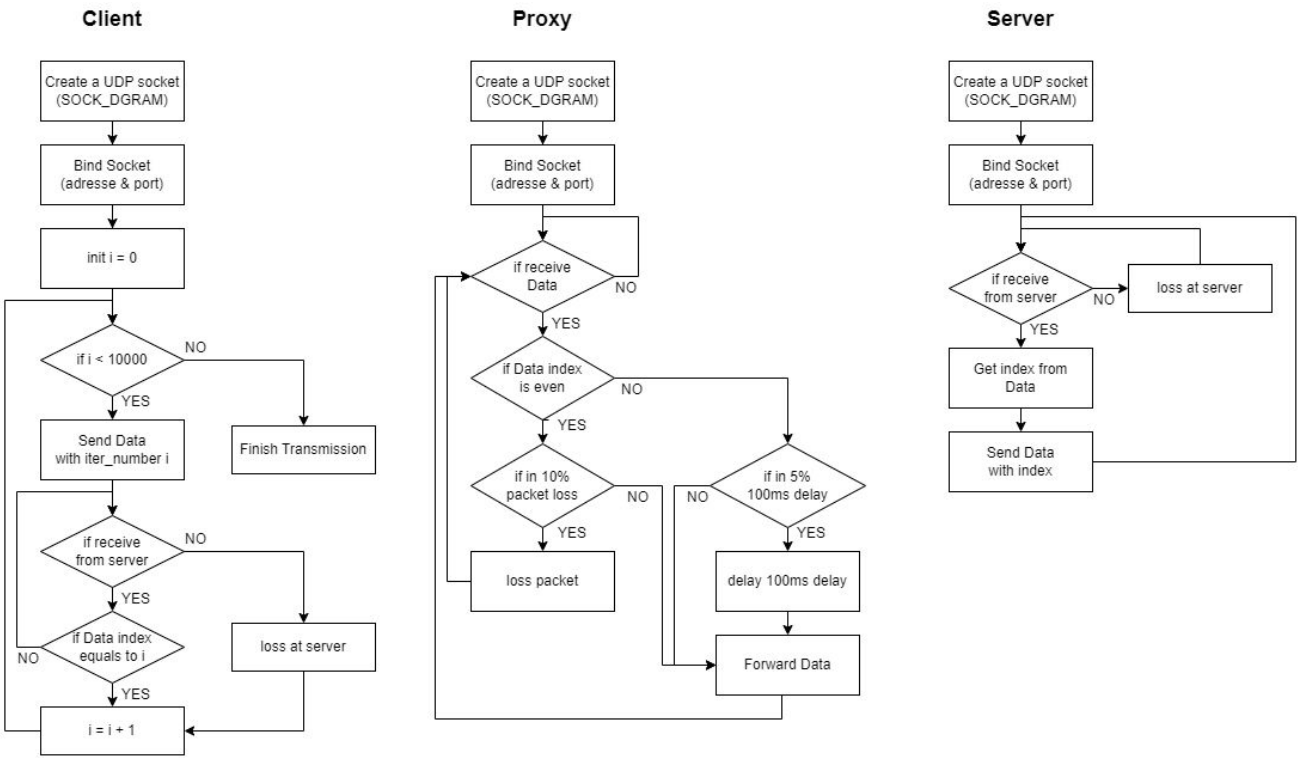
Loss & Delay Function

When the UDP proxy receives the “Hello i” message

– it drops each received packet with 10% probability if i is even number

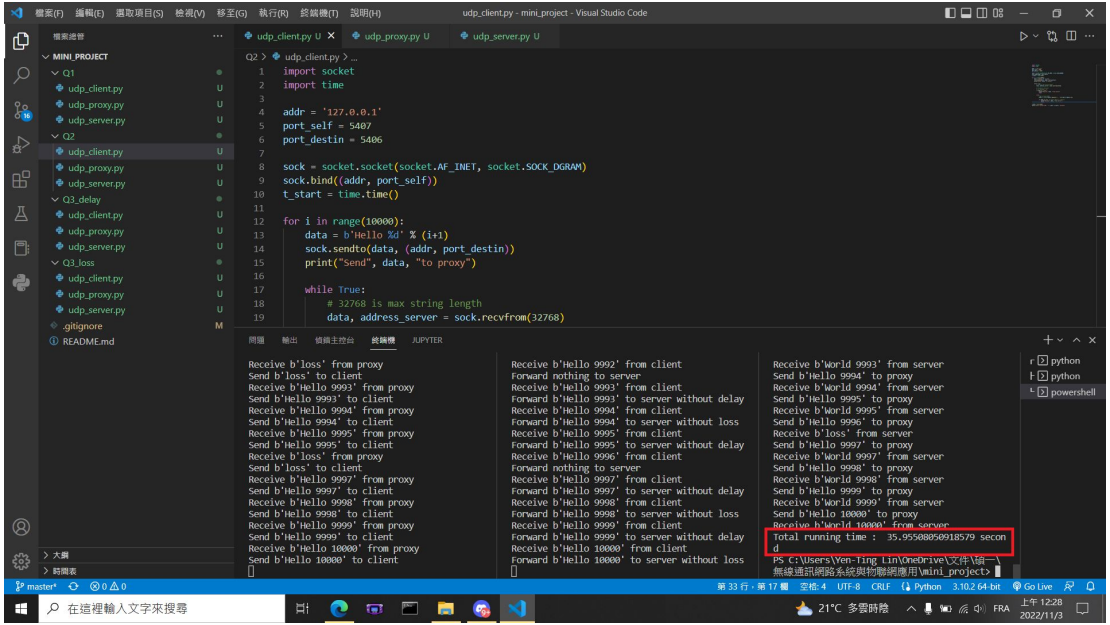
– it delays 100ms the received packet with 5% probability before forwarding to the server if i is odd number

Loss & Delay Function



Loss & Delay Function

This figure shows that the total time to send the message is 35.96 seconds.



Improvement : Loss Only

If we consider only solving the issue of transmission caused by loss function.

In condition of : delay transmission problem still exists

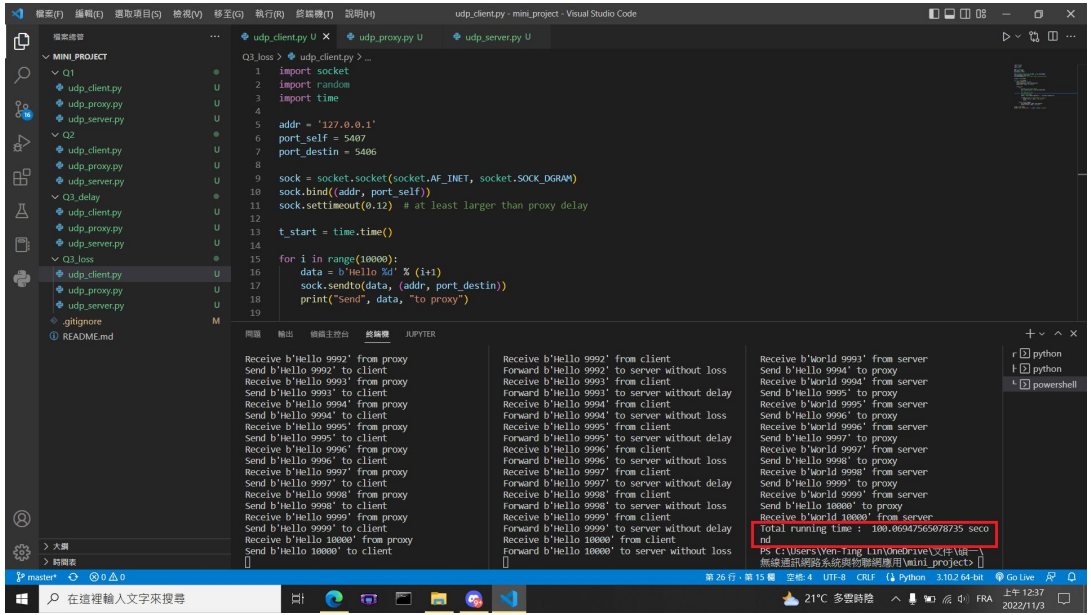
1 : Measuring the delay transmission time = T_out (~= 120 ms)

2 : If waiting time > T_out, there exist transmission data loss

3 : Re-transmission until the server receives it

Improvement : Loss Only

This figure shows that the total time to send the message is 100.07 seconds.



Improvement : Delay Only

If we consider only solving the issue of transmission caused by delay function.

In condition of : loss transmission problem still exists

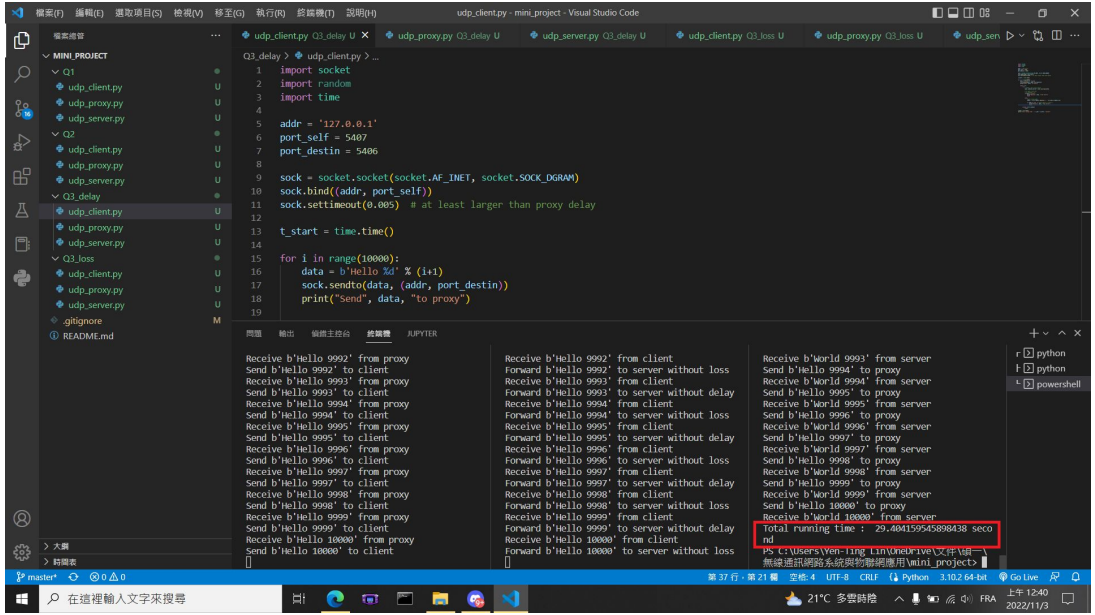
1 : We don’t retransmit the loss message

2 : Server knows when is loss message, when is delay message

3 : When it is delay message, client send next message without knowing message from server

Improvement : Delay Only

This figure shows that the total time to send the message is 29.40 seconds.



Improvement : Loss & Delay

If we consider only solving the issue of transmission caused by loss function.

In condition of : delay transmission problem still exists

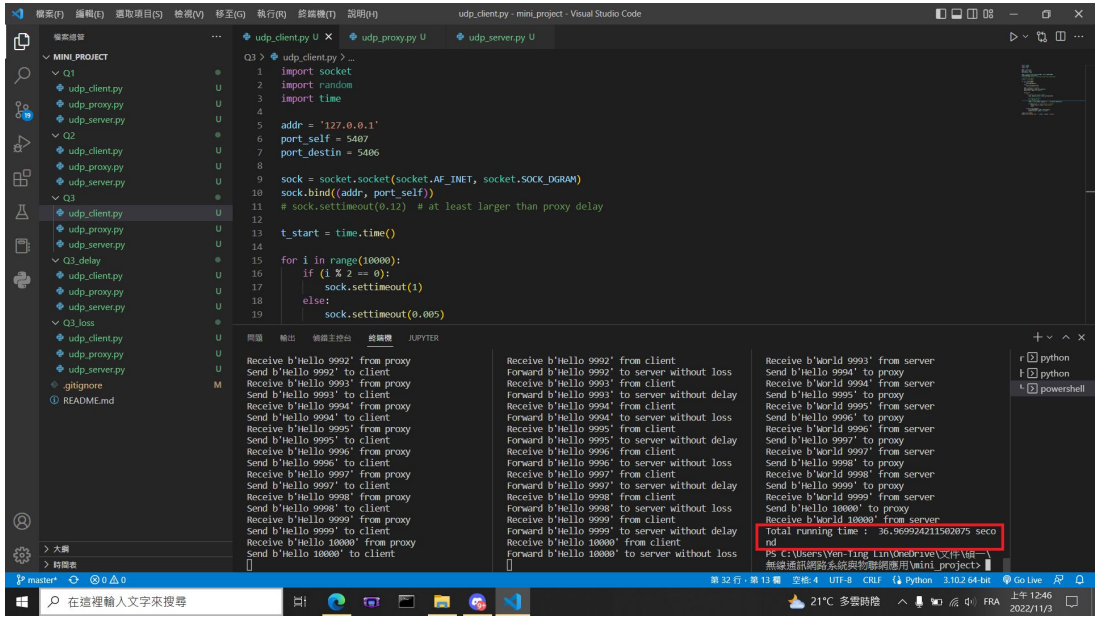
1 : T_out of even number is 5ms and timeout of odd number is 100ms

2 : This cannot be used to reduce the latency

3 : Make sure that only need to do one more time retransmission

Improvement : Loss & Delay

This figure shows that the total time to send the message is 36.97 seconds.



Job Partition

林彥廷	Q2 Implementation / Flow Chart / Solution Idea	**30%**
鄭有宏	Q3 Implementation / Writing Report / Solution Idea	**40%**
潘宣伊	Q1 Implementation / Writing Report / Solution Idea	**30%**

Q & A