

# 計算機網路 HW1 report

資工三 B04902021 陳弘梵

## [Program Structure]

We do not need to handle server part, so we are interacting between clients.

"irc.freenode.net" offers us a platform to send all the messages to each other in the current channel.

To meet the specification of this homework, first, our program should login as a **user**, pick a **nickname** and enter the **channel** given in config file.

Second, when we get instructions from the channel, we should identify its purpose and response answer back to the channel.

All messages sending require prefix of "PRIVMSG #CHAN :" and so do received data. Also the messages are required to change to or from *"bytes"*.

## [Challenge & Solution]

- ◆ "Hello! I am robot."

Send this message after entering channel.

- ◆ @Repeat <Message>

I first parse the received message using ":" . After finding out this instruction, I **return the whole string** after "@repeat" . Due to the possibility of multiple words repeating, I did not split them to words.

( I forgot to add ":" after "channel" when sending. It turns out to send only to the first "space" . )

- ◆ @Convert Hex and Dec

Python offers **"hex"** and **"int"** API for this. Only need to remember to change to **str** to send.

- ◆ @IP <String>

The most difficult part in this homework. I wrote a *recursion* to accomplish this part. There is also a trick besides judging if it is between 0~255, that is the *number of zeros* in a section. So there are more conditions considered in the recursion.

For easier printing solution, I stored all of them and count them after calculating.

- ◆ @Help

Send the instructions when called.

## [Reflection]

This homework is quite fun because we can see our work immediately. Interacting through Internet can be more interesting than just on localhost, I think. There are also many useful functions in Python that can help us to write easier codes, it really saves time working on string implements than C does.