

Report of Computer Network HW1

1. Program Structure

The program is written in Python. I define a class called ChatBot, which contains the major functions in this homework.

ChatBot is initialized by nickname, channel, site and port number. There are several methods in ChatBot to simplify the program, such as “talk()” will send messages to the server. “run()” is the main method of this object. It receives messages and checks if there are command. If it receives commands, then it does what commands command.

2. Challenge and Solution

At the beginning, there were some problems of connecting with irc.freenode.com. Then, I googled. The solution is adding nickname and some complicated stuff to the chatbot.

```
def __init__(self, channel, nickname, site, port):
    self.channel = channel
    self.nickname = nickname
    self.irc = socket.socket( socket.AF_INET, socket.SOCK_STREAM )
    self.irc.connect((site,port))
    self.irc.send("USER " + self.nickname + " " + self.nickname + " " + self.nickname + " :Goodhat's bot\n")
    self.irc.send("NICK " + self.nickname + '\n')
    self.irc.send("PRIVMSG nickserv :iN00PE\r\n")
    self.irc.send("JOIN " + self.channel + '\n')
```

Also before sending message, chatbot should send a prefix message to inform the server.

```
def talk(msg):
    self.irc.send('PRIVMSG ' + self.channel + ' :' + msg + '\r\n')
```

Ping problem was quickly solved by a solution from stack overflow. The solution is that chatbot will send ‘PONG’ if it receives messages that contain ‘PING’.

```
if self.text.find('PING') != -1:
    self.irc.send('PONG ' + self.text.split() [1] + '\r\n')
```

Other problems are trivial, not worthy of mentioning.

3. Reflection

I have learned some basic computer network knowledge from this homework. I am quite curious of how to write server side program. I hope the following homework will cover the domain.