Computer Network - *Homework Assignment 1*

IRC Robot – Due Date : 23:59, October 24 (Wed.), 2018

1. Description

- IRC is an application layer protocol that facilitates communication in the form of text.
- The chat process works on a client/server networking model.
- This assignment is based on the knowledge of "Socket programming".
- You need to "Connect" to socket and "Send / Receive" message to/from socket.

2. Grading Policy

1. ***Implementation (90%)***
   (a) Connection to Channel & Automatic Introduction Message (20%)
   (b) Daily horoscope (10%)
   (c) Guess Number (20%)
   (d) Music robot (20%)
   (e) Chat (20%)

2. ***Report (10%) – (Format : pdf)***
   Program structure, Challenge & Solution, Reflections about this homework ?

3. What should Your Program Do ?

(a) Connection to Channel & Automatic Introduction Message (20%)

```
info: Server listening on port: 6667
info: [server1, C: null] NICK bot
info: [server1, C: bot] USER r06922075
info: [server1, C: bot] JOIN #CN_DEMO
info: [server1, C: bot] PRIVMSG #CN_DEMO :I'm r06922075
```

(b) Daily horoscope (10%) <constellation>
Given an constellation in English, reply the daily horoscope.(Limit:100 chars)

Capricorn, Aquarius, Pisces, Aries, Taurus, Gemini,
Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius

```
info: [server1, C: TA] PRIVMSG bot :Libra
info: [server1, C: bot] PRIVMSG TA :今日運勢 水星逆行
```

(c) Guess Number (20%) !guess
When user send "!guess" , create a guess number game!

```
info: [server1, C: TA] PRIVMSG bot :!guess
info: [server1, C: bot] PRIVMSG TA :猜一個1～10之間的數字！
info: [server1, C: TA] PRIVMSG bot :5
info: [server1, C: bot] PRIVMSG TA :大於5!
info: [server1, C: TA] PRIVMSG bot :Libra
info: [server1, C: TA] PRIVMSG bot :5
info: [server1, C: bot] PRIVMSG TA :你猜過5了=_= 大於5!
info: [server1, C: TA] PRIVMSG bot :7
info: [server1, C: bot] PRIVMSG TA :正確答案為7! 恭喜猜中
```

(d) Music robot (20%) !song <song_name>   Hint: web crawler

　　When user send "!song", search the song on Youtube and reply the url.

```
info: [server1, C: TA] PRIVMSG bot :!song 挪威的森林
info: [server1, C: bot] PRIVMSG TA :https://www.youtube.com/watch?v=gPpZJlE0Ca8
```

(e) Chat (20%) !chat / !bye

　　When user send "!chat", chat with the user.
　　Input and display the message simultaneously on client side.
　　User may send or receive message continuously.

```
========TA想跟你聯繫=========
TA ： 我想聽個笑話
> 有一天
> 醫生與剛出車禍的病人說
> 有一個好消息跟壞消息　你要先聽哪一個?
TA ： 先聽好消息好了
> 好消息就是基本上你出車禍的傷大致無礙
TA ： 那...那壞消息是??
> 你出車禍的New march後擋風玻璃全碎所以裝了新的玻璃
> 隔熱紙因此重貼，但是因為只有後擋風玻璃碎掉，所以只貼後擋風玻璃那塊原廠費用2000
> 不曉得是否合理，我是覺得有點貴。
TA ： 你真的吃飽太閒，我也不想跟你計較
TA ： 如果這樣會讓你心情好點我也算是日行一善。
TA ： !bye
=======TA已離開聊天室========
```

**** This is client side ****

4. Demo Rules

- You shouldn't hardcode the user's nickname. Your bot should extract this information as the user contact it.
- Nickname of the bot should be bot_studentID (e.g. bot_r06922150), and the channel should be #CN_DEMO.
- Bring your own computer.

5. How to Submit the Assignment ?

　　Please compress all of your file into an archive. (Format : zip/rar)
　　EX: hw1_studentID.rar
　　Then email to ntu.cnta@gmail.com before due date.
　　Email subject: [CN2018] Homework1_studentID
　　Penalty for late submission is "20%per day".
　　NOT accept after 23:59 October 26, 2018.