

Computer Network - Homework Assignment 1

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1. Program Structure, Challenge & Solution

(a) Connection to Channel & Automatic Introduction Message

- *Copy and paste the code in hwl_tutorial.pdf and change the student ID to my ID number.*

(b) Daily horoscope

- *Make a list containing all constellations.*
- *When receiving a message, split the message into a list and then get the user's nickname.*
- *Make sure the user's message is included in the constellation list made in advance and reply the user by **PRIVMSG (username) (daily horoscope)**.*

(c) Guess Number

- *When receiving **!guess**, put the username into a guessing list. Don't remove the username from this list until it gets the right number. If the username is in the guessing list, bot won't reply to any other function.*
- *Make a list and write down multiple users' correct answers produced by randomization, which makes the bot able to serve all the users when there is more than one user guessing a number. Likewise, delete the number when the user gets the correct answer.*
- *When receiving a number guessed by a user, bot will reply some hints by **PRIVMSG (username) (hint)**.*

(d) Music robot

- *When receiving **:!song**, bot will form a url and use **requests.get()**, **BeautifulSoup()**, **.select()**, **re.search()** to get what the url needed. Then, send the url back by **PRIVMSG (username) (url)**.*

(e) Chat

- *Use **select()** to handle the problem that bot needs to deal with bot's standard input and requests by users simultaneously.*
- *Bot can serve multiple users at the same time. But if there is a user chatting with bot, other users can use all the functions except chatting function. I maintain this situation by having a list to memorize whether there is a user chatting now, and who he is. When a user sends a message to bot, I can check if he is chatting now, or when a user wants to chat, I can check if there is anyone chatting now.*

2. Reflection:

Maybe the spec can be more clear so that we won't be too confused when doing the homework. For example, some requirements were told only in class, not in the spec, but I think it would be better to put them in the spec. Additionally, hope TAs can demo the homework in class when announcing the homework, and then we can understand more and have fewer questions. The remains are good, and thank TAs a lot.