BOUN SWE

SWE 544 – 2015 Fall

Project 1

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Contents

Development Process

I try to add my notes in every commit but I will explain the development process with the steps that I followed.

1) A user interface has been prepared by using QT Designer.
2) A basic server and client application has been implemented.
3) Dummy connection to the given host has been established.
4) A basic thread implementation has been done.
5) Threads are implemented again, to not block the GUI while working in loops.
6) Threads started working with Queues for messaging with UI and socket.
7) MessageWindow is implemented, refreshing every 10ms.
8) Incoming and outgoing parsers have been added.
9) Online members list is implemented.
10) Host/port is assigned by user via command line; this has been added to the application.
11) Final tests and bugfixes are finished.

Commit Notes

1) Commit:c54a76c 02/12/2015

- Repository has been created and first commit has been tried with a readme file

2) Commit:3043bdf 03/12/2015

- Git integration with PyCharm has been established, committing form the IDE has been tried with an update to ReadME file.

3) Commit:4d07c2a 04/12/2015

- UI with QT Designer has been created, a draft version of the UI has been added to the application.
- Basic client and server connection has been established without any protocol rule/definitions - UX/UI controls and basic features has been added. (e.g. Send button is disabled when message text is empty, Enter button can be used for sending messages in the message text area.)

4) Commit:6e1f3fc 09/12/2015

- Server connection to 178.233.19.205:12345 has been established, just a dummy one getting TIC message only
- 2 threads beyond main thread have been added, after running the app, Read and Write threads start

5) Commit:81bad12 10/12/2015

- Threads construction have been changed, because of the while loops, the GUI is frozen so thread mechanism has been revised. In this new version QtCore.QThread is used, and the threads working without blocking the GUI.
- Queue mechanism has been implemented:
  - WriteQThread is listening to threadQueue, if threadQueue has any element, it is pushed to the socket.
  - ReadQThread is listenining to screenQueue, if screenQueue has any element, it is showed in the MessageView of GUI. Any message from server or written in textbox in the GUI, are added to the screenQueue.

- updateChannelWindow is called if any need to the refreshing the MessageWindow, and this function reads screenQueue and puts it in the MessageView.
- sendMessage has been implemented, if any message is written in the textbox and press send, the text will be added to the threadQueue and screenqueue.

6) Commit: c54a76c 10/12/2015

- Incoming and outgoing parsers are added, more tests and checks will be done on these parsers
- Online members list is implemented. It is refreshing regularly to get the latest list of the online users.
- Live test has been executed today. Another student working on the project was online in the system (not planned, we do not know each other also), and we talked for a while on the IRC and tested our applications.

7) Commit: _____ 10/12/2015

- Hostname/port is taken by command line from user
- Incoming protocol rules and messages are controlled and fixed - Comments has been added in the codes

Server Bugs

Theara are some errors that I met during the development, I am not sure if some of them are from the server bugs. I listed these cases that may resulted from the server bugs.

1) SYS <nick> had a connection problem

- Some times server sends a message as "SYS Sinan had a connection problem". I guessed there were some problems with my coding, and I fixed them but I think I met this error again randomly.

2) Socket.error: [Errno 10053]

- The whole message is "socket.error: [Errno 10053] Kurulan bir bağlantı, ana makinenizdeki yazılım tarafından iptal edildi". I am not sure what was the problem that caused of this, but in my opinion closing the application before sending "QUI" message to server may have been.

3) TOC Message Error

- When I send a reply to "TIC" message from the server with a message "TOC", it gives an error and sends "ERR" message. It is not a problem I guessed, I am not sure if we are responsible to automatically reply the message of "TIC" from the server.

4) MSG commend to the logged in user

- If I try to message myself with a command like /msg <myusername> hey there, it returns an "ERR" message. IT is not a problem I guess, but it can be handled nor giving permission to do that, or giving an explanation for the wrong command.

Code Errors in the Assigment Paper

I am not very familiar with Python, but the code parts that I have used from the assignment paper has not produced any errors in the application.