***LAB 3 WRITE UP***

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Language used for the assignment: Python 3.x

Dependencies:

- Tkinter (GUI)

-Dirsync

I have used PyCharm 2020.2 IDE.

If you do not have PyCharm IDE, you can run the code from Command prompt using command:

>python server.py

Use new command prompt to run different clients:

>python client.py

Flow:

1. Start the server.
2. Start the client:

-Enter unique name for the client. If one user is already using active with same name you will need to enter a different username name.

If you enter an illegal character (like digit in username) server will not accept the connection. E.g. A1, 4B, etc.

-Once you get the message you have connected. You can do directory actions.

-Server provides a list of directories to sync for each client.

-Then you may click on sync, desync, create, move, rename, delete and list all directories.

-Follow the commands on the user interface and use 'Entry' box to communicate and click send to deliver messages to the server.

-Click ‘Disconnect’ to terminate client’s connection.

Bugs:

1. Remove logs messages are not printed to the console.

References:

*1.https://pythonprogramming.net/python-binding-listening-sockets/*

2.*https://www.geeksforgeeks.org/socket-programming-multi-threading-python/*

3.*https://stackoverflow.com/questions/19859282/check-if-a-string-contains-a-number*

*4.https://www.geeksforgeeks.org/create-a-directory-in-python/*

5.*https://stackoverflow.com/questions/6996603/how-to-delete-a-file-or-folder*

*6.https://www.geeksforgeeks.org/python-shutil-move-method/*

*7.https://www.tutorialspoint.com/python/os\_rename.htm*

*8.https://www.educative.io/edpresso/how-to-list-files-in-a-directory-in-python*

*9.https://realpython.com/python-gui-tkinter/*

*10.https://www.youtube.com/watch?v=7A\_csP9drJw&t=336s*

***Added references for Lab 2****:*

*11.* [*https://stackoverflow.com/questions/54688687/how-to-synchronize-two-folders-using-python-script*](https://stackoverflow.com/questions/54688687/how-to-synchronize-two-folders-using-python-script)

*12.* [*https://www.instructables.com/Syncing-Folders-With-Python/*](https://www.instructables.com/Syncing-Folders-With-Python/)

*13.* [*http://thepythoncorner.com/dev/how-to-create-a-watchdog-in-python-to-look-for-filesystem-changes/*](http://thepythoncorner.com/dev/how-to-create-a-watchdog-in-python-to-look-for-filesystem-changes/)

*14.* [*https://linuxize.com/post/python-delete-files-and-directories/*](https://linuxize.com/post/python-delete-files-and-directories/)

***Added reference for Lab 3****:*

*15. https://stackoverflow.com/questions/37463569/extract-dict-value-from-list-of-dict*

*16. https://stackoverflow.com/questions/2860153/how-do-i-get-the-parent-directory-in-python/29137365*

*17. https://stackoverflow.com/questions/2860153/how-do-i-get-the-parent-directory-in-python/29137365*

*18. https://stackoverflow.com/questions/42170411/tkinter-how-to-make-tkinter-text-widget-update*