CS3130
Assignment #3

Using the code in files udp_remote.py and udp_local.py (from the textbook) as a starting point, I want you to write a messaging system based on the client-server model.

The user will use your client to connect to the messaging server and once he/she has signed in, they can begin sending short messages to other users.

A sample client / server interaction might like this:
--

```
Welcome to MMS.

> help

>>the following commands are supported:
>>
>>   signin <username>
>>   whoIsOn
>>   send <username> <message>
>>   signout

> send fred hi fred

>>You must signin first

> signin jimmy

>> user jimmy is not authorized to use MMS

> signin fred

>> Welcome fred, you have 2 messages waiting :
>>        libero: you here?
>>        Tim: can't make it :(

> WhoIsOn

>>Users fred,francoc, and Tim are online
>>Users libero are NOT online

> send francoc hi franco

>> francoc: hi

> send libero yup
```

```
>> libero is offline, message will be saved for future delivery

> signout
>> user fred has signed off

--
```

As you can see from the dialogue, the server will be doing the lion's share of the work. It will have a database of users in a file that it will read on start-up, and that will be used to authorize access to the messaging system. Messages sent to users that are not signed in will be stored in another file and will be sent to the user once he/she signs in. All messages must go through the server. You will have to design a protocol that client and server will use to communicate with each other. **I want that protocol to be well-documented in a separate document that you will provide as part of your submission**

Your client and server must have a structure similar to the code from the book : both client and server code are in the main python file (support functions, if needed, can go in another) and you should make use of the argparse module.. All modules/functions must be documented. All possible exceptions (text files not found / illegal /invalid values) must be caught and handled appropriately.

Your final project must include a README file, 2 or more python script files (one for the file handling/processing functions and another for the user interaction /main function) and a test database.

Franco