Chat Room HLD

Terminology

Chat Room

A virtual environment in which users can post their messages and read the messages written by other users.

User

A person who interacts with the system.

Nickname

A familiar or humorous name the user uses to identify himself.

Registration

The act of recording user details.

Login

The act of signing into the system by the user.

Message

The text which the user delivers. Message content is limited to 150 characters.

Message Frame

A written communication sent between the users of the system.
A wrapper for a message.Server structure

Business Logic

ChatRoom class

Operate the chat room and provides the requested functionalites from the remuements document, such as :
 registration,
login,
logout,
sending message,
receiving last 20 stored in ram messages,
and receiving last 10 messages from the server

MessageSrvice class

handle the stored on RAM messages.
And enable to edit it. And allow to :
sending message,
receiving last 20 stored in ram messages,
and receiving last 10 messages from the server

UserSrvice class

handle the stored on RAM users
And enable to edit it. It also enable :
registration,
login,
logout,

IUser interface

This is an interface that representing a user

User class

Implements IUser interface. represent a user in the chat room
Can send a message and logout

Message class

Implements IMessage interface. represent a message in the chatroom. Can verify the conted and edit a message.

GeneralHandler

Has a field that Stores a coppy of the data in the ram for a quick acces
initiates the ram's saves from users stored in the disk, desirializes data and/or serializes data. sorts the data, updatesthe data stored in the disk after changings in the ramand also has a function which merge two collections to the first one without duplications.

DisplayMessage

Used in order to handle messages before they are displayed at the presentation layer, in order for the data to be relevant accessible.

Persistent Layer

SerializationService class

Enable to serialize and deserialize any object to any file

UserSerializationService class

Enable to serialize and deserialize the users

MessageSerializationService class

Enable to serialize and deserialize the messages

Logging Layer

Logger class

Operate the logger

Presentation Layer

CLI class

Operate the common-line interface

ObservableObject class

Responsible for all the binding in the project

Hasing Class

Used in order to handle and encrypt passwords