

CLIENT-SIDE DESKTOP APPLICATION OF A CHAT ROOM – LLD

Client-side structure:

Namespace - Presentation layer-CLI (command line interface):

❖ **Class ActionListener:**

- Functionality- connects between the controls on the screen(ChatRoomWindow and FirstWindow) , and the code behind.
- Implements MVVM Architecture.
- Allows to make the data property of one object to be linked to the data property of a another.
- Used to populate elements on a screen

❖ **Class ChatRoomWindow:**

- Part of the GUI ,the design contains the buttons, Labels, Text Boxes etc.
- Functionality- hosting a chat room that supports sending message, displaying messages, filtering and sorting procedures.

❖ **Class FirstWindow:**

- Part of the GUI ,the design contains the buttons, Labels, Text Boxes etc.
- Functionality- presenting the log in and register to the Chat Room screen.

Namespace - Business (Logic) layer:

❖ Entity –class User

- Functionality- class per user, all the users identified by a nickname and group id. The user communicates with other users in the chatroom by sending messages.

❖ Entity – class Message

- Functionality- performs actions dictated by a request. A message is limited to 150 characters, identified by GUID and the user who sent it.

❖ Entity -class Chatroom

- Functionality- the chat room manages the interactions with the presentation layer. user and message classes, registers and online users. The chat room holds the URL for server request through communication layer, nicknames list in for duplicates prevention and messages list for efficient message retrieving.

Namespace – Data Access Layer

❖ class Query

- Functionality- this class is used to describe an sql query, for executing with the db server. The query contains fields which describe different parts of the query such as "Select", "Where"...

❖ Entity -class QueryRunner

- Functionality- the queryRunner manages executions of queries, and performs them according to the chat's preferences (like filter). Queries are divided to Message queries and Users queries.

