Low Level Design

Presentation Layer GUI **Presentation** - url : string - chatRoom : ChatRoom - displayNum : int - retMessages : List<Message> - boolLogout : bool - boolExit : bool + Main(string[] args) : void - PrintOnScreenStart(): void - ChooseOptionsStart(string choiseStart) : \ + register(): void - CheckVlidityId(String option) : string - CheckVlidityName(string option) : string + login(): void + Exit(): void - PrintOnScreenLogin(): void - ChooseOptionsLogin(string choiseLogin) + retrieveMessages(): void + Send(string message) : void - CheckVlidityMSG(string MSG) : bool + displayAll(): void + display(int num): void + logout(): void

Communication Layer

Business (Logic) Layer

ChatRoom

- currUser : User
- url : string
- allMessages : MessageHandler
- allUsers : UserHandler
- groupsId : IdHandler
- + login(string nickname, int g_id): bool
- findUser(string nickname, string g_id): User
- findGroupId(string g_id) : ID
- + retrieveMessages() : List<Message>
- + send(string message) : bool
- + displayAll(string nickname, string g_id): List<Message>
- + display(int num) : List<Message>
- +logout(): void
- + register(string nickName, Id g_id) : bool
- + exit(): void

Message

- body : string - user : User
- dateTime : DateTime
- id : Guid
- + IEquatable<Message>.Equals(Message other): bool
- + ToString(): string

User

- nickname : string
- g_id : ID
- handler : MessageHandler
- loggedIn : bool
- + send(IMessage msg) : Message
- + addMessage(Message msg) : void
- + logout(): void
- + isEqual(string nickname, string g_id) : bool
- + toString(): string

- id : string
- members : List<string>
- contains(string nickname) : bool
- + addMember(string nickname) : bool
- + isEqual(string g_id) : bool
- + toString(): string



<u>Persistent Layer</u>

UserHandler

- name : string
- list : List<User>
- + updateFile(User user) : bool
- deleteFile(): bool
- openNewFile(): bool

IdHandler

- list : List<ID>
- name : string
- + updateFile(ID id) : bool
- deleteFile() : bool

addNewFile(): bool

MessageHandler

- list : List<Message>
- name : string
- + updateFile(Message msg) : bool
- + updateFile(List<Message> msgList) : bool
- deleteFile(): bool
- openNewFile(): bool