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) : v
+ 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, string_id) : bool

User

- nickname : string
- g_id : ID
- handler : MessageHandler
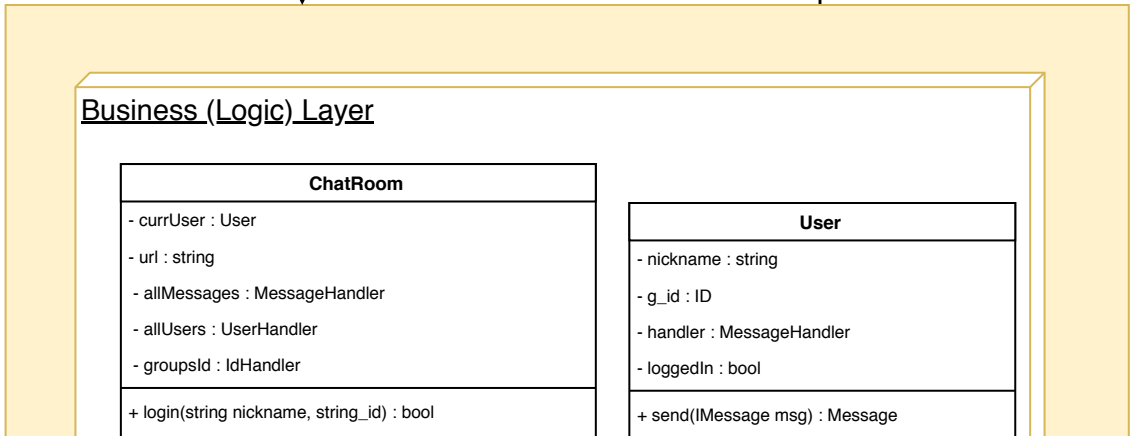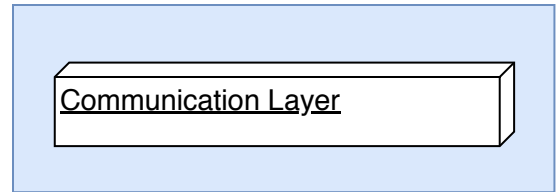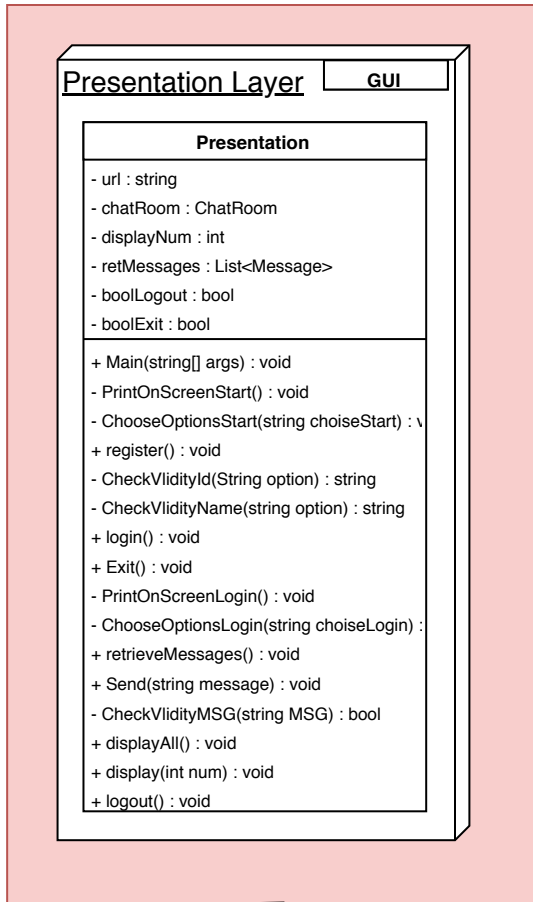- loggedIn : bool

+ send(IMessage msg) : Message

+ retrieveMessages() : List<Message>

+ send(string message) : bool

+ displayAll(string nickname, string g_id) : List<Message>

+ display(int num) : List<Message>

+ register(string nickName, string g_id) : bool

+logout() : void

+ exit() : void

- findUser(string nickname, string g_id) : User

- findGroupId(string g_id) : ID

+ addMessage(Message msg) : void

+ logout() : void

+ isEqual(string nickname, string g_id) : bool

+ toString() : string

Id

- id : string

- members : List<string>

- contains(string nickname) : bool

+ addMember(string nickname) : bool

+ isEqual(string g_id) : bool

+ toString() : string

Message

- body : string

- user : User

- dateTime : DateTime

- id : Guid

+ IEquatable<Message>.Equals(Message other) : bool

+ CompareTo(Object other) : int

+ ToString() : string

Persistent Layer

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

- SortByTimeStamp() : void