High Level Design

Terminology

GUI

A Graphical user interface in which the user interacts with the program.

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.

Username

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.

Handler

Responsible for all local data management.

Logger

A type with the main goal to document all system events and track errors.

Communication model

Requests

Send message request

A send message request is initiated by the user, the request is sent to the server, which assinges the message with a unique ID (GUID) and the server's timestamp.

Show the last messages from the server

every 2 seconds the chat room window refreshing and retrieve the last 10 messages from the server. In addition the chatroom window Refresh the received messages view with the new data.

Messages display model

Filtering

on the chat room window, the user able to filter the messages by:
 a) Group id
 b) User

Sorting

on the chat room window, the user able to sort the messages ascending and descending by the:
 a) Message timestamp
 b) Nickname
 c) Group id, nickname and timestamp (all together)

Actors

Users

A person connected to the chatroom using a client software, for sending and receiving messages. A user is identified by her group ID and a nickname that is unique to her group.

Assumptions

- access devices – windows powered computer.
- expected peak numbers of users – Designated server traffic limit dependent.

Project Objective

- **Communication**: to develop an instant messaging solution to enable users to seamlessly communicate with each other
- **User friendliness**: the project should be very easy to use enabling even a novice person to use it

Graphical User Interface

- ❖ This application interacts with the user through GUI. The interface is simple and easy to handle
- ❖ Once opened, user will easily come into the flow with the application and easily uses all interfaces properly
- ❖ The basic interface available in our application is:
    a. Login window
    b. Chatroom window include: display messages panel, write and send messages panel, emojis, sort methods and filter methods.