# The system requirements are expressed as user stories

## User identity

UserS(1)

AS A USER I want to pick a nickname when I connect to the app so other people can recognize and message me

UserS(2)

As A USER I want the system to tell me if the nickname is already taken so that everyone has a unique identity

_____

## DM

UserS(3)

AS A USER I want to send a private message to another user by using their nickname so we can chat with each other.

UserS(4)

AS A USER I want to receive private messages addressed to my nickname so I can read what others send me

UserS(5)

AS A USER I want the system to deliver private messages only to the target nickname ensuring message isolation between UserS

_____

## Public Group Chat

UserS(6)

AS A USER I want to create a public chat room with a unique name so that multiple UserS can join together


UserS(7) (sys)

AS A SYSTEM I want to ensure room names are unique so that UserS can clearly identify chat rooms


UserS(8)

AS A USER I want to join an existing chat room, so that I can participate in group conversations


UserS(9)

AS A USER I want to leave a chat room so that I can stop receiving chatroom messages


UserS(10)

AS A USER I want to send a message to a chat room so that all members of the room receive it


UserS(11) (sys)

AS A SYSTEM I want to forward room messages to all UserS currently joined to the room, so that all group UserS can recive the messages

_____

## Message Content

UserS(12)

AS A USER I want to send text messages so that I can communicate with the group UserS

UserS(13) (sys)

AS A SYSTEM I want to enforce a maximum text message size of 1 kB so that resources usage is controlled

_____

## End2End Encryption

UserS(14)

AS A USER I want my messages to be End2End encrypted so that only intended recipients can read them

UserS(15) (sys)

AS A SYSTEM I want to transmit encrypted messages without accessing their plaintext so that message confidentiality is guaranteed

_____

# User Sign-Up & Authentication

UserS(16)

AS A USER I want to create an account so that i can persist across sessions

UserS(17) (sys)

AS A SYSTEM I want the user to authenticate themself when connecting so that only authorized UserS can access the system

_____

# Offline Support

UserS(18)

AS A USER I want messages sent to me while I am offline to be stored so that I can receive them when I reconnect to the system

UserS(17) (sys)

AS A SYSTEM I want to queue undelivered messages so that no messages are lost when UserS disconnect

_____