

Requirements Documentation

Client software requirements

The client application is to be installed on the user's phone. It is what the user will interact with. All user interactions that require persistence beyond the single usage of the app will be saved to the server.

Messaging overview

The user will be exposed to various strangers on the meet strangers screen. When one of the strangers is liked, then the stranger will have that person added to their "friends" screen. When the user likes a person on their "friends" screen, then both people are able to send messages to each other from the messaging screen.

Profile management

It is possible to change the user's personal introduction and profile picture on the manage profile screen. Upon changing, the server should be notified of the change so that other users can see it.

Stranger profile

When a stranger is viewed, the most recent information from the server can be viewed about the person. It is also possible to see the strangers profile picture and other information.

Server software requirements

The server should be hosting an HTTP server. The HTTP server should have various pages listening for POST requests. Upon receiving a POST request, the database should be updated or read from. The format of the requests and responses shall be JSON.

Overview of sessions

Any requests that are non-public information should also pass in the user's session key. The session key is used to validate that a user has access to the privileged information. Session keys shall be auto generated and expire after 24 hours. Session keys shall contain enough bits to make it sufficiently hard to guess even in an automated fashion.

Hardware requirements

The user shall have a phone running Android 7 or newer. The server should be capable of running both a Tomcat server and MySQL.

Functional requirements overview

Function	Logging in (Client application requirement)
Description	The user can login provided that his username and password are correct. The phone application can maintain the state of the user's login status via a session key.
Requirements	The user has the application installed on their phone. The user has an account.

Side effects	The user's login state in the application has been modified.
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Function	Signing up (Client application requirement)
Description	The user can sign up for an account by entering in their desired details and then clicking the register button. If the username and password combination is not available, then they receive an error message.
Requirements	The user has the application installed on their phone and the user is on the sign-up screen.
Side effects	The user sees either an error message or a success message.

Function	Sending a personal message (Client application requirement)
Description	The user can enter a text message and send it. By clicking the send button it should be transmitted to the server where it is routed to the correct user. After sending it the recipient should be able to see the message on their device.
Requirements	The user is logged in and on the personal message screen.
Side effects	The user's message is transferred to the other user.

Function	Reading personal messages (Client application requirement)
Description	Personal messages should be retrieved from the mail box on the server. The user should be able to see them in chronological order.
Requirements	The user is logged in and on the personal message screen.
Side effects	The user's message is transferred to the other user.

Function	Reading personal messages (Client application requirement)
Description	Personal messages should be retrieved from the mail box on the server. The user should be able to see them in chronological order.
Requirements	The user is logged in and on the personal message screen.
Side effects	The user's message is transferred to the other user.

Function	Reading personal messages (Client application requirement)
Description	Personal messages should be retrieved from the mail box on the server. The user should be able to see them in chronological order.
Requirements	The user is logged in and on the personal message screen.
Side effects	The user's message is transferred to the other user.

Function	Saving data objects (Server requirement)
Description	The server should be able to store all incoming data objects in a SQL database. Upon failure saving, an exception should be thrown to ensure the called knows of the failure.
Requirements	A call to the data persistence module is made.

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Side effects	Information is saved to the database or an exception is thrown.
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Function	Incoming data receiving. (Server requirement)
Description	The server should host pages over HTTP with requests that can be made. Upon receiving the request, appropriate database calls should be made to respond to the incoming request. Privileged information have a session key sent with it. If the request fails, that should be made known in the response.
Requirements	The server is running and has received a request.
Side effects	Information is saved to the database or the user is notified of the failure.