Secure Fast Chat: Client Program

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CLIENT_SIDE

1.1 Message module

class Message.**Message**(*conn_socket*, *task*, *request*)

Bases: `object`

This is the class to handle Encryption of messages. The format in which the message is sent to server is determined in this class

Parameters

- **task** (`str`) – Task to be done. It can have the values signup, login, send_message
- **socket** (`socket.socket`) – The socket used for connection with Server
- **request_content** (`dict`) – Content to include in the request to send to server
- **_data_to_send** (`bytes`) – Contains the data to send to the server
- **_recvd_msg** (`bytes`) – Content recieved from server is stored here

Constructor Object

Parameters

- **conn_socket** (`socket.socket`) – Socket which has a connection with server
- **task** (`str`) – Task to do. It can have values: login, signup, send_message
- **request** (`str`) – Content to send to server

_send_data_to_server()

Function to send the string to the server. It sends content of _send_data_to_server to the server

_recv_data_from_server(*size*)

Function to recv data from server. Stores the bytes recieved in a variable named _recvd_msg.

Parameters **size** (`int`) – Length of content to recieve from server

_json_encode(*obj*, *encoding*)

Function to encode dictionary to bytes object

Parameters

- **obj** (`dict`) – dictionary to encode
- **encoding** (`str`) – Encoding to use

Returns Encoded obj

Return type bytes

_hash_password(*passwd*)

Function to salt and hash the password before sending to server

> **Parameters passwd** (*str*) – Password to be hashed
>
> **Returns** Transformed Password
>
> **Return type** string

_create_login_request()

The jsonheader has the following keys: | byteorder, request, content-length, content-encoding. The value for request is 'login' | The content has user id and password separated using ''

> **Returns** Message to send to server directly for login
>
> **Return type** bytes

_create_signup_request()

The jsonheader has the following keys: | byteorder, request, content-length, content-encoding. The value for request is 'signup' | The content has user id and password separated using ''

> **Returns** Message to send to server directly for login
>
> **Return type** bytes

_login()

Function to help login into the system. This function sends the login details to the server | The function expects to recieve a response of size 2 from server which gives 0 if invalid id/password and 1 if successful login and 2 for any other case

> **Returns** Response from server converted to int
>
> **Return type** int

_signup()

Function to help signup to make new account. This function sends the new user details to the server | The function expects to recieve a response of size 2 from server which gives 0 if username already taken and 1 if successful login and 2 for any other case

> **Returns** Response from server converted to int
>
> **Return type** int

processTask()

Processes the task to do

> **Returns** Returns int to represent result of the process. The details of return values are given in the corresponding functions handling the actions.
>
> **Return type** int

1.2 app module

app.**login**(*sock=None*)

Function to help user log in to the app

> **Returns** Socket with which user is connected to server
>
> **Return type** socket.socket

app.**signup**(*sock=None*)

Function to help user make new account

> **Returns** Socket with which user is connected to server
>
> **Return type** socket.socket

`app.`**`handleUserInput`**`()`
This function is called when the user sends some input. This function does the work asked by user

`app.`**`handleMessageFromServer`**(*socket*)
This function is called when there is a message from server....

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