Functions:  
Add user

Users will be able to add users by username and add them to their contact list, if a user is already a part of the contact list, this function will tell the user that the attempted add failed because their contact list already contains who they are trying to add. Upon success, a user will be added to the contact list.

This is not a search feature, so it is either the exact username or failure to add the user. A user may not add multiple users in one line either, each user must be added separately.

Lookup user

This will allow users to look up usernames for closest matches from the database. This feature will have to match the usernames by searching the database for the input, users will be organized in a first match basis. The lookup feature will only work from the start of the username. For example, if there exists a user "ABCDEFGH" and a user "BCDEFGH", and a user looks up "BCDEF", the only result will be the second user "BCDEFGH".

This function does not allow to add, delete, or block users; to do those actions, a user must use those specific features. This feature will not sort users! It will not provide CLOSEST match, but FIRST match that contains and starts with the searched username; for example if in the database we have user ADS22 and user ADS in that order and a user searches "ADS", "ADS22" will be the first result, also if a user were to search "DS", neither user will appear.

Delete user

This will allow users to delete users from their contact list. If the user does not exist or is not a part of the contact list, this function will fail; warning the user that they are trying to delete an invalid contact from their list.

This feature will not search for the user to delete, it is either an exact input or failure. Also, this will only delete from the contact list of the user executing the delete function, the other user will lose the link to the one whom deleted him, but it will display the one that deleted the user as "Invalid recipient".

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| --- | --- | --- | --- | --- | --- | --- |
| Function | Optimistic A | Most M | Pessimistic B | Expected Le | Deviation Ld | $/Line Line/Months |
| UI | 400 | 550 | 700 | 550 | 25 | 20 |
| Database Manager | 150 | 250 | 400 | 258.3333 | 16.66667 | 20 |
| Profile Manager | 200 | 300 | 400 | 300 | 16.66667 | 20 |
| Login Manager | 50 | 100 | 125 | 95.83333 | 8.333333 | 20 |
| Contact Manager | 100 | 150 | 300 | 166.6667 | 8.333333 | 20 |
| Chat Manager | 200 | 300 | 400 | 300 | 16.66667 | 20 |
| Total | 1100 | 1650 | 2325 | 1670.833 | 91.66667 | $33,416.67 |