Design Specifications for Social Networking System

8th Dimension

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1 Project Summary

Our project consists of two primary modules: a social network generator, and the social network that is output from this generator.
The generator will allow the client to select various options. Once these options are set, the client then downloads the social network generated by these options, which can easily be installed by the client. The network then continues to run, with little or no administrative effort by the client.
Once the social network, or community, has been setup by the client, users can then join and use the community. First they must register, and after successfully registering, they will be required to login. After login, the user will be able to access the many features of the community, such as making connections to other users, sending and receiving messages, posting messages on message boards, joining an existing message board, creating new message boards, etc.

2 Sample User Interfaces

2.1 Community Generation Sample Interface

This is the community generation page. On this page, the client can select various options, and after submitting them, the appropriate PHP files will be generated with the selected options, along with shell scripts to appropriately set up the PostgreSQL database on the client's machine.

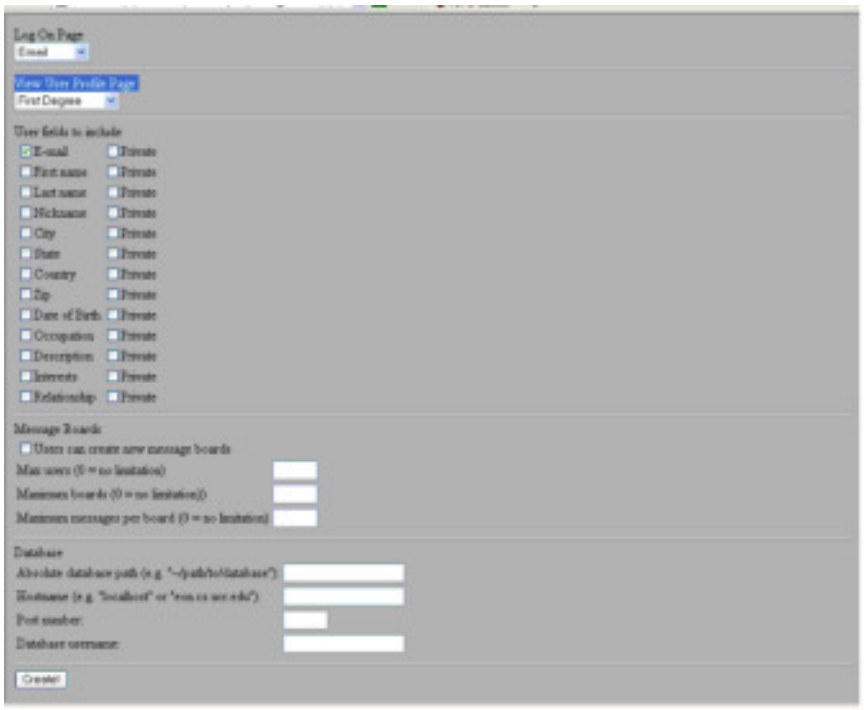

Figure 1: Community Generation Sample Interface

2.2 User Information Sample Interface

Once a community is generated, users will be able to access it much the same as other social networks. Below we have a sample image of what a user information page may look like. Only public attributes (which were chosen by the administrator) will be viewable by other users.

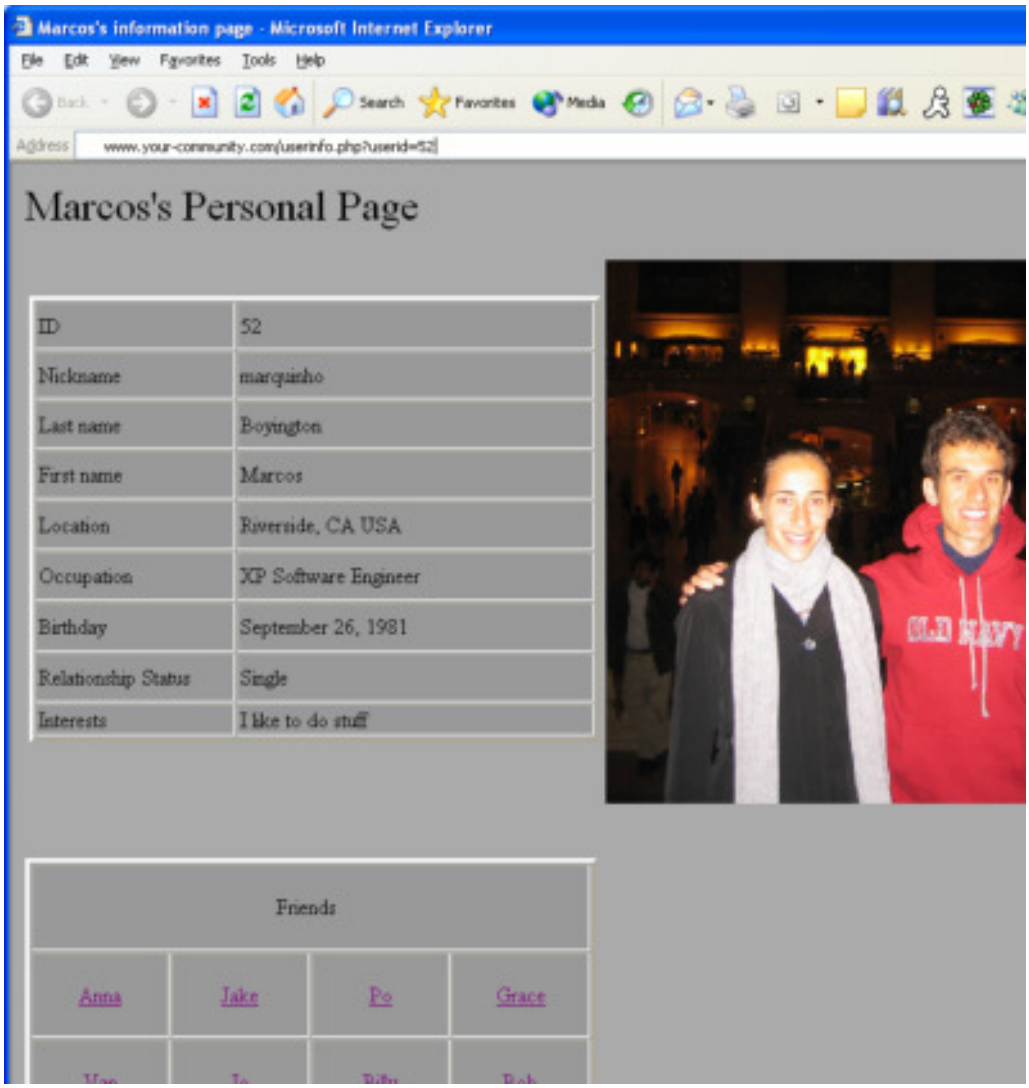

Figure 2: User Information Sample Interface

2.3 View Message Boards Sample Interface

A user can join existing message boards, or create their own. Here they are given a list of all available message boards, which will likely be produced from some sort of search. The user can then go to that message board and ask the owner permission to join.

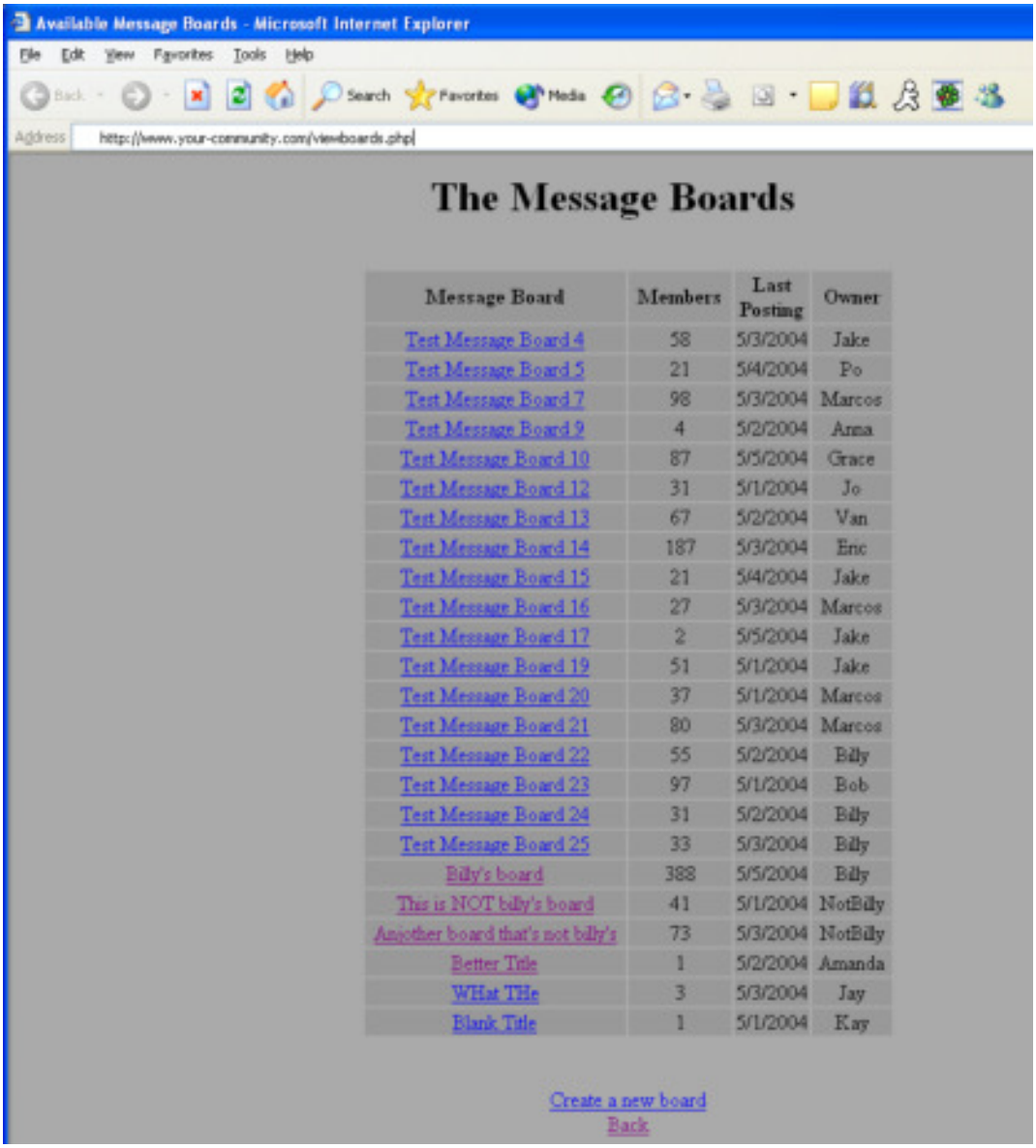

Figure 3: View Message Boards Sample Interface

2.4 View Messages Sample Interface

Once a user is a member of a message board, they can view its messages and post new ones. Below a sample of what a message board will look like when various messages have already been posted.

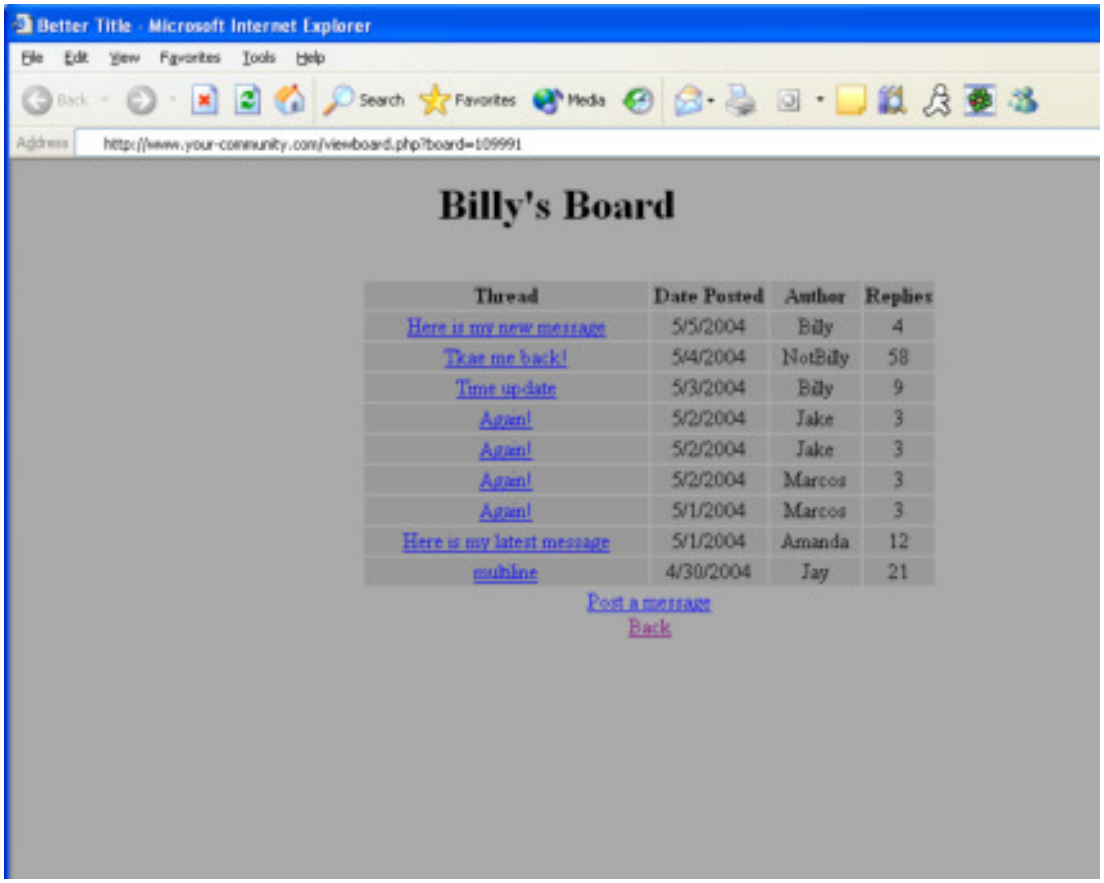

Figure 4: View Messages Sample Interface

3 Screen flow

The client screen flow shows an overview of the pages a client wanting to update their existing community or create a new one will see. After successfully setting up the community options, the client is given the option to either download the community or "test" it.
The user screen flow shows what a user of the community will see. After successfully logging on, the user will be given various links (such as search users, search boards, view mail, etc.), and be able to select options from there, or go back to their home.

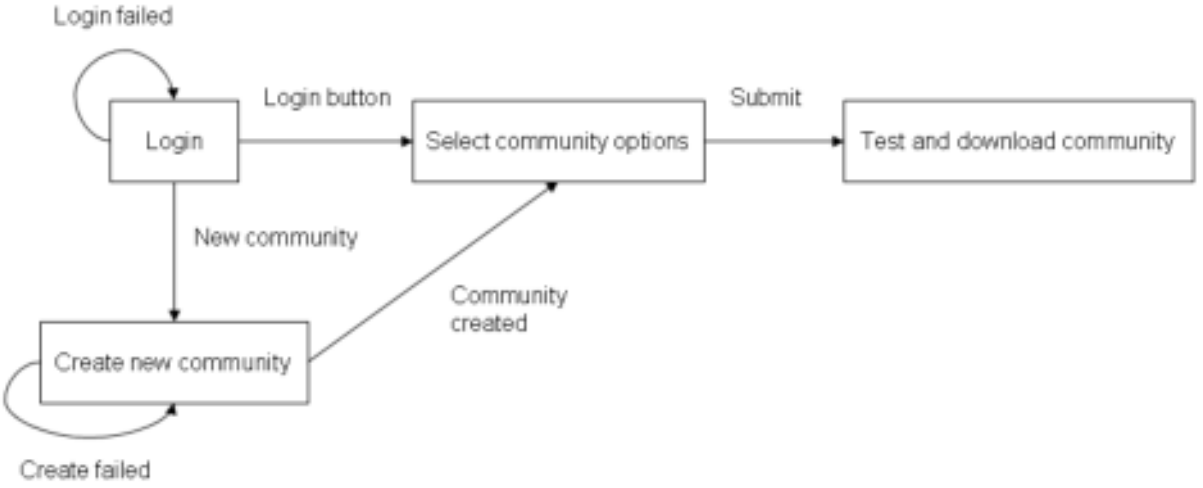

Figure 5: Client Screen Flow

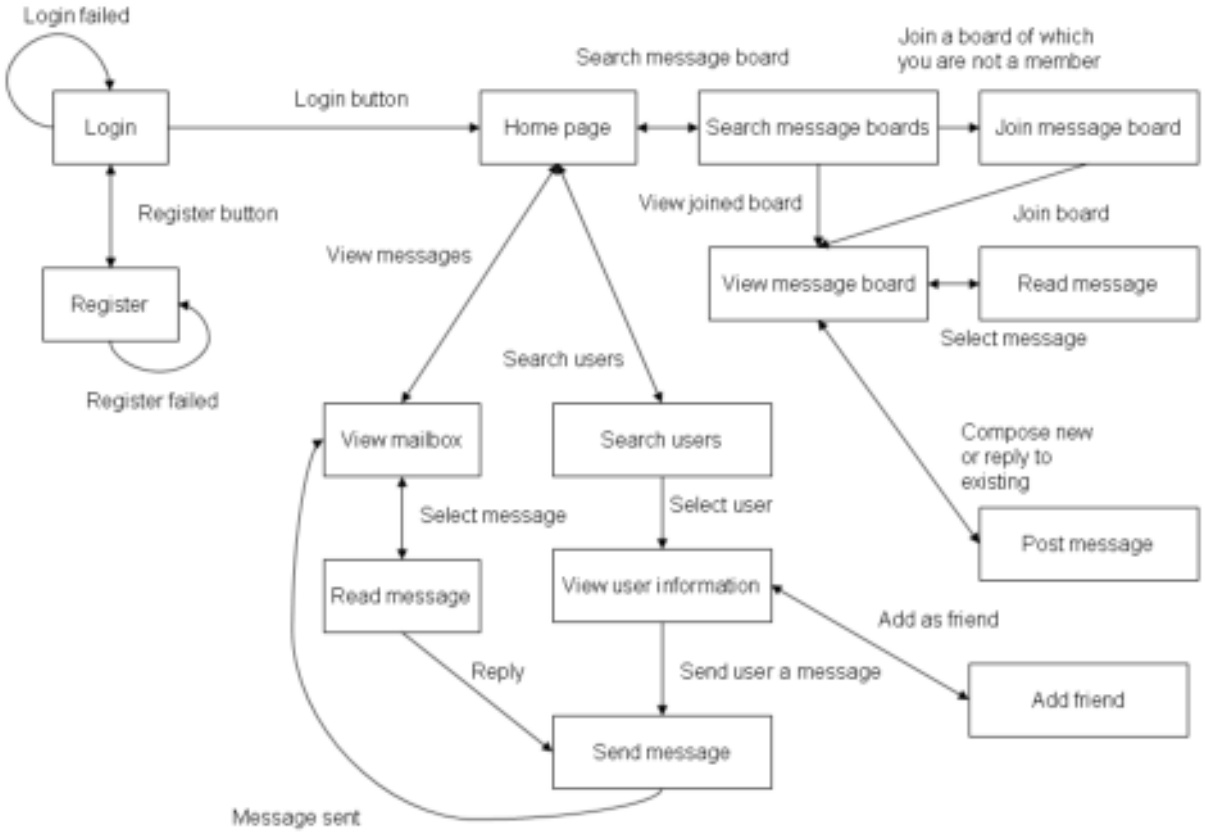

Figure 6: User Screen Flow

4 Project Class Diagram

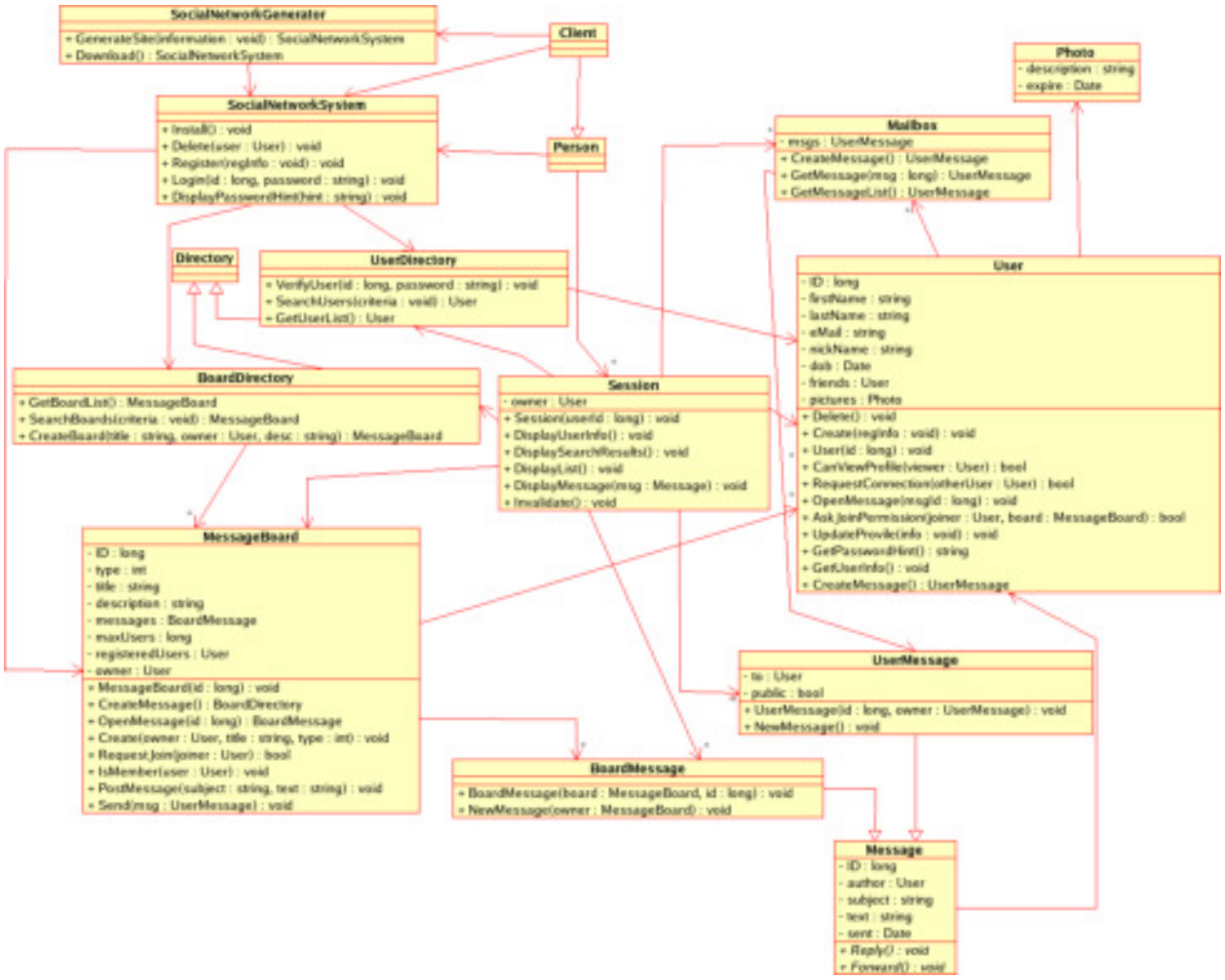

Figure 7: Project Class Diagram

The class diagram consists of four primary objects: The social network generator, the social network system, the user, and the message board. The person and client objects are also important, but they are actors, and will not actually be implemented in the system.
The social network generator is the interface that the client will use to generate their social network, or community.
The social network system, or community, is what users will register and log on to to communicate and socialize with other users and use the many features of the social network system.
The user object is the actual user information stored on the database. It is responsible for all abstract action requested by the person using the social network system. It includes all information submitted when the user registered, along with various functions to load this information and interact with the rest of the system. This object will also include the user's mailboxes, which will in turn include the user's messages.
The message board object is the object responsible for all message board functionality. This includes all the messages belonging to the board, along with functionality to create new ones, view existing ones, join the board, create a new board, etc.

5 Packages

Our project contains primarily three groups of classes, or packages: User interface, application, and database. The user interface classes provide mainly functionality to display information to the user. The application package provides internal functionality, such as processing data before it is displayed to the user. The database package contains classes whose primary function is storage of data, and provide very little functionality.

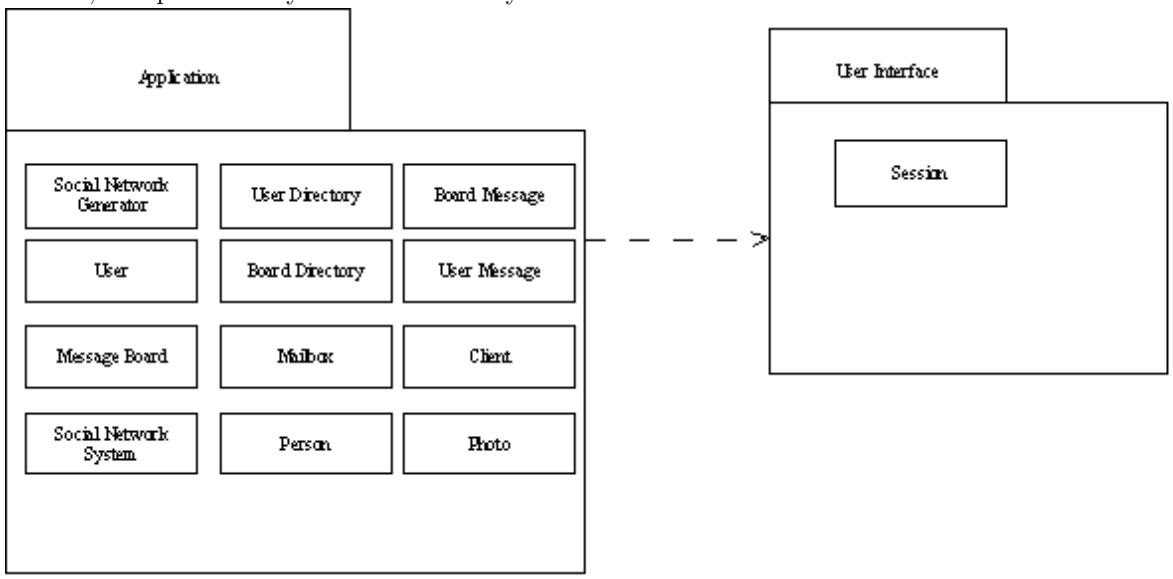

Figure 8: Project Package Diagram

6 Deployment

When the client wants to create a community website, the client will access the admin web server via Internet using his/her web browser and HTTP protocol. The site setting made by the client well be stored in the admin database on the admin database server. The community generator will generate the community website in a zip file. After the zipped site being created, the client can download it and install the site on his/her client web server and database on his/her database server. When the user wants to use the community, the users will access the client web server via Internet using browser and HTTP protocol. The Information of his/her information will be stored in the user database on user DB server, and those information will be view and edit using the component in the community website.

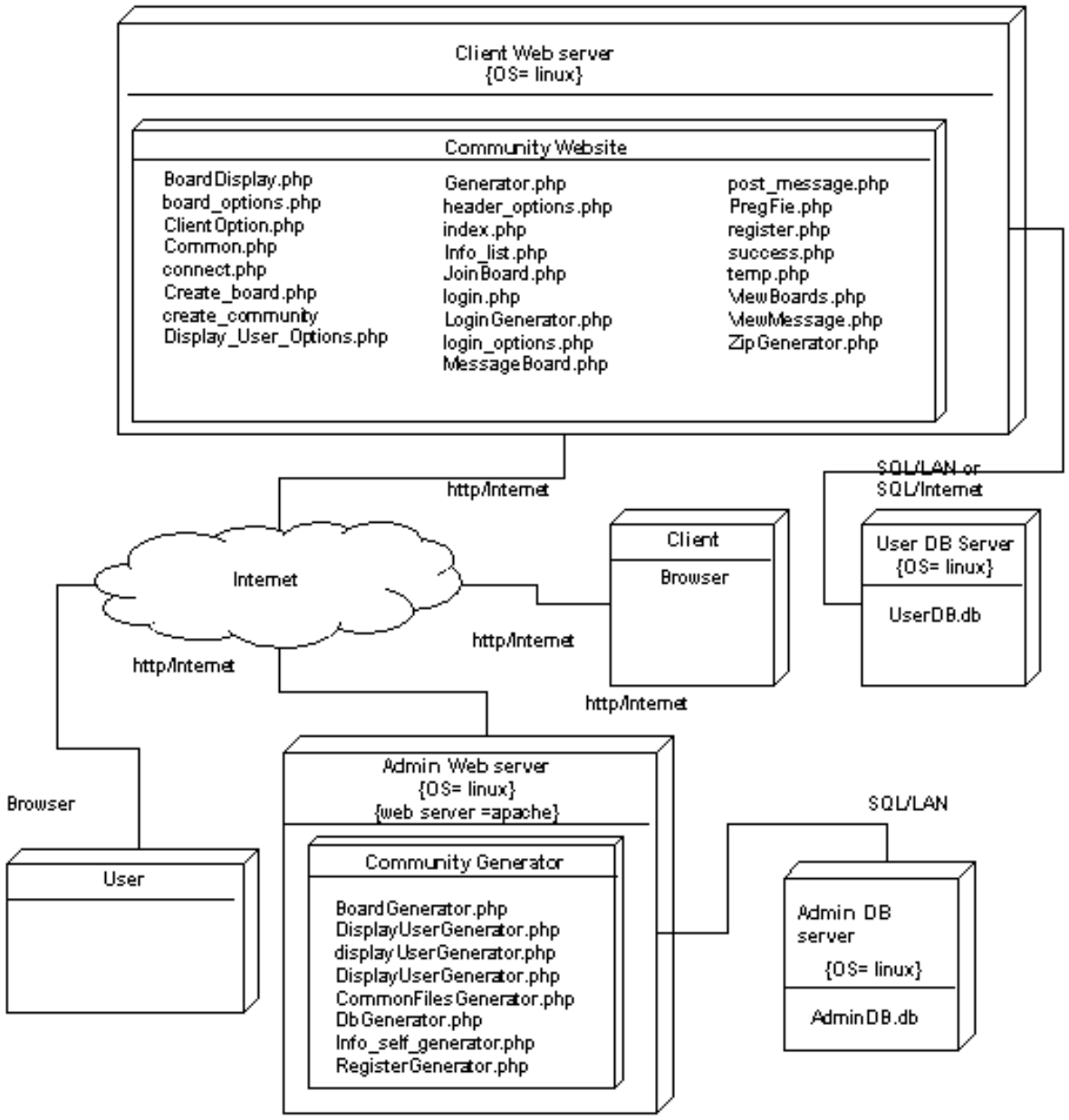

Figure 9: Project Deployment Diagram

7 Communication Diagrams

Some communication diagrams for relevant use cases are given.

1. Site options - Administrator can select the options about the site that he/she wants to generate, and select where the database is going to be store. So, the database will only store the options that the administrator selected. Some of the options are default that the website will automatically include such as firstname, lastname, password and email etc. So basically, the design of the website will be generate by the "option site" which controls by the administrator.

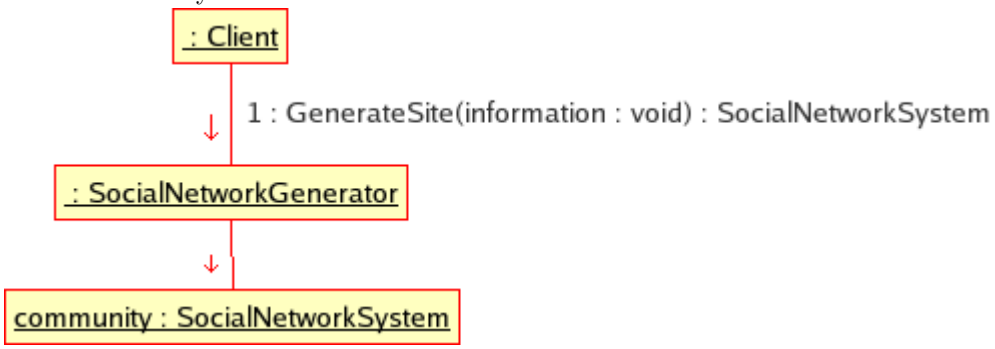

Figure 10: Use Case 1 communication diagram

2. Site Generation - After the administrator selected all the options, the system must generate a website base on the options that he/she selected. The system will make the website available for the administrator to download. Then a website will be generated for the administrator to use.

3. Download generated site - Administrator must download the generated site to their local machine after all the configuration is done in order to get the site running. We will provide instructions of how to run the website for the administrator, most likely an instruction page.

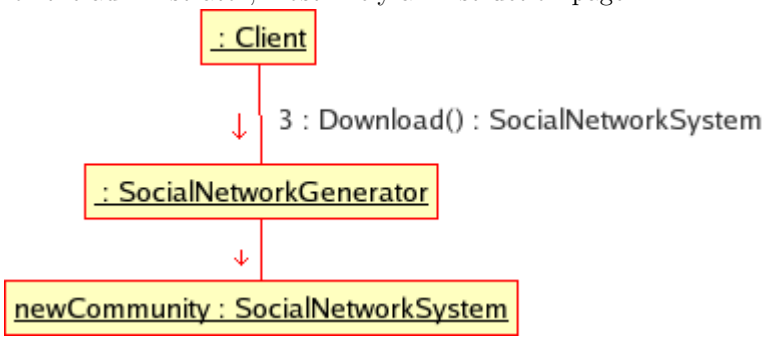

Figure 11: Use Case 3 communication diagram

4. Installation - Administrator must start with running the install package that we have provided then the system will be install. We might have to give a unique username and password for the administrator once the system is install.

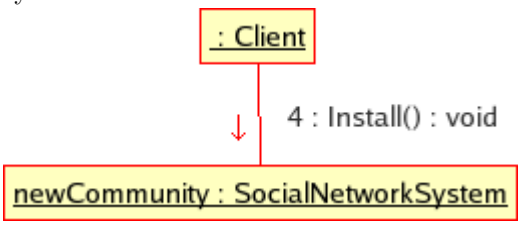

Figure 12: Use Case 4 communication diagram

5. Delete User - Administrator can delete a specific user. Administrator ID and user ID has to be verify by the system in order to delete a user (verifying email and password). Then the system will delete the specific user after all the verification.

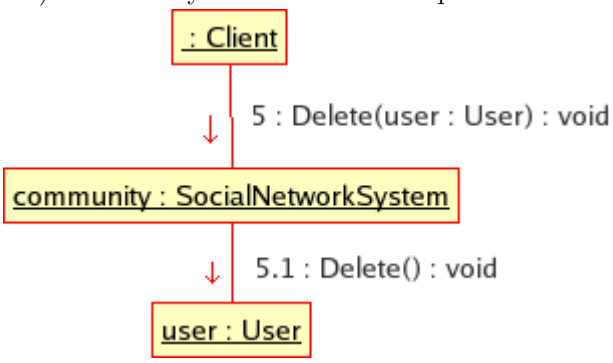

Figure 13: Use Case 5 communication diagram

6. Register - Add a user to the community. The user will be asked for registration details, and after successfully submitting them, will be registered to the community.

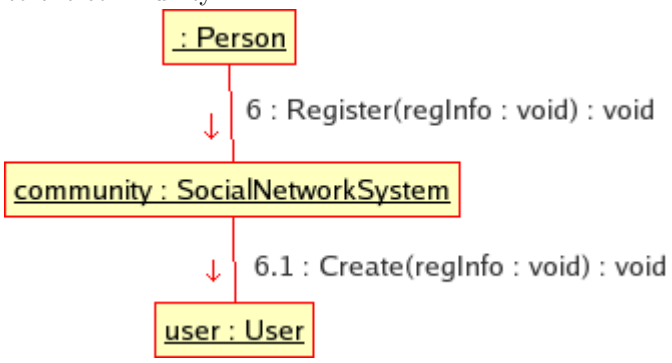

Figure 14: Use Case 6 communication diagram

7. Login - The system will ask the user for his username and password. It will then check if the entered info is correct. If it's so, the system will let the user log on into the system. Otherwise, it keeps asking the user either to enter the info again until it's correct or go to "Forgot Password" page (use case 23) to achieve the password.

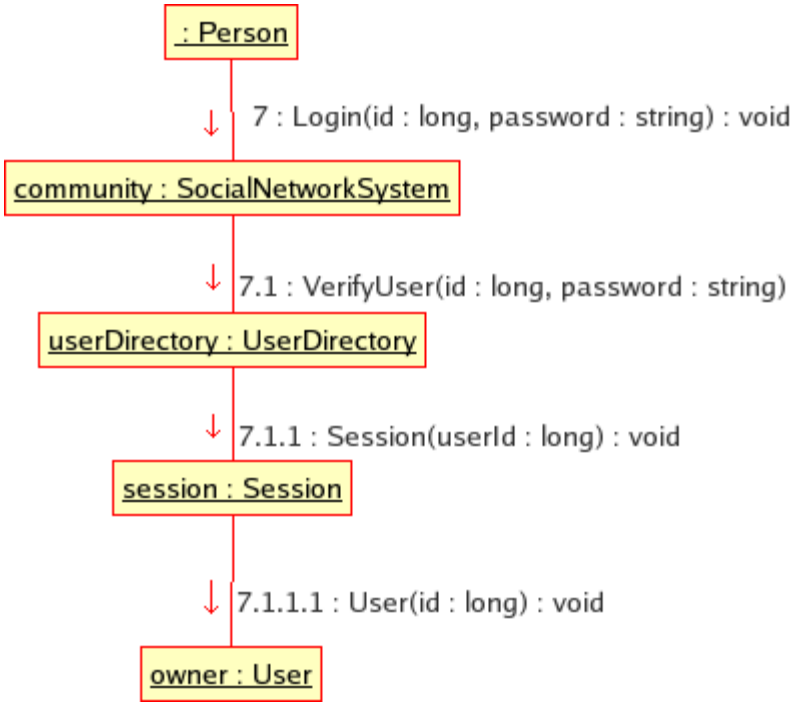

Figure 15: Use Case 7 communication diagram

8. View Personal Page - After the user logs on, he will go to his personal page. He also can view portion of message board (messages posted on current day) and portion of his profile. The system will also let him modify his profile if he wants to.

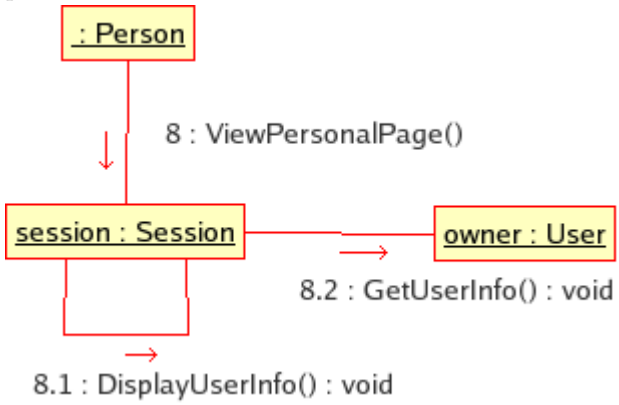

Figure 16: Use Case 8 communication diagram

9. Search Users - System allows a user to search for another user. System will ask the user for first name, last name, and/or other fields (Specified by the admin) of the person that he wants to search for. If matches are found, system will display a list of matching users.

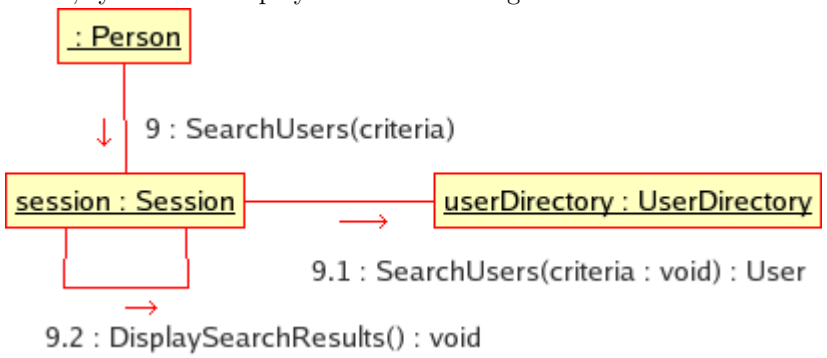

Figure 17: Use Case 9 communication diagram

10. List All Users - If a user wants to see the list of all users, the system will ask him for options to display the list of users.

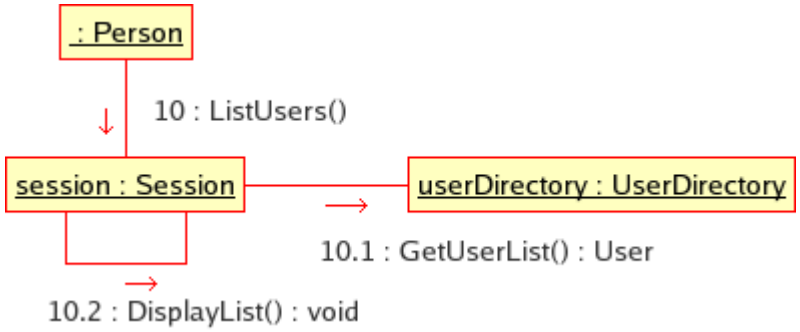

Figure 18: Use Case 10 communication diagram

11. View Other User's Page - The User can see the info of other users. the user can only view what is allowed depending on what the permission is set to. Also, if it is allowed the user is also able the see the persons picture.

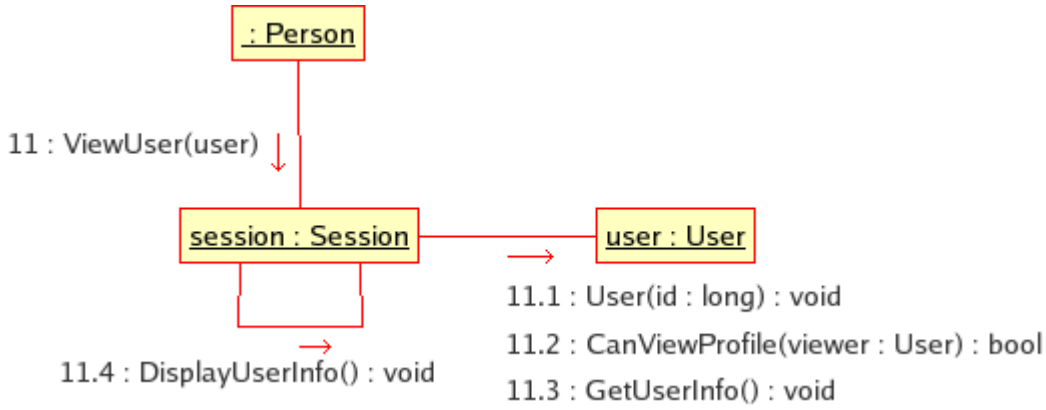

Figure 19: Use Case 11 communication diagram

12. Create Connection to User - Connect to a user to be considered their "friend". When a friend, the user can see more about the user, such as some private information, that they cannot see when they are not.

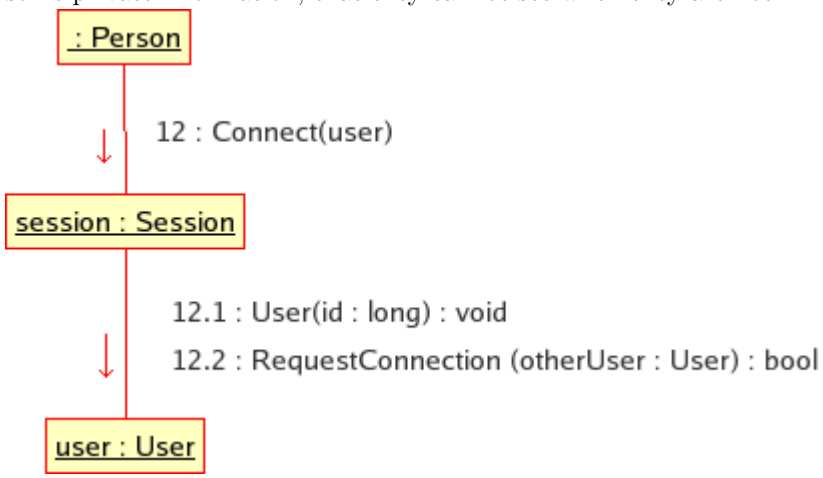

Figure 20: Use Case 12 communication diagram

13. Send User a Message - The user can send messages to other users. They have a list of other users.

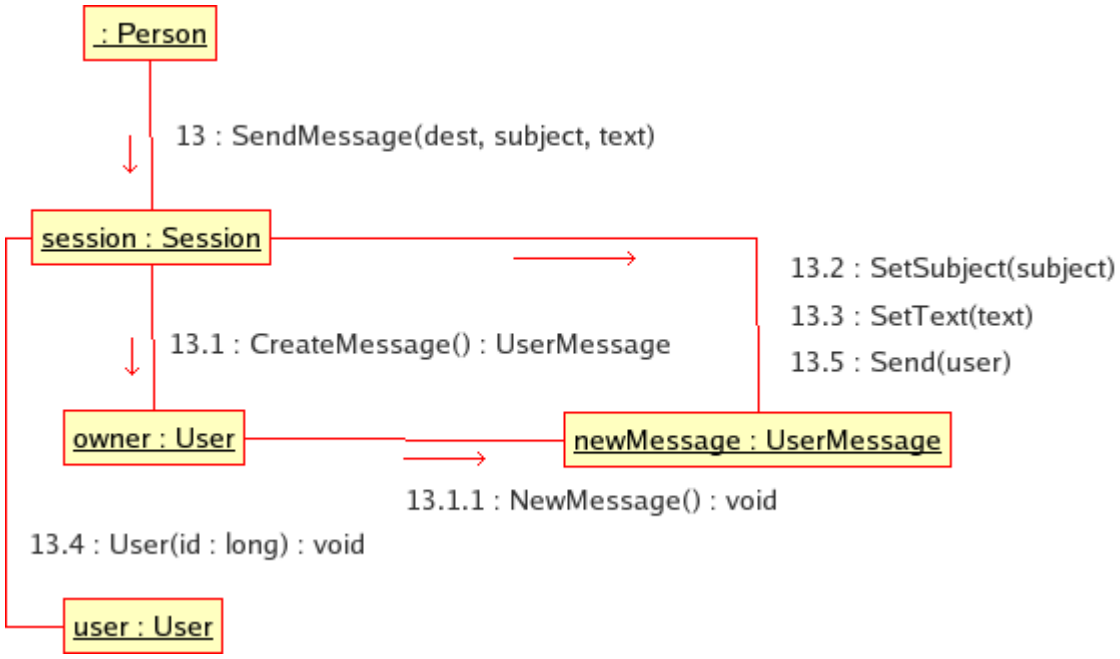

Figure 21: Use Case 13 communication diagram

14. View Mailbox - The user can view their on mailbox. They can read messages, delete messages, reply to a message, and forward a message. They can see the info of the message, i.e. who sent it.

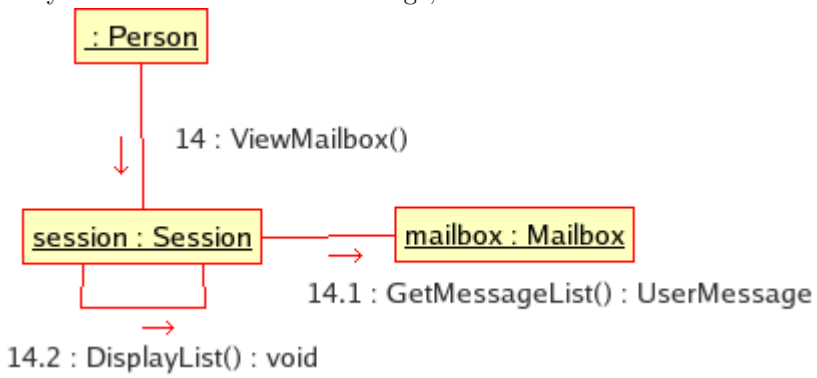

Figure 22: Use Case 14 communication diagram

15. Read User Message - User can read a message from the mailbox.

Figure 23: Use Case 15 communication diagram

16. List Message Boards - User can list message board by selecting type and order to list.

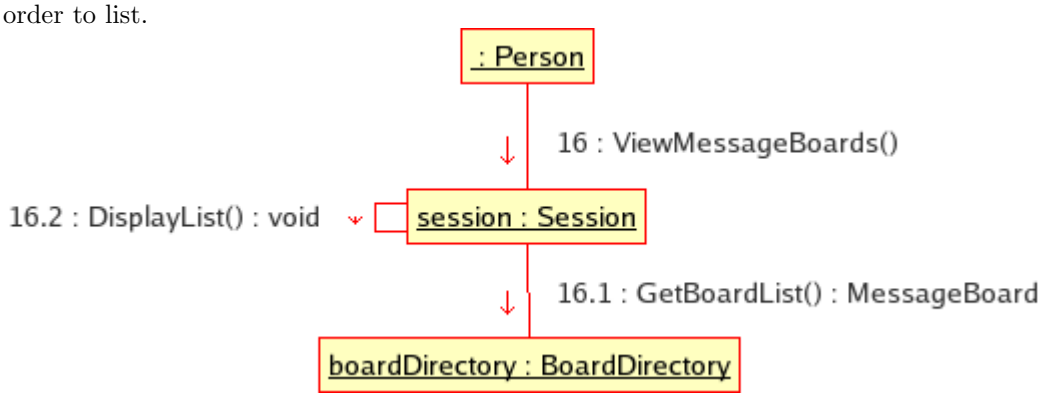

Figure 24: Use Case 16 communication diagram

17. Create Message Board - User can post a message board with certain message that can be viewed only by the group which has the permission from the user.

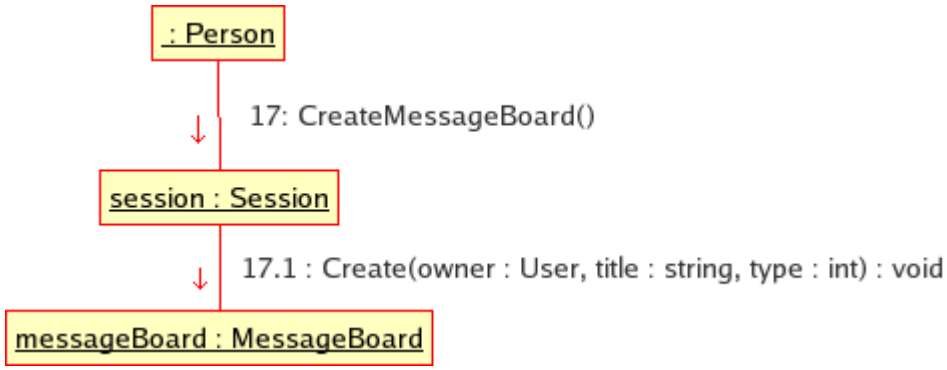

Figure 25: Use Case 17 communication diagram

18. Join Message Board - Users can join certain message board posted by others if he can receive the approval for permission from administrator of Information Sample Interface the message board.

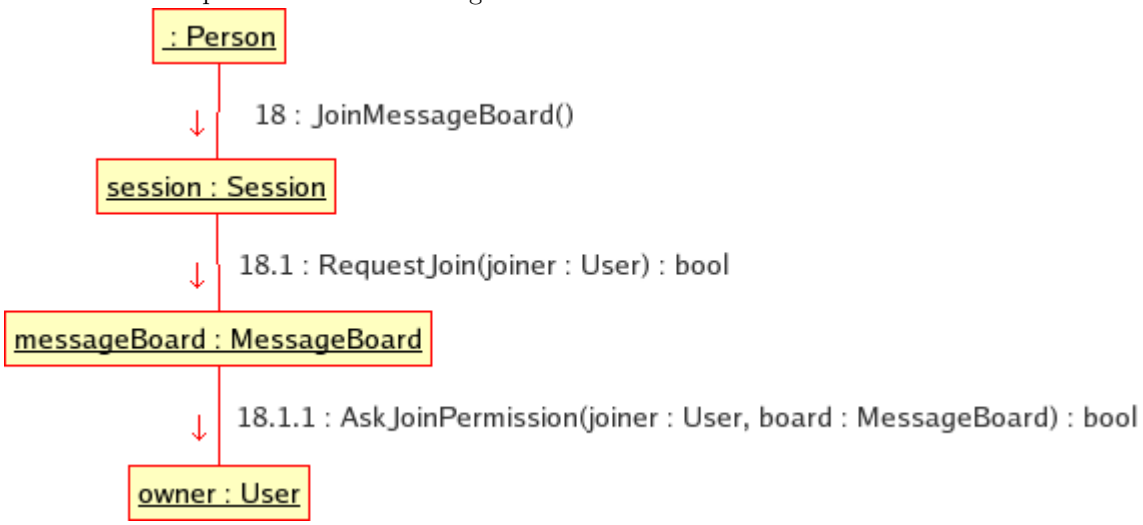

Figure 26: Use Case 18 communication diagram

19. Post Message to Board - Users can post messages to the board, but the user

can not post empty message.

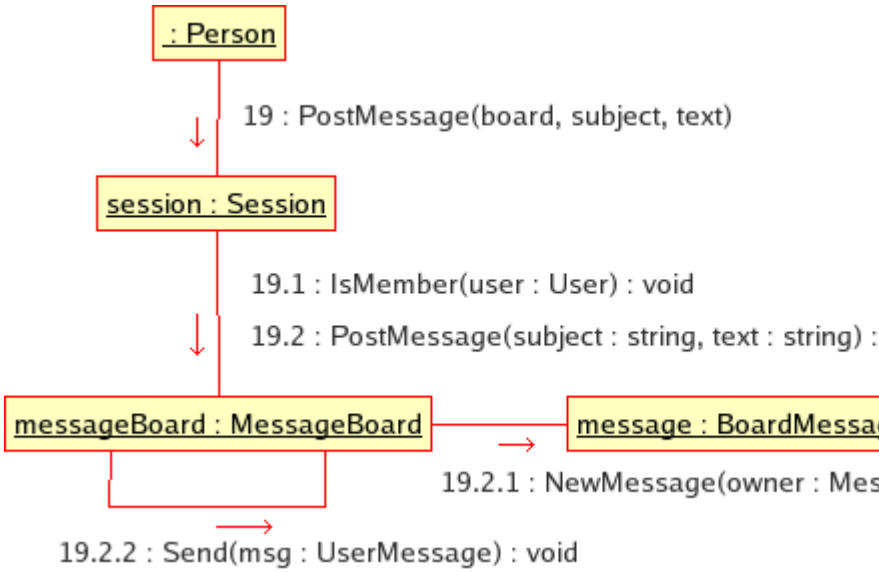

Figure 27: Use Case 19 communication diagram

20. Read Board Message - Users can read any messages if they have the permission from the user who posted the message.

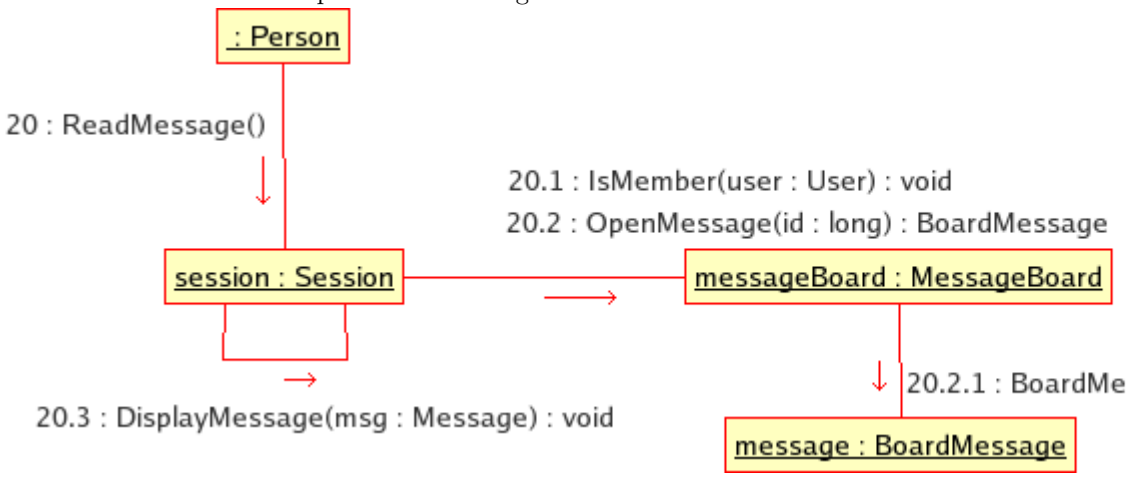

Figure 28: Use Case 20 communication diagram

21. Change User Profile - User can change his/her profile on the site. This option will prompt for the field that user wants to change and user can select which field to change. Then system will ask for the new data and user submits the changes. The system will verify the changes and store it back to database.

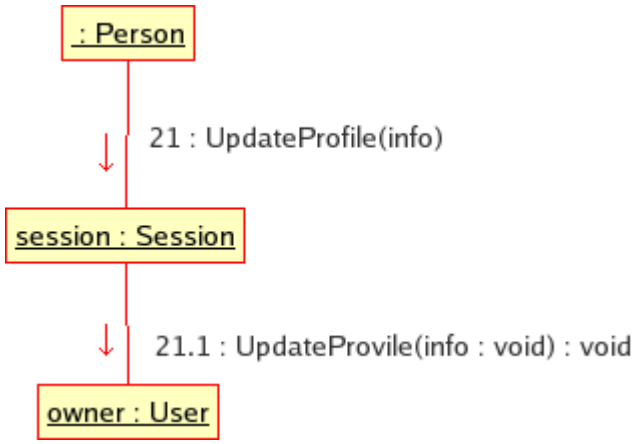

Figure 29: Use Case 21 communication diagram

22. Log Off - User can logoff the page. A page will appear to confirm this action with the user then the user will be successfully logoff.

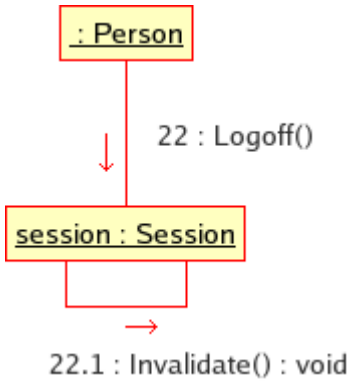

Figure 30: Use Case 22 communication diagram

23. Forgot Password - If the user forgot his/her password, the system will prompt for user's registered email address. If the system can verify this email address, the password will be send to that email address for the user.

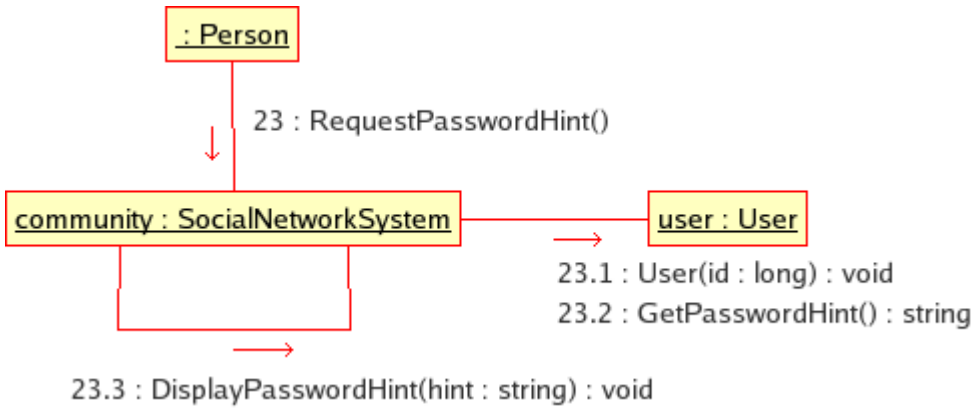

Figure 31: Use Case 23 communication diagram