CMPSC 487W Phase #1

Requirements Review

Group Name: Remember5

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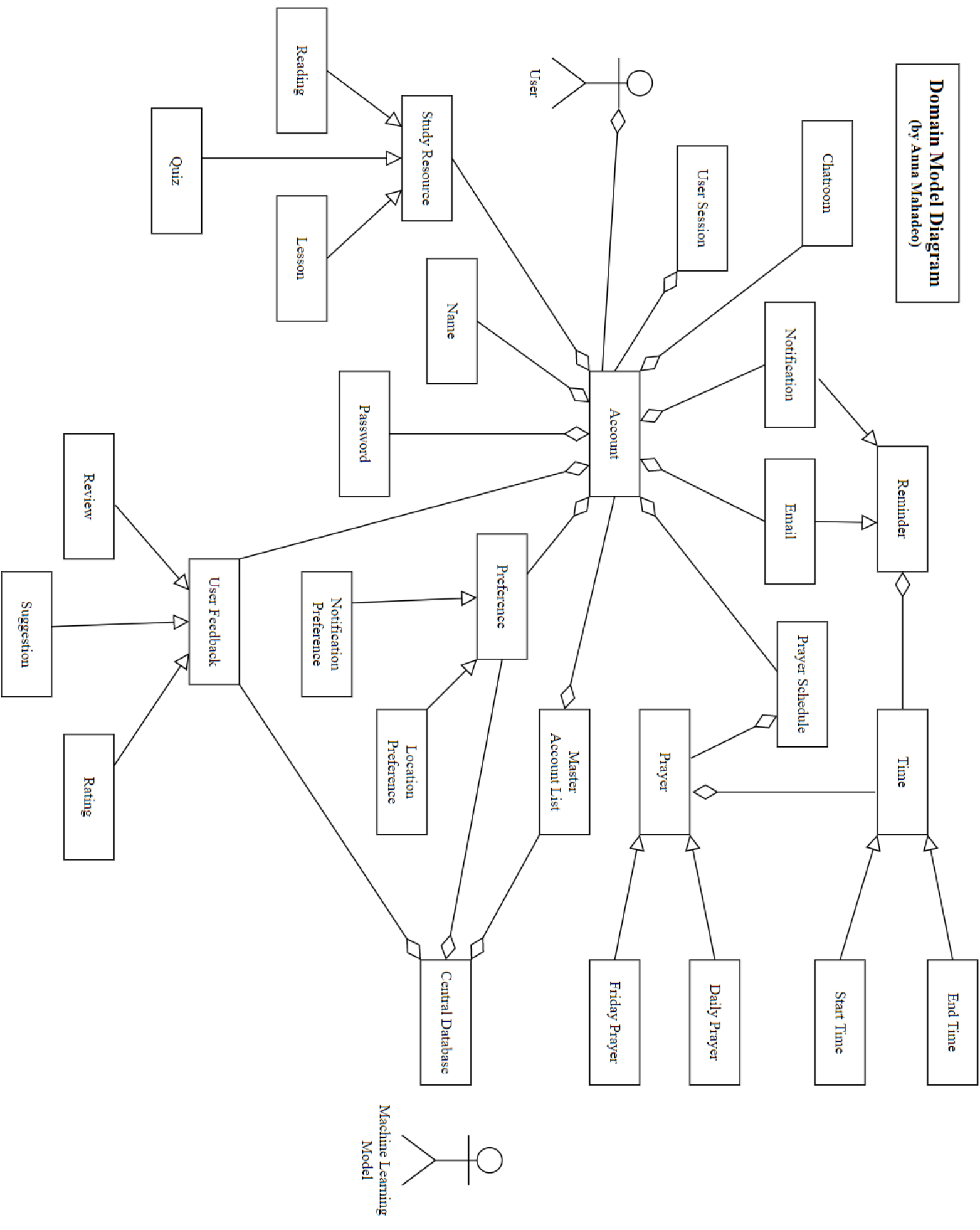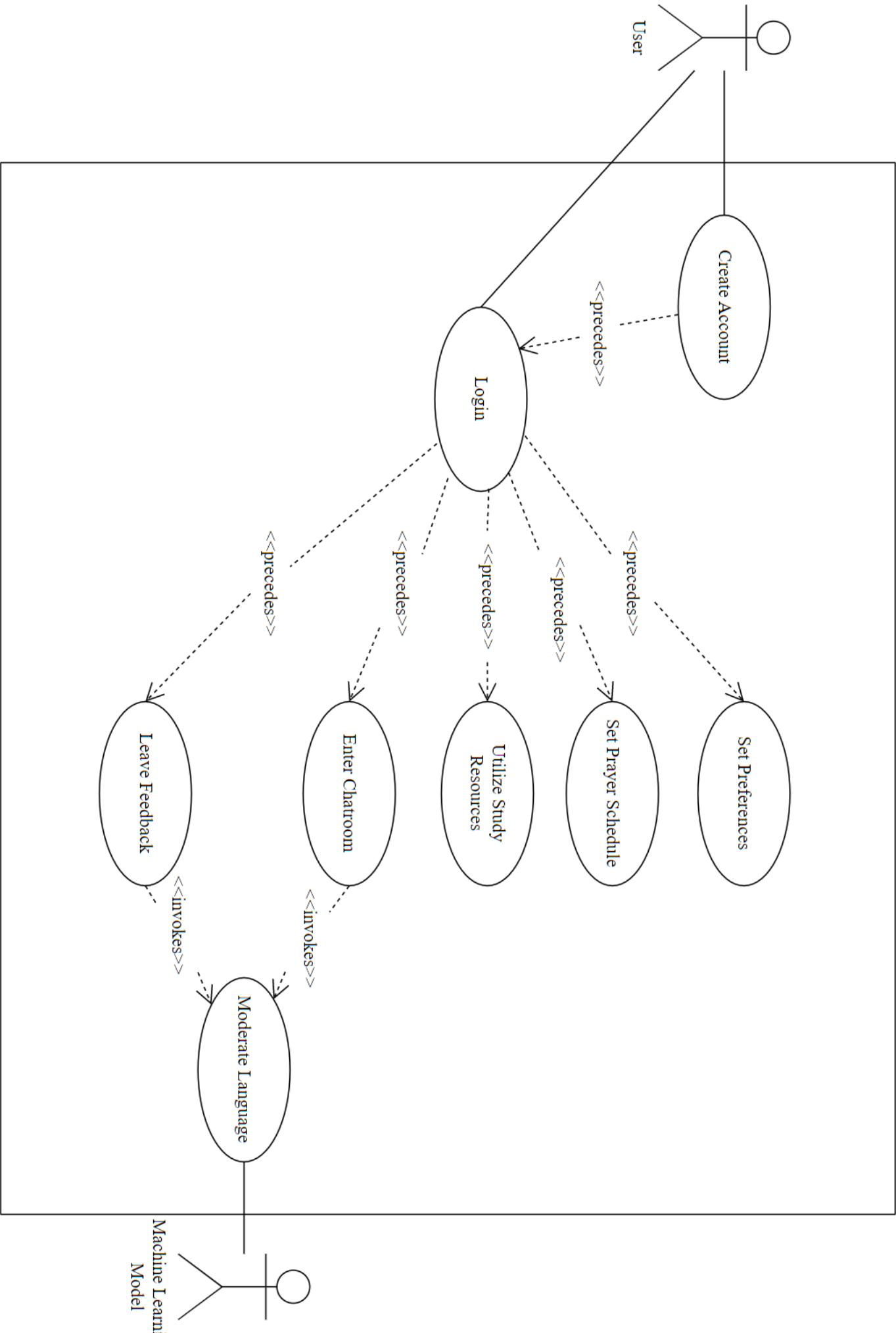1. Remember5 will be a web-based application that will have a sufficiently flexible architecture to provide full functionality in two modes: desktop and mobile.
2. Remember5 must be able to provide reminders for the 5 daily prayers Muslims are obligated to fulfill.
   a. The 5 timings of the daily prayers change every day based on the positioning of the sun in the sky, so these reminders must be adjusted accordingly every day.
   b. The reminders will be sent as emails and push notifications. One reminder will be at the starting time of prayer, and another will be 15 minutes before it finishes.
   c. The daily prayer schedule will be posted on a user's account and emailed the night before to notify users of the 5 daily prayer times.
   d. On Fridays, users will receive a separate notification for the special congregational afternoon prayer.
   e. Users will also be notified of Islamic holidays.
3. The user must be able to create a customer account, so that the system remembers the user's details (name, email, password) at login:
   a. System shall maintain a list of accounts in its central database.
   b. When the user logs in, his or her password and username must always be matched against the data in the master account list.
   c. The user must be able to update any information that they provided, as well as have the option of deleting their account.
4. Remember5 at the time of a prayer, will send the user a list of people within a proximity based on the location of the other users. So that all those close by, may all pray together in congregation. All registered users' locations are set as discoverable by default, but the user will have the option to turn their location off.
5. Based on the list of people close to the user, the data will be collected and given to a machine learning model that will predict in advance where people might be at future prayer times.
6. The user shall have access to the chatroom by default at any time:
   a. The user, when logged in, can send and receive messages in the chatroom.
   b. The chatroom shall have a list of online and offline users. The chatroom will be moderated by a machine learning model checking for foul language.
7. The user shall have access to the religious studies section:
   a. The section provides information about the religion for newly converted members, and for those that just want to learn more about the religion.
   b. The user shall utilize the study resources to learn about the religion, such as: lessons, readings, and quizzes.
8. All account information must be stored in a central database:
   a. The central database should collect and store each individual user's preference, such as the history of selected notification and location preference, in order to provide a better service in the future.
9. The customer who uses Remember5 can provide user feedback:
   a. The user can write a review and a suggestion, then can provide a customer rating (1-5) of the website.
   b. The user's feedback shall be moderated by a machine learning model (like the chatroom) and then saved to the central database. The user's feedback shall also be used in the future for further updates
10. Remember5 must be scalable with the following specific requirements:
    a. The reminder service must be capable of maintaining user accounts for up to 100 customers in its first six months, and then a further 1,000 after that.
    b. The reminder website must be capable of serving up to 100 simultaneous users.

Domain Model Diagram
(by Anna Mahadeo)

User

Reading

Quiz

Lesson

Study Resource

Name

Password

User Session

Chatroom

Notification

Email

Account

Review

Suggestion

Rating

User Feedback

Notification Preference

Location Preference

Preference

Master Account List

Prayer Schedule

Reminder

Prayer

Friday Prayer

Daily Prayer

Time

Start Time

End Time

Central Database

Machine Learning Model

Use Case Diagram
(by Flamur Berisha)

User

Create Account

<<precedes>>

Login

<<precedes>>

<<precedes>>

<<precedes>>

<<precedes>>

<<precedes>>

Leave Feedback

Enter Chatroom

Utilize Study Resources

Set Prayer Schedule

Set Preferences

<<invokes>>

<<invokes>>

Moderate Language

Machine Learning Model

Use Cases

Create Account (by Anna Mahadeo)

BASIC COURSE:
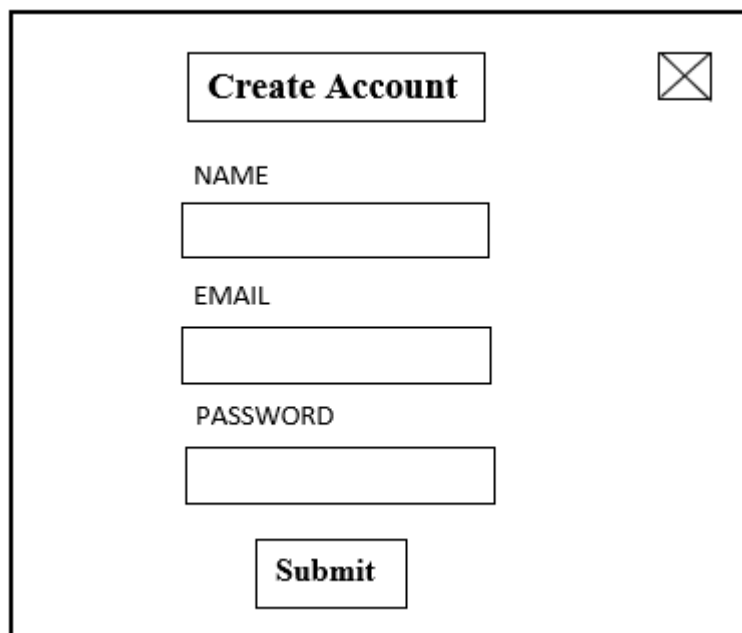
The system displays <u>Create Account page</u>. The <u>User</u> enters <u>Name</u>, <u>Email</u>, <u>Password</u> and clicks <u>Create Account Button</u>. The system ensures that <u>Password</u> is valid, and <u>Name</u> is unique by accessing <u>Master Account List</u>. The system then adds <u>Account</u> into <u>Master Account List</u>. The system displays <u>Account Create Confirmation Page</u>, and invokes <u>Login</u> use case.

ALTERNATE COURSES:

Invalid password: The system displays "Password is invalid" message on <u>Error Page</u> and displays <u>Create Account Page</u> again.

Name already exists: The system displays "Name already exists" message on <u>Error Page</u> and displays <u>Create Account Page</u> again.

Blank fields: The system displays "User information is incomplete" message on <u>Error Page</u> and displays the <u>Create User Account Page</u> again.

Figure 1-1. *GUI Prototype for Create Account*

Leave Feedback (by Flamur Berisha)

BASIC COURSE:

The system displays Account Page. The User clicks Leave Feedback Button. The system checks User Session to confirm the User is logged in, and then displays Leave Feedback Page. The User enters a website Review and Suggestion, gives it a Rating out of 5 stars, and clicks Send Button. The system ensures that Review and Suggestion are not too long or short, and that Rating is within 1-5 stars. The system then displays Feedback Confirmation Page and adds website Review and Suggestion to Pending Feedback Queue for moderation. The system invokes Moderate Language use case.

ALTERNATE COURSES:

User not logged in: The system invokes Login use case. Once the User logged in, the system displays Leave Feedback Page.

Too long or short Review: The system displays "Review is too long or short" message on Error Page and displays Leave Feedback Page again.

Too long or short Suggestion: The system displays "Suggestion is too long or short" message on Error Page and displays Leave Feedback Page again.

Invalid website Rating: The system displays "Invalid rating" message on Error Page and displays Leave Feedback Page again.

Blank fields: The system displays "User feedback is incomplete" message on Error Page and displays the Leave Feedback Page again.

Figure 1-2. *GUI Prototype for Leave Feedback*