Phase 2

Group Member

Baige Liu `g5liubai`

Zhiyu Kang `g5garyk`

Xiaoyu Yan `c4yanxia`

Features:

- **User Authentication**: Verifying a user account.
- **User Profile**: Each user has a profile including privacy informations, emails, majors, skills, experiences, current projects and rating history.
- **User Interactions**: A user can post a project and becomes a project initiator. Users can read the description and requirement of projects and submit applications to initiators. Initiators can accept any number of applications to form a group.
- **Implicit Social Networking**: Users in a same project are automatically considered as friends. They can check each other's information that only friends have the privilege.
- **Reputation System**: Users can comment a posted project. When a project finished, group members can rate each other and leave comments. Initiators can check applicants' rating level and read their partner comments history.
- **Search and Recommendation System:** Users can search projects by keywords or other users by account name. When Initiators post a project, platform will recommend users having relevant skills and high rates to the initiator.
- **Administrative View**: The project administrative view allows initiators to check the applicant list of a project and add or remove group members.

Project Structure

We are using MEAN stack to build this project.

- `Design Pattern` : MVC.

- `MongoDB` : Database
- `Express.js` : Controller, Driver
- `Angular.js` : Controller, Template
- `Node.js` : Server
- `Bootstrap` : Style
- `Library` : mongoose.js, passport.js

Database Schema

We are going to use mongodb with mongoose module in our project. The database saves all informationsabout our website, and provide functionality of all database operations. Whenever the pages need to interact with database, this module should be used. The followings are our database schemas:

- `User` : { UserID, PassWord, Email, Ceil, Projects(list of project ids), Skills(list of skills, Rating(list of ratingID))}
- `Project` : { ProjectID, Description, Start_time, Finish_time, Status, Admin, Member{(list of userID) }, Comments(list of commentID) }
- `Rating` : { RatingID, RaterID, Stars, Comments}
- `Comment` : {CommentID, ProjectId, UserId, Time, Content}

Module Design

Authentation module

We would use the module express-session from express to preventing users browse un-authorized content. This module, at first, works for the information bar that check the login information. If the login information in correct, it would use the express-session module to keep track of login information so that every modules knows who they are dealing with. As are result, we are able to modify the content of pages dynamically based on users' premissions.

Main page search module

The Main page search module is responsible for the display on main page. At first, by default, it would display the top 10 recently added project to view, and the numbers of current ongoing projects, finished pages and number of users. Also, it uses database module to get different pre-defined results that corresponding to pre-defined search buttons on the main page, and display the result on main page. Also, it allows user to search by key words. This also interacts with our database and display the results on the main page.

Panel module

The panel module provides functionality of upper side panel for all pages. This module takes the session information from authenation module, provide and display the corresponding functionalities that the user now can choose on the panel.

Profile Module

This module is responsible for the profile page. Firstly, this module checks where the request comes from. If the user is authenticated, it will display the complete information about a user with update options. Otherwise, the profile page only shows public information about a user without privacy informations. Authenticated users can update their informations such as password, email, cell number. This module also displays a list of projects and ratings related to the user.

Project Module

This module is responsible for managing project informations. It can get project informations from database and return the relevant projects according to reqirments. If the request comes from the publisher, the module will show the publisher update options so that the publisher can modify the project. If the request comes from a project member, the member can quit this project. This module also can be used to create a new project.

Rating Module

This module is used to rate and comment a user or project. Group members can use this module to rate each other when the project is finished. Users can also use this module to comment a project so that users who are interested in the same project can interact with each other.

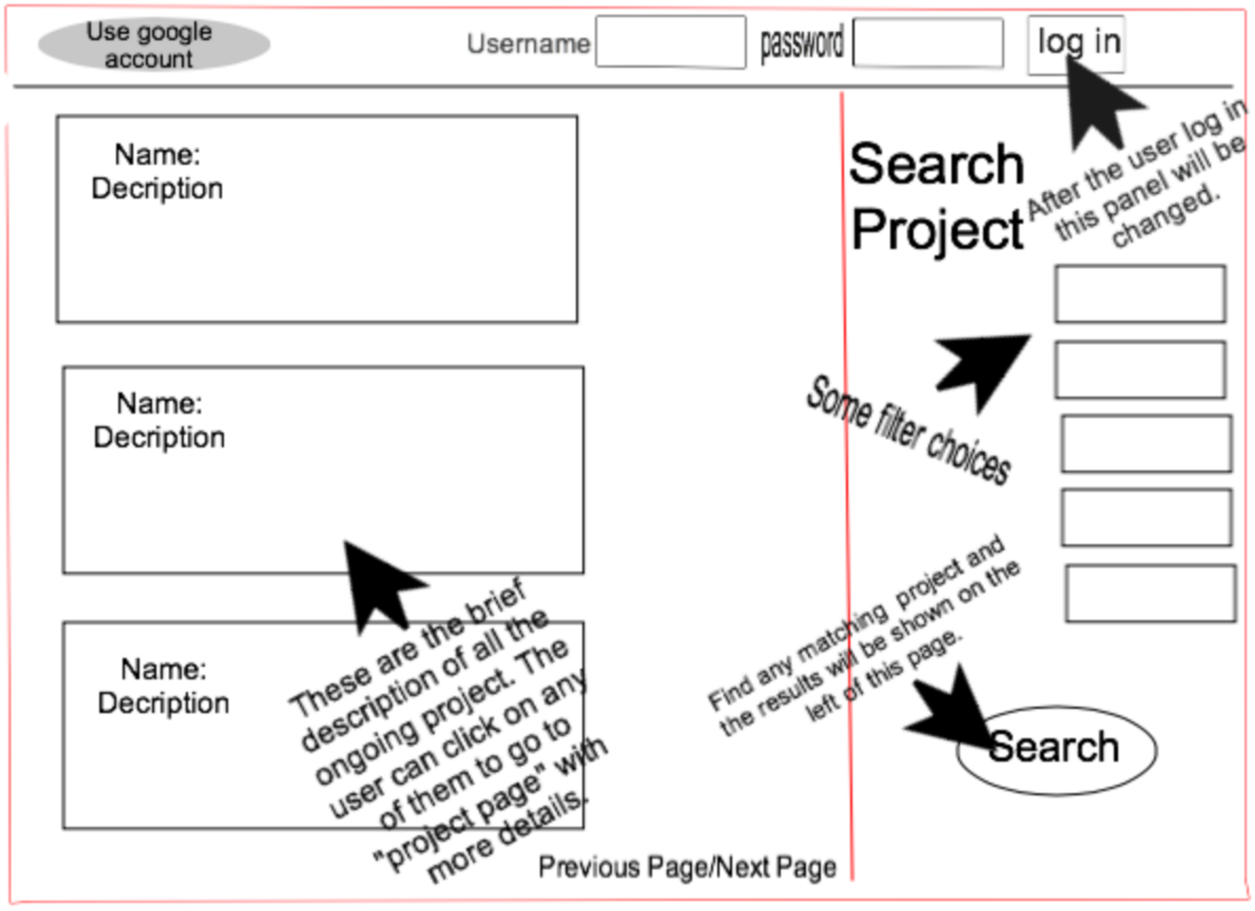
Recruitment Module

The project page will use this module. If the request comes from a publisher, this module displays all the applications so that the publisher can accept or refuse an application.

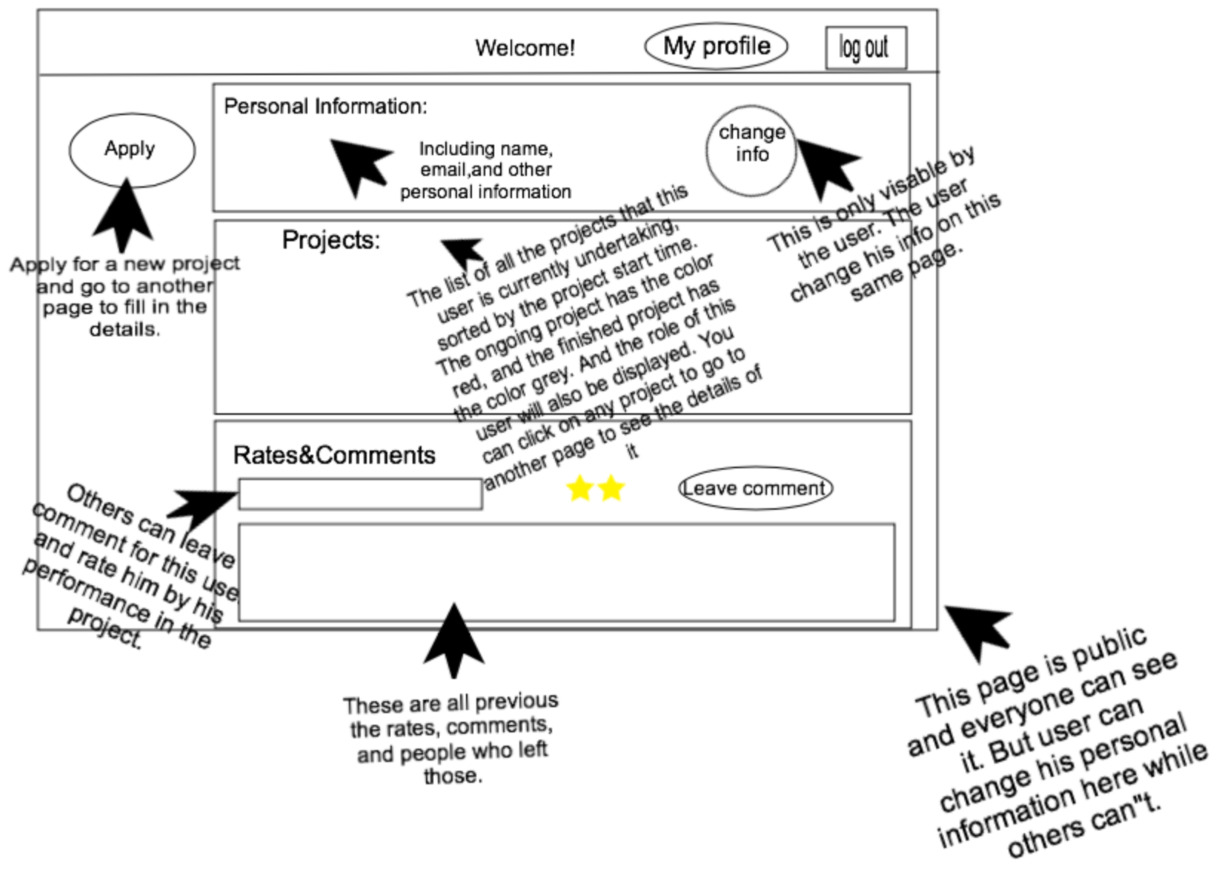
Publishers can also delete a member before the project finished. If the request comes from a normal user and the project's state is still in recruiting, this module will display apply options, users can apply for the relevant positions as the publisher's requirments.

Page&Interaction Design

Home Page


Use google account
Username
password
log in
Search Project
After the user log in this panel will be changed.
Name:
Decription
Name:
Decription
Name:
Decription
Some filter choices
These are the brief description of all the ongoing project. The user can click on any of them to go to "project page" with more details.
Find any matching project and the results will be shown on the left of this page.
Search
Previous Page/Next Page

Profile Page



Including name, email,and other personal information

Apply for a new project and go to another page to fill in the details.

The list of all the projects that this user is currently undertaking, sorted by the project start time. The ongoing project has the color red, and the finished project has the color grey. And the role of this user will also be displayed. You can click on any project to go to another page to see the details of it

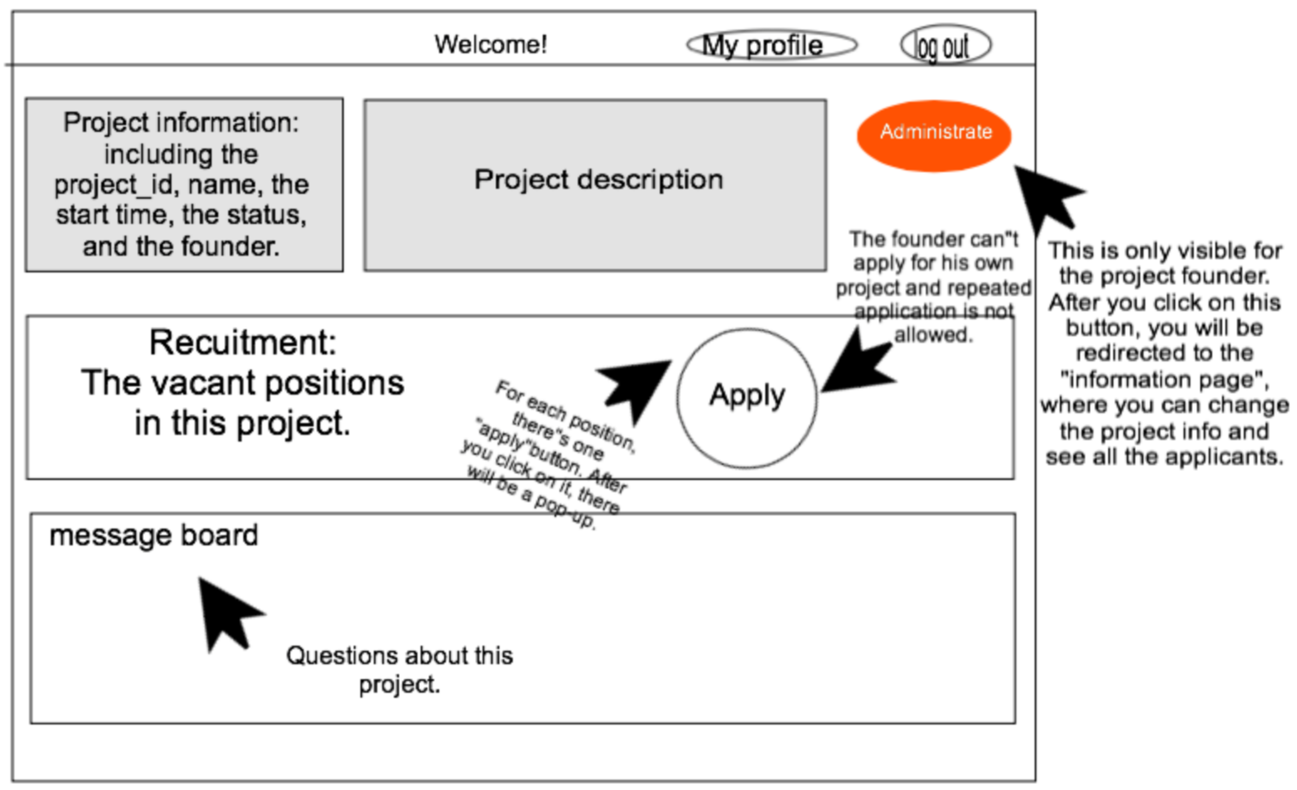
This is only visable by the user. The user change his info on this same page.

Others can leave comment for this user and rate him by his performance in the project.

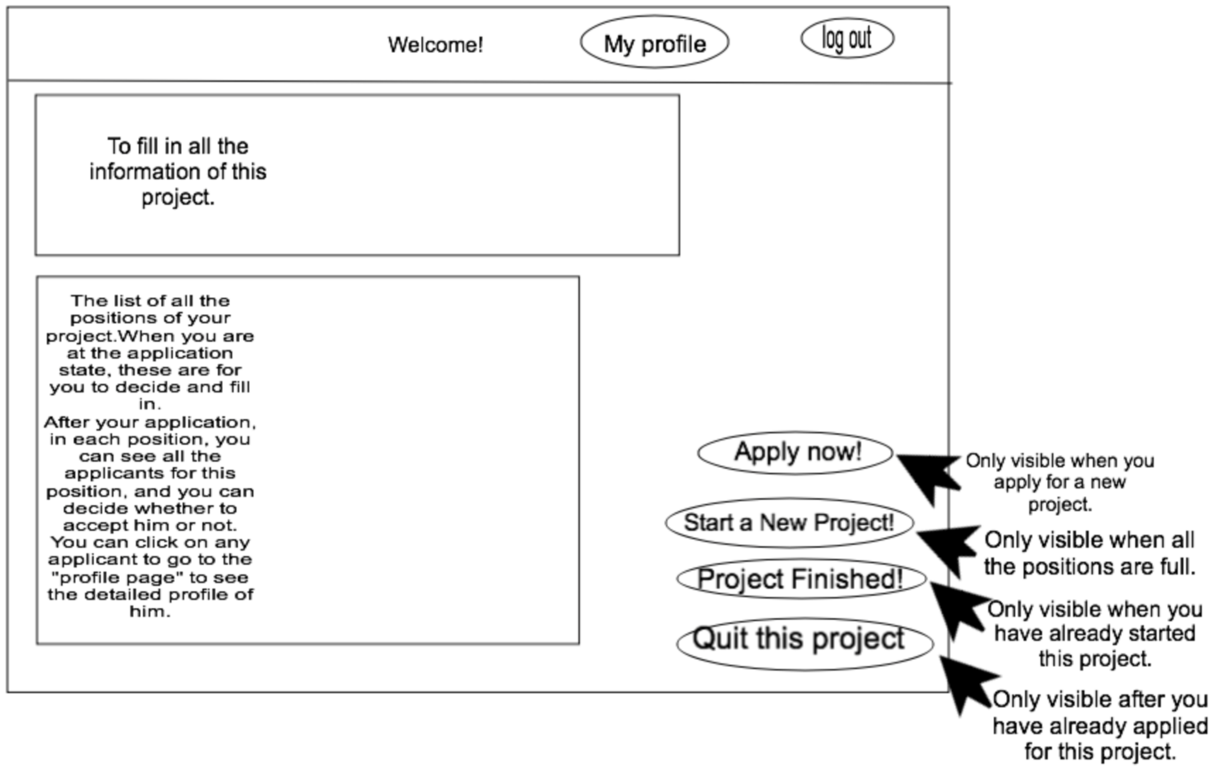
These are all previous the rates, comments, and people who left those.

This page is public and everyone can see it. But user can change his personal information here while others can"t.

Project Page


Welcome!
My profile
log out
Project information: including the project_id, name, the start time, the status, and the founder.
Project description
Administrate
The founder can"t apply for his own project and repeated application is not allowed.
This is only visible for the project founder. After you click on this button, you will be redirected to the "information page", where you can change the project info and see all the applicants.
Recuitment: The vacant positions in this project.
For each position, there"s one "apply"button. After you click on it, there will be a pop-up.
Apply
message board
Questions about this project.

Information Page


Welcome!
My profile
log out
To fill in all the information of this project.
The list of all the positions of your project.When you are at the application state, these are for you to decide and fill in. After your application, in each position, you can see all the applicants for this position, and you can decide whether to accept him or not. You can click on any applicant to go to the "profile page" to see the detailed profile of him.
Apply now!
Only visible when you apply for a new project.
Start a New Project!
Only visible when all the positions are full.
Project Finished!
Only visible when you have already started this project.
Quit this project
Only visible after you have already applied for this project.

REST API Design

Project

- GET/api/projects
  - Get all projects.
  - Output:

    ```
    {
      {
          "ProjectID": ,
          "Start_time": ,
          "Finish_time": ,
          "Status": ,
          "Admin": ,
          "Members": [user_id1, user_id2,...],
          "Comments": [comment_id1, comment_id2,...]
      },
      {
       project2
      },
      {
       project3
      },
      ...
    }
    ```

- POST/api/projects
  - Create a new projects.
- GET/api/projects/
  - Get a single project.
  - Output:

    ```
    {
        "ProjectID": ,
        "Start_time": ,
        "Finish_time": ,
        "Status": ,
        "Admin": ,
        "Members": [user_id1, user_id2,...]
        "Comments": [comment_id1, comment_id2,...]
    }
    ```

- PUT/api/projects/
    - Update a single project.
- DELETE/api/projects/
    - Delete a single project.

User

- GET/api/users
    - Get all users.
    - Output:

```
{
    {
        "Userid": ,
        "Password": ,
        "Email": ,
        "Cell": ,
        "Projects": [project_id_1, project_id_2, ...],
        "Skills":
        "Rating": [rating_id_1, rating_id_2, ...]
    },
    {
        "Userid": ,
        "Password": ,
        "Email": ,
        "Cell": ,
        "Projects": [project_id_3, project_id_4, ...],
        "Skills":
        "Rating": [rating_id_5, rating_id_6, ...]
    },
    ...

}
```

- GET/api/users/
    - Get a single user.
    - Output:

```
{
    "Userid": ,
    "Password": ,
    "Email": ,
    "Cell": ,
        "Projects": [project_id_1, project_id_2, ...],
        "Skills":
        "Rating": [rating_id_1, rating_id_2, ...]
    }
```

- PUT/api/users/
    - Update a single user.

Rate

- GET/api/rates/

    - Get all rates of a single user.
    - Output:

```
{
    {
        "RaterID": ,
        "Stars": ,
        "Comments":
    },
    {
        "RaterID": ,
        "Stars": ,
        "Comments":
    },
    ...
}
```

- PUT/api/rates/
    - Create a rate to a single user.
- POST/api/rates/
    - Update a rate to a single user.
- DELETE/api/rates/
    - Delete a rate.

Comment

- GET/api/comments/
    - Get all comments of a single project.
    - Output:

```
{
    {
        "ProjectId": ,
        "UserId": ,
        "Time": ,
        "Cotent":
    },
    {
        "ProjectId": ,
        "UserId": ,
        "Time": ,
        "Cotent":
    },
    ...
}
```

- PUT/api/comments/
    - Add a comment to a project.
- DELETE/api/comments/
    - Delete a comment of a project.
- POST/api/comments/
    - Update a comment of a project.