

# Design Document

## Teacher Student Resource Platform(TSRP)

<https://github.com/WillSan98/Teacher-Student-Resource-Platform>

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Final Version

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# 1. Description and Features

1. Project General Description The goal of the Student/Teacher Resource Platform, or TSRP, is to provide a social space for students and faculty to share both helpful resources such as materials, links, etc. Both users will also be able to share their own educational backgrounds depending on the user endpoint i.e. listing info such as their school associations, majors, or interests for student users or displaying information for inquiring students such as offered classes, class resources, or campus associations for teacher users.

2. Product Features Content Preference Customization: Users can select their past, current, and planned classes upon signup. Users can also select from a list of interests and their college major to customize their feed of information upon opening the app the posts the user will see is based on their preferences, what accounts they choose to follow, and the groups they choose to join.

"The App" gives the User options to select their professors based on what classes they are currently enrolled in, along with any groups that the professor has created for the class.

Personalized Profile Creation: Users can create and customize their public profile that reflects their career information, including their school, major, and classes, along with the personal interests they selected upon account signup. "The App" allows the User to update any information on their profile later if desired. The User can also customize the appearance of the

profile to fit their preference with many options to choose from, this allows the User to organize their profile to fit their desired interests with the service.

Interactive Content Interaction: “The App” provides the User with an interactive home feed that is designed around the preferences they have set for their profile, including their interests, classes, accounts they follow, and groups they have joined or created themselves. They can scroll their home feed of posts that are shown upon opening the app to see any posts or announcements that are related to their preferences. The User can also search for any resources that are related to a class they are currently enrolled in or will be, a professor they follow can choose to include any helpful resources when creating their class profiles.

Content Creation and Sharing: "The App" provides each User the options to post to their profile for anyone who chooses to follow them can see, or post just for their group members. Posts are meant to be about a class or information on a major to help others in the same field. Users can also leave reviews on professors of any class they have previously taken for Users who plan to enroll in the class to read.

## 2. Requirements

### 3. Functional Requirements

- FR0: The app allows all users to create a profile upon signup.
- FR1: The app will allow all users to input their career info and interests
- FR2: The app will allow all users to modify their profile info at any time after account creation
- FR3: The app will allow the user to follow any User or Professor account they choose to
- FR4: The app will allow the user to join any created by a professor they follow, groups they create, or groups designed around their majors.
- FR5: The user can search for or look at any resources that professors display for their classes.
- FR6: Users can choose to leave reviews for any professor they have taken a class of.
- FR7: Users can choose to block any accounts they do not want to see on their feed.
- FR8: Teacher users can add the resources to their class to the class page itself
- FR9: Teacher users can create groups for their classes and manage them
- FR10: The system admin can choose to suspend or ban accounts that post harmful or offensive posts themselves or read a report sent by a user and make a decision.
- FR11: The system admin can choose to manage groups members if harmful or offensive posts are made themselves or read a report sent by a user and make a decision

### 4. Non-Functional Requirements

- NFR0: The home feed will be generated upon account creation for the user to customize based on their preferences.
- NFR1: The group page for the Users side will be created when they are joined at first and selected anytime later.
- NFR2: The access to resources will be automatically available to student users when added to a teacher's profile

# 3.Scenarios

## 5. User Scenarios

### a. Users – Bobby David (Student) (Jason Isler)

- Initial Assumption: The user has access to the web app, can sign up for an account or login to an existing one and view their home feed page.

- Normal: The user will be presented with their home feed to scroll through their feed and choose to like any posts they see to see more relatable posts on their feed that fit the users' interests. They can look at their groups, the professors they follow, or look for class resources.

- What can go wrong: The user could affect their home feed to see posts they have no interest in. The user could follow accounts that are not related to any of their interests, therefore they are given the option to unfollow any account.

- Other Activities: The user can customize their profile appearance.

- System state on completion: The user has scrolled through the related posts they want to see, when they close the web app and reopen it later the home feed will refresh with any new posts that are related to their interests.

### b. Users – Professor Monroe (Teacher) (William Sanders)

- Initial Assumption: The teacher is logged in and has opened their profile page. They are looking to add courses to their offered courses listing.

- Normal: The teacher locates the courses section of their profile information and clicks the add course(s) menu option. The teacher is then presented with prompts to fill a form for the course's relative data such as subject, course id, section, and description.

- What Can Go Wrong: The teacher could incorrectly populate course fields which then need to be amended. The teacher should then be able to edit the course listing and republish it. The teacher could accidentally publish a redundant course to their listing or no longer offer the course. The teacher should be able to remove courses from their listing.

- Other Activities: The teacher will be prompted that a given section is occupied if another teacher user has a course with an identical subject, id, and section. They will then be prompted to review and fix their entry.

- System State on Completion: The user is logged on. A new course's data has been populated to the teacher's courses listing and is now displayed on their profile.

c. Users – Admin John (System Admin) (Matthew Davis)

- Initial Assumption: The user has access to a list of all users registered on the site and access to all the posts and groups on the site.

- Normal: The user will be able to browse the list of registered users and view their activities and accounts. They can modify the information on these accounts freely before locking in any changes they make by saving.

- What Can Go Wrong: The user could accidentally delete information from the wrong account or delete an account entirely by accident. In this case, the user would be prompted with the changes they made before saving and can revert these changes in case they changed something they did not mean to by accident.

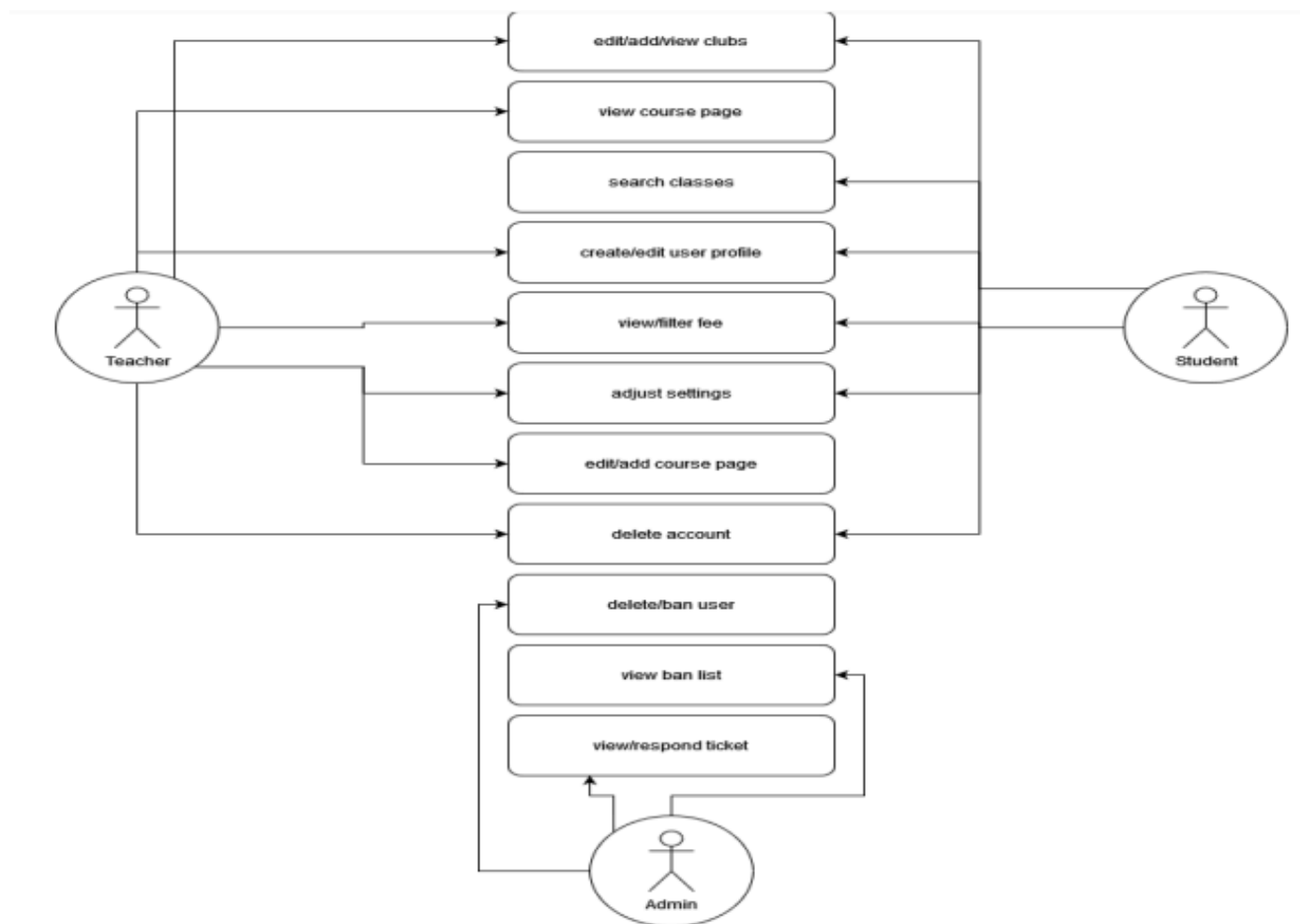
- Other Activities: The user can ban accounts and adjust the information within the accounts of other users.

- System State on Completion: A problematic user will have their account moved to a ban list. This will prevent any accounts registered under their email address from using the services provided on this website. Any system admin can view this users account on the ban list.

## 4. Use Case Design

Overview: The goal of the Teacher/Student Resource Platform, or TSRP, is to provide a social space for students and faculty to share both helpful resources such as materials, links, etc. Both users will also be able to share their own educational backgrounds depending on the user endpoint i.e. listing info such as their school associations, majors, or interests for student users or displaying information for inquiring students such as offered classes, class resources, or campus associations for teacher users. The platform itself consists of a landing page that contains a feed, profile tab, classes tab, and clubs tab with functions differing depending on the previously discussed user needs.

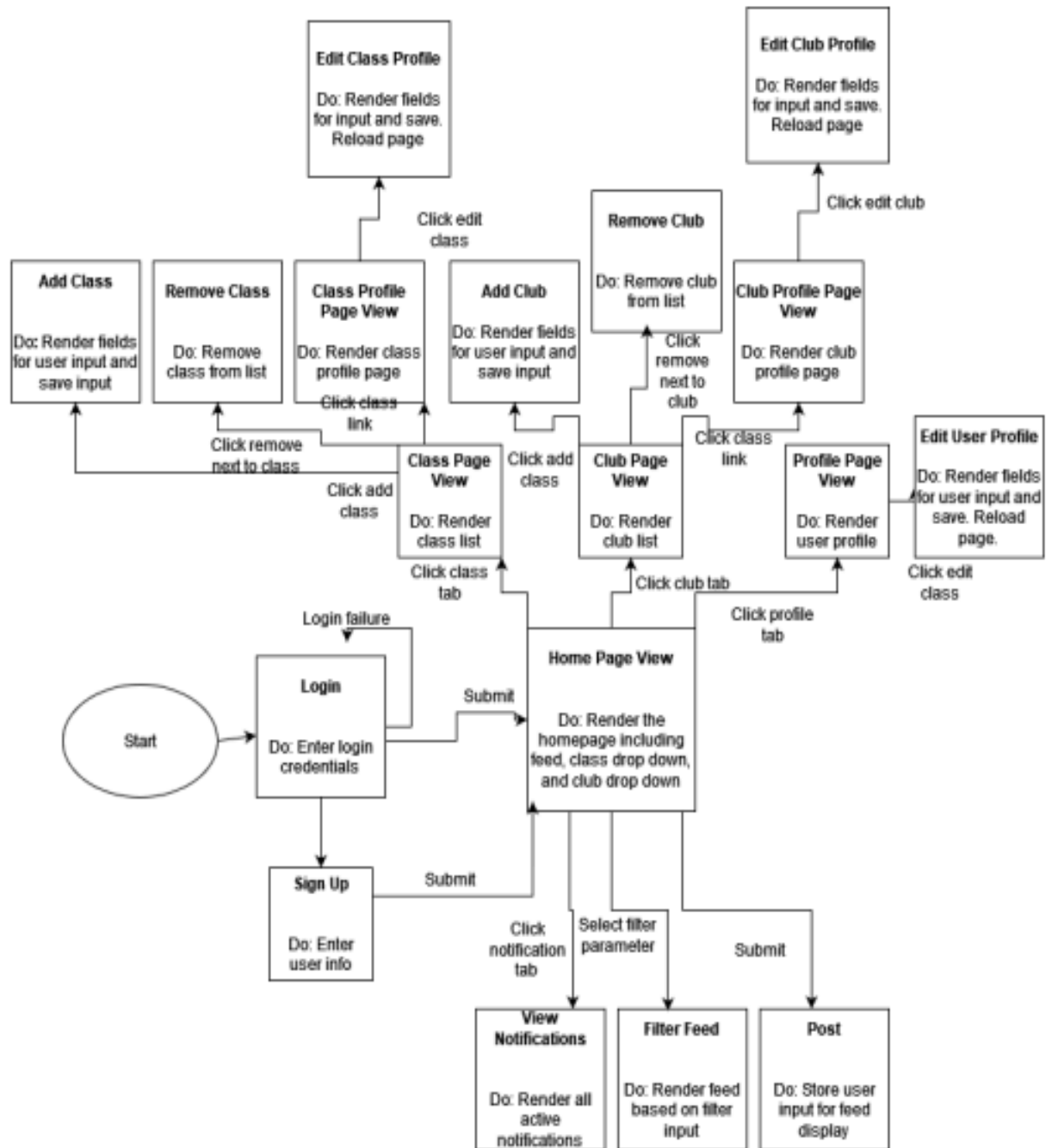
Use-Case Model:



## 5. State Machine Diagrams

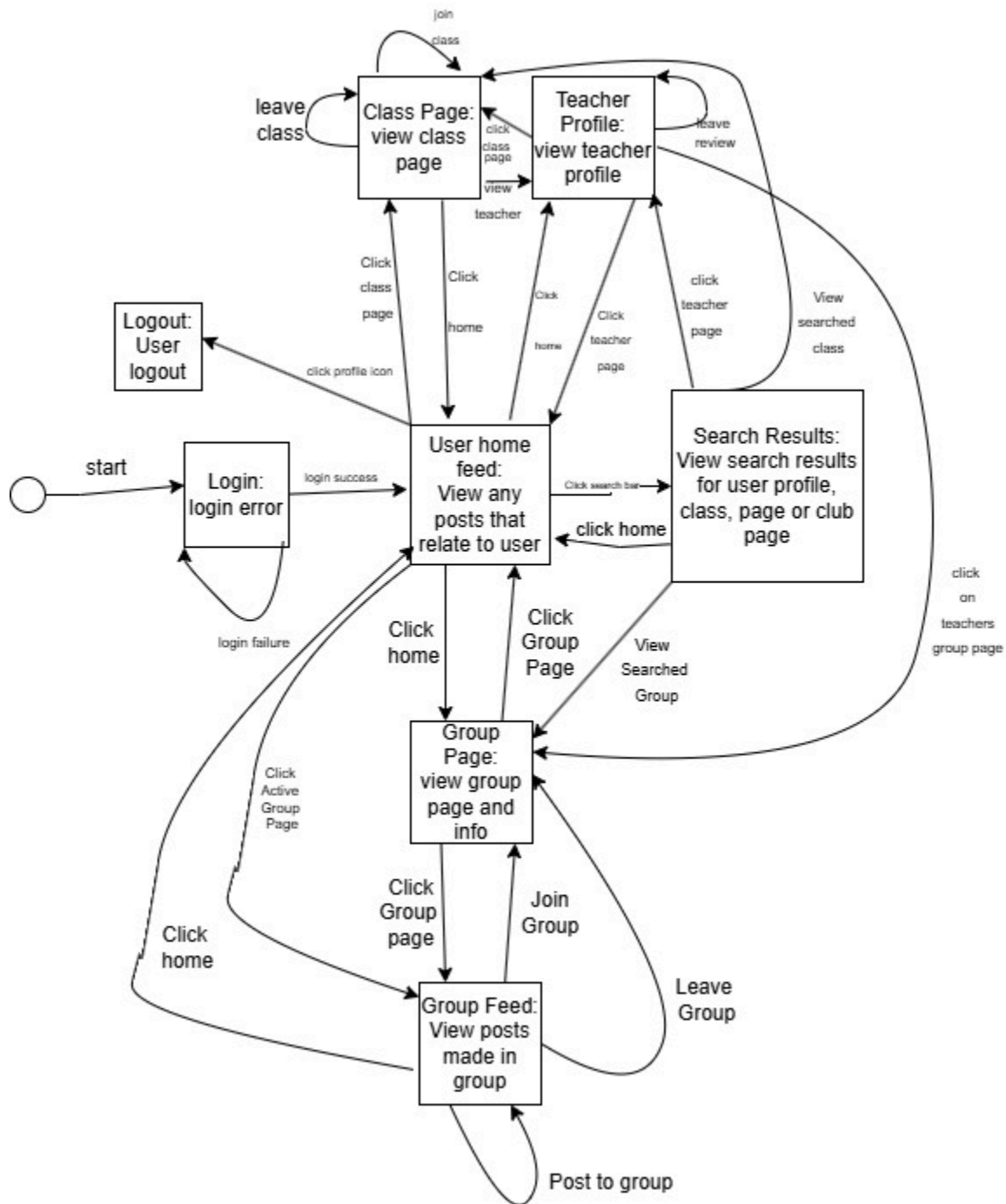
State Machine Diagram:

a. User – Professor Robert (William Sanders)

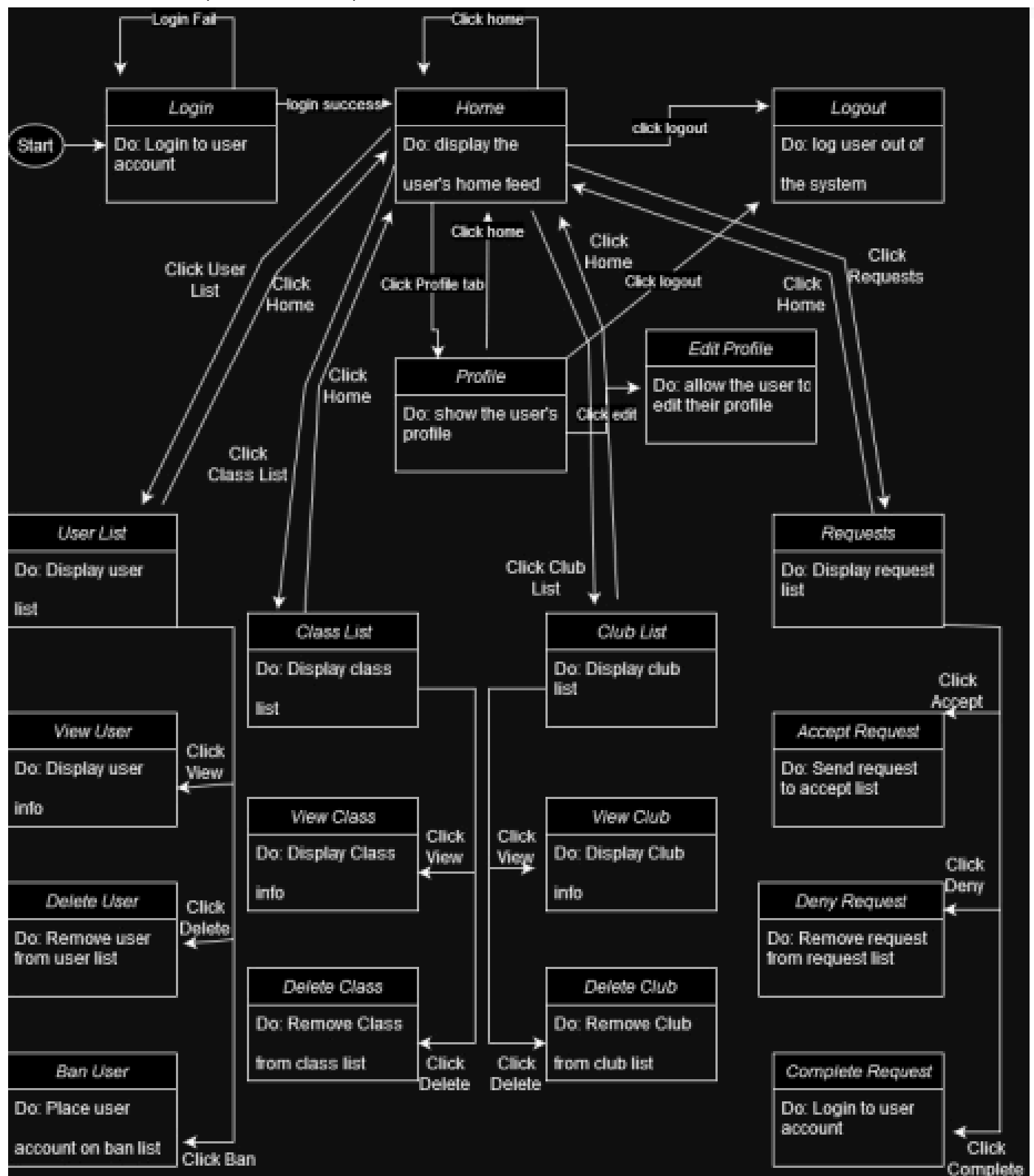




b. User – Freshman Janet (Jason Isler)

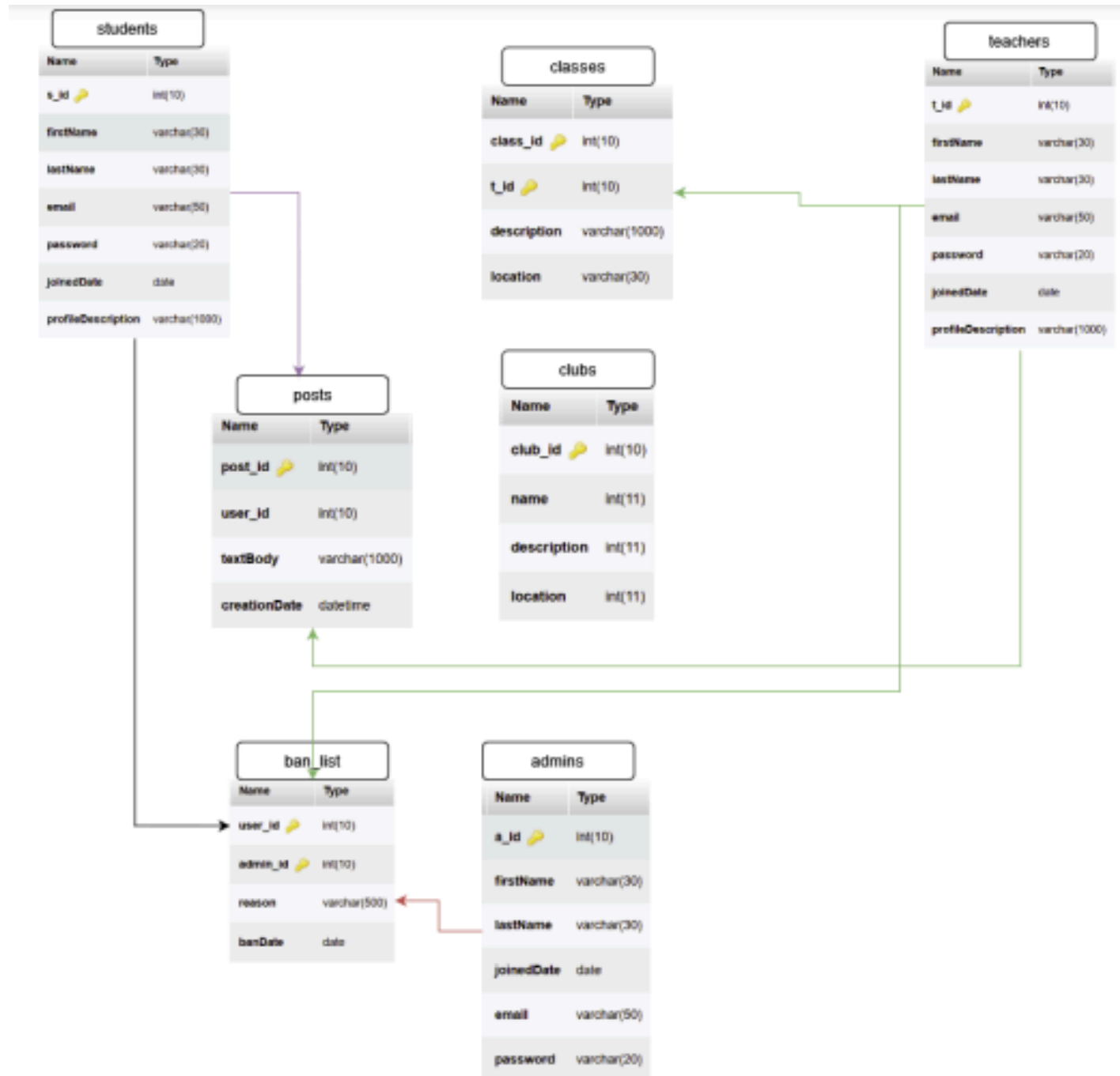


User – Admin Jared (Matthew Davis):



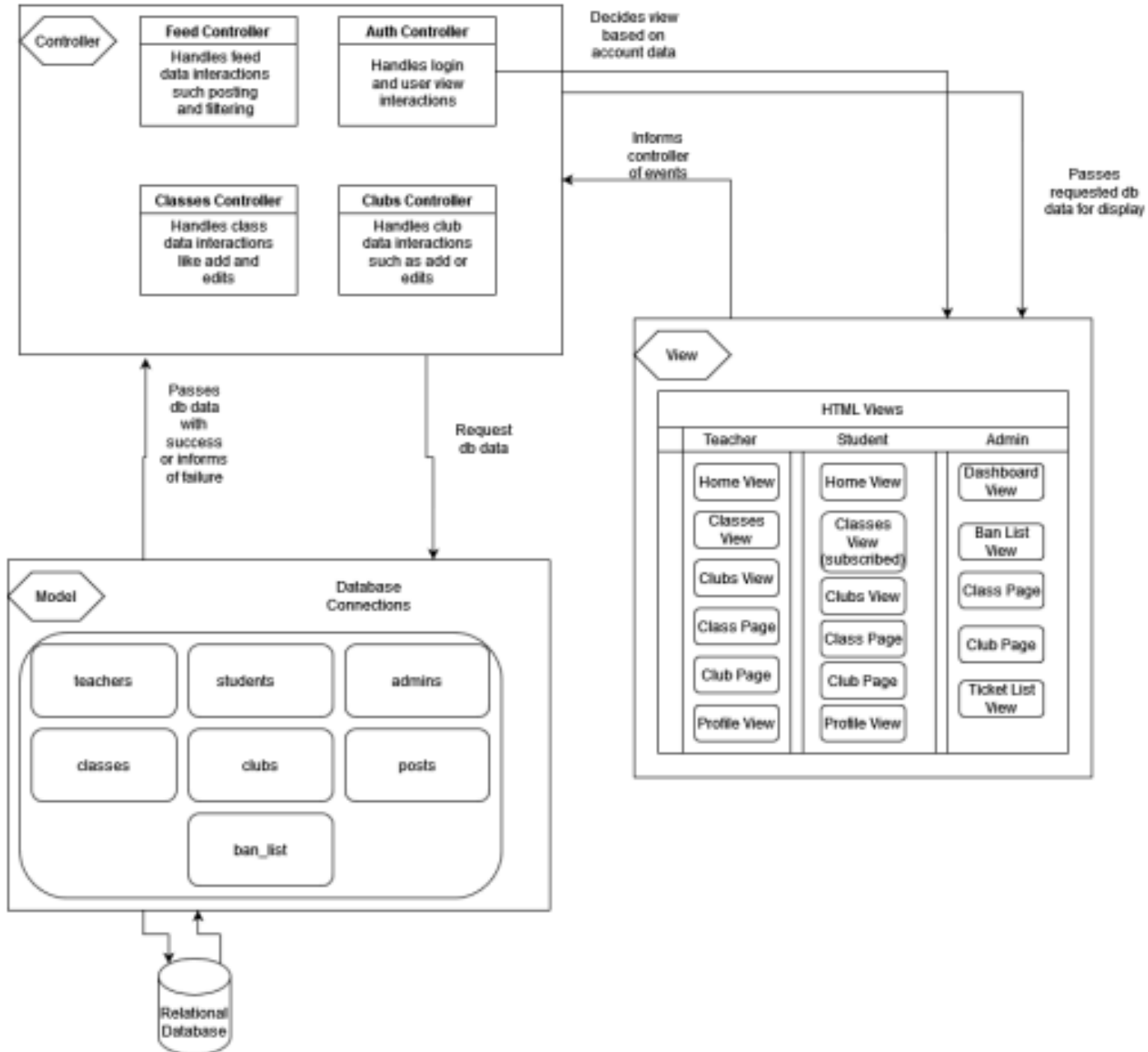
## 6. Database Schema

(William Sanders)



# 7. Software Architecture

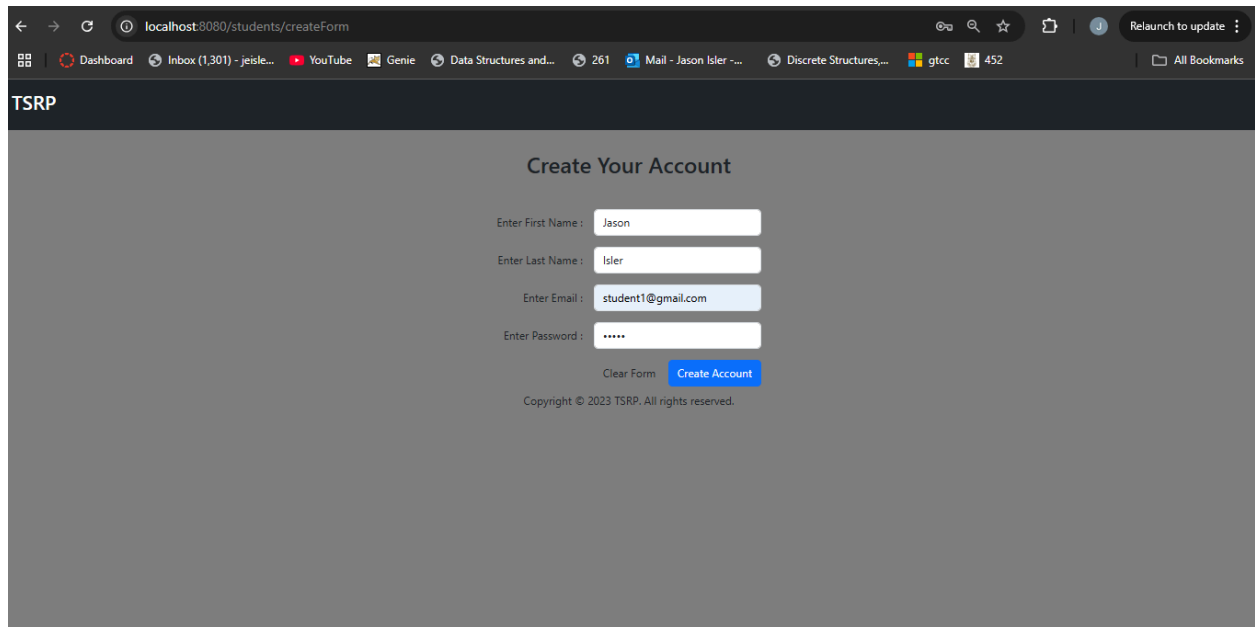
(William Sanders)



## 8. Screenshots with Scenarios

Customer signup page: (Jason Isler)

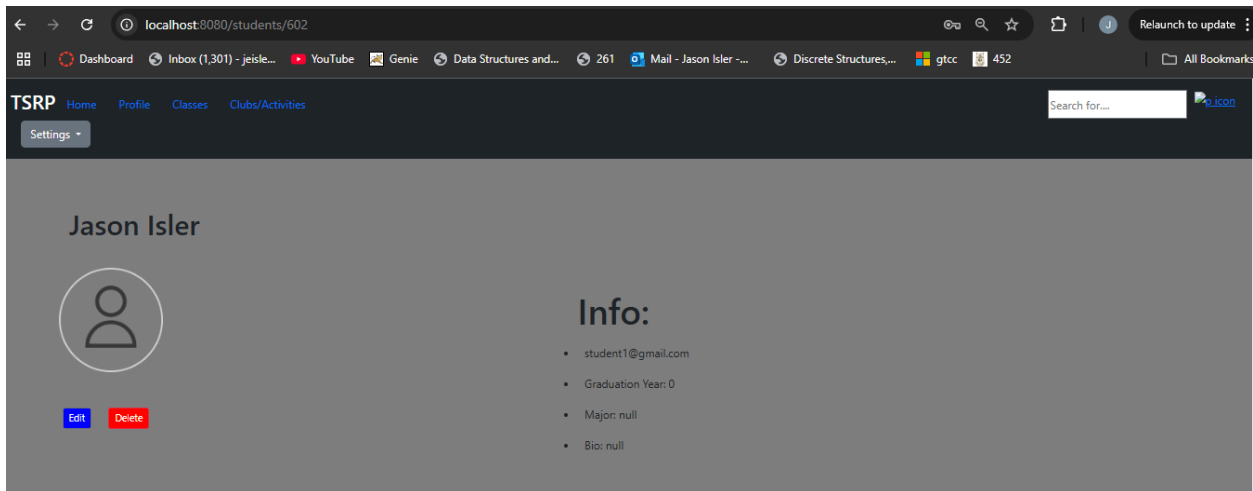
- Student creates a new account by clicking on the “create student account page”



The screenshot shows a web browser window with the URL `localhost:8080/students/createForm`. The page title is "TSRP". The main heading is "Create Your Account". Below the heading, there are four input fields: "Enter First Name:" with the value "Jason", "Enter Last Name:" with the value "Isler", "Enter Email:" with the value "student1@gmail.com", and "Enter Password:" with the value "\*\*\*\*\*". Below the input fields, there are two buttons: "Clear Form" and "Create Account". At the bottom, there is a copyright notice: "Copyright © 2023 TSRP. All rights reserved."

Customer Profile Page: (Jason Isler)

- The new student account is seen on the profile page



The screenshot shows a web browser window with the URL `localhost:8080/students/602`. The page title is "TSRP". The main heading is "Jason Isler". Below the heading, there is a circular profile picture placeholder. To the right of the profile picture, there is a section titled "Info:" with a list of details: "student1@gmail.com", "Graduation Year: 0", "Major: null", and "Bio: null". Below the profile picture, there are two buttons: "Edit" and "Delete". The page also features a navigation bar with links: "Home", "Profile", "Classes", and "Clubs/Activities". A search bar is located in the top right corner.

## Update Customer Profile Info: (Jason Isler)

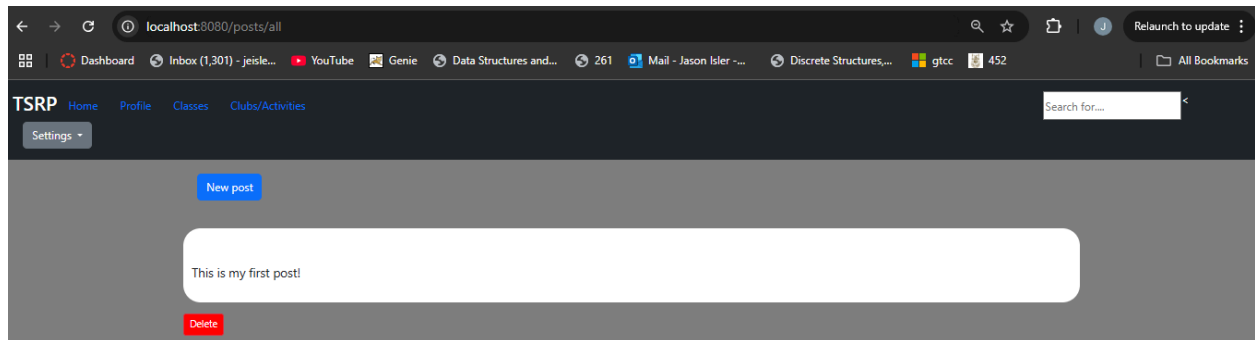
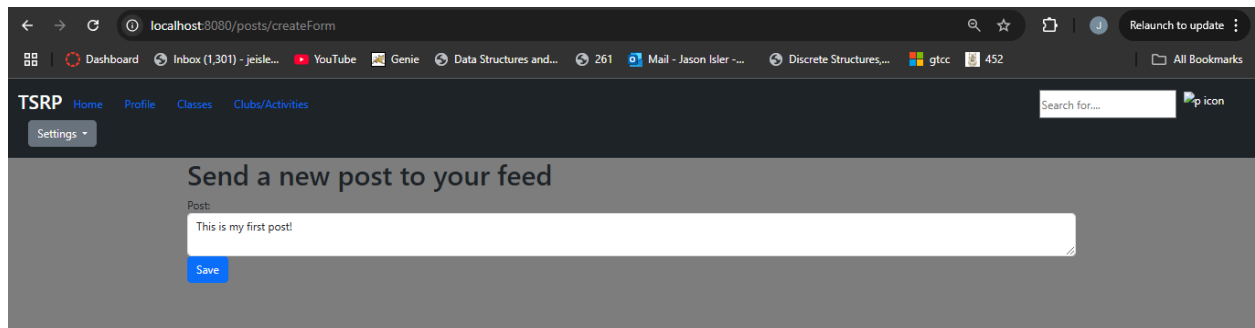
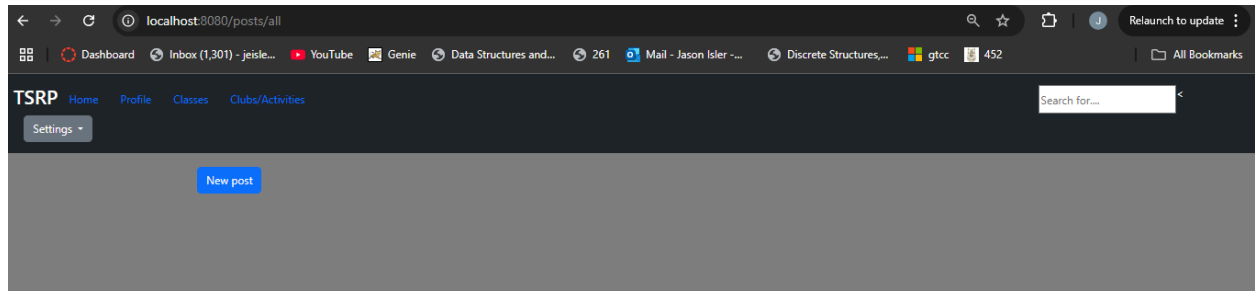
- The student chooses to update their info; They change their email and add a bio, major, and graduation year. They can also view their id number. They then click save and see the changes on the profile page

The screenshot shows a web browser window with the URL `localhost:8080/students/update/602`. The browser's address bar and tabs are visible at the top. The page has a dark header with the text "TSRP" and navigation links: "Home", "Profile", "Classes", and "Clubs/Activities". A "Settings" button is on the left, and a search bar is on the right. The main content area is a light gray form for updating a profile. On the left, there are two text input fields labeled "Jason" and "Isler", and a circular profile picture placeholder. To the right, under the heading "Info:", there is a "Save" button and a list of input fields: a text field with "602", an email field with "student14@gmail.com", a text field with "2025", a text field with "12345", a text field with "Math", and a text area with "This is my bio".

The screenshot shows the "Profile" page in the same web browser. The header is identical to the previous screenshot. The main content area displays the updated profile for "Jason Isler". On the left, there is a circular profile picture placeholder and two buttons: "Edit" (blue) and "Delete" (red). To the right, under the heading "Info:", there is a list of profile details: "student14@gmail.com", "Graduation Year: 2025", "Major: Math", and "Bio: This is my bio".

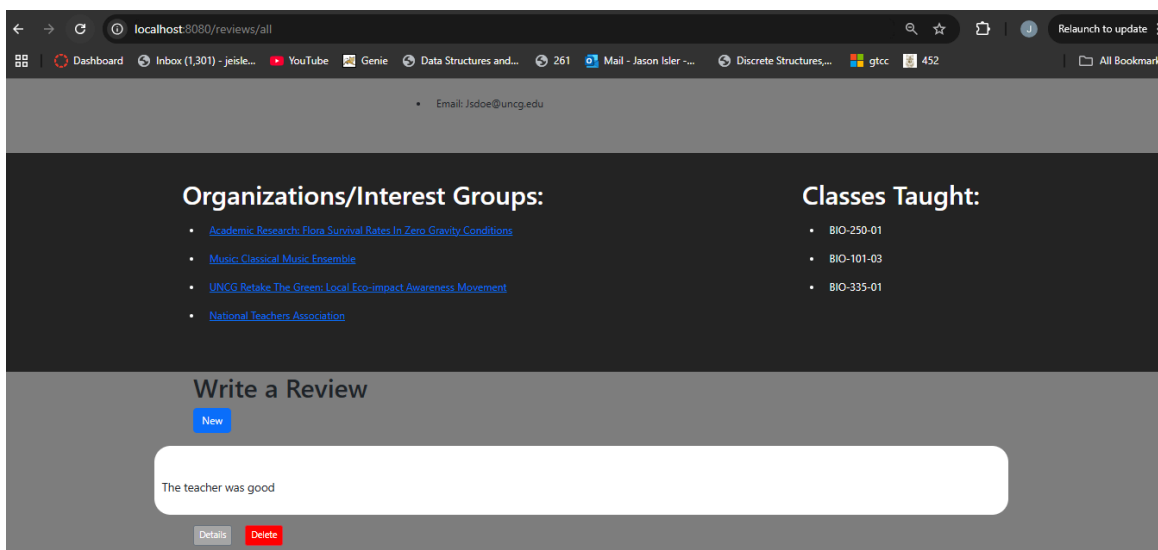
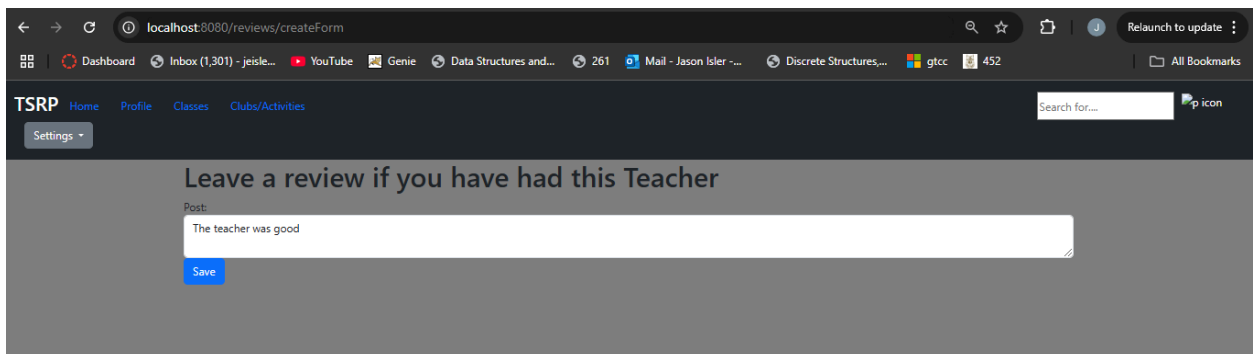
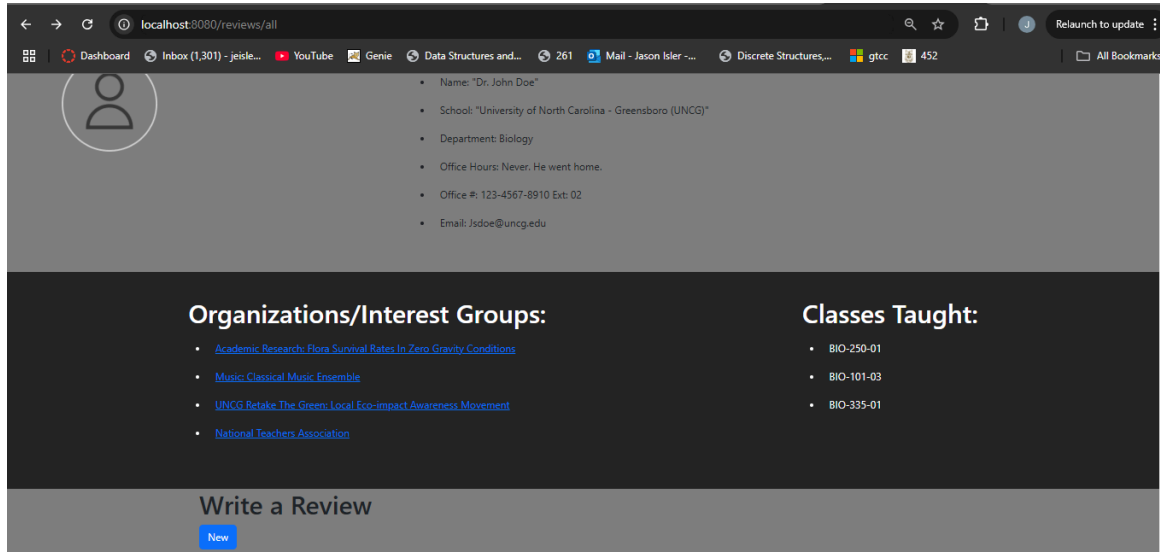
### Creating a new Post from a student: (Jason Isler)

- A student with an account can click on new post on the feed page to create a post for people to see
- The student creates their post and then it displays on the feed page
- The student has the option to delete the post



Create a new review for a teacher: (Jason Isler)

- For a teacher page, a student can create and leave a review
- The students clicks on new, then types a review and posts it
- The student can delete the review





Modify user list: (Matthew Davis)

- The admin can add a new user by clicking the Create New User button
- The admin can ban a user by clicking the Ban button on the Users list
- The admin can un-ban a user by clicking the Un-Ban button on the Banned Users list

TSRP

[Home](#)[Profile](#)[User List](#)[Class List](#)[Clubs/Activities List](#)[Requests](#)

p-icon

Settings

Create New User

Users

ID	Name	User Type	Email	Actions
2	Jane Donny	Teacher	anotherone@email.com	<div>ViewDeleteBan</div>
5	fas ges	Admin	abcd@email.com	<div>ViewDeleteBan</div>

Banned Users

ID	Name	User Type	Email	Actions
1	John Doe	Student	something@email.com	<div>ViewDeleteUn-Ban</div>

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TSRP

[Home](#)[Profile](#)[User List](#)[Class List](#)[Clubs/Activities List](#)[Requests](#)

Search for...

p-icon

Settings

Create a new User

First Name:

First Name

Last Name:

Last Name

User Type: ☒ Student ☐ Teacher ☐ Admin

Email:

Email

Password:

Password

Description:

Description

Save

Modify the request list: (Matthew Davis)

- The admin can accept requests by clicking the Accept button in the free requests list
- The admin can free, complete or delete requests by clicking the respective buttons
- The admin can create new requests by clicking the Create New Request button

TSRP

[Home](#)[Profile](#)[User List](#)[Class List](#)[Clubs/Activities List](#)[Requests](#)

p-icon

Settings

Create New Request

Accepted Requests

ID	Sender	Description	Actions
202	John Doe	Help me please	<div>CompleteFreeDelete</div>

Free Requests

ID	Sender	Description	Actions
203	Jane Donny	EVERYTHING BROKE	<div>AcceptDelete</div>
204	Big Man	Another problem	<div>AcceptDelete</div>

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TSRP

[Home](#)[Profile](#)[User List](#)[Class List](#)[Clubs/Activities List](#)[Requests](#)

p-icon

Settings

Create a new User

Sender:

Name

Description:

Description

Save

Teacher signup: (William Sanders)

-Teacher user enters data into a form to initialize an account.

TSRP

[Home](#)

[Profile](#)

[Clubs/Activities](#)

Search for....

Create Your Account

Enter First Name :

John

Enter Last Name :

Doe

Enter Email ID :

JSDoe@uncg.edu

Enter Password :

••••••••

Enter Description :

Researcher and professor.

Clear Form

Create Account

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Teacher profile page (William Sanders):

- Teacher profile page is rendered and the info is editable.

Adding classes to teacher account: (William Sanders)

- A teacher can create a class with relevant info and associate it with their account
- A class can be edited or deleted

Adding clubs to teacher account: (William Sanders)

- A teacher can create a club with relevant info and associate it with their account
- A club can be edited or deleted