<Company Name>

Branches
Assignment 3: Use Case Specification

Version < 1.0 >

Revision History

Date	Version	Description	Author
20/03/2019	1.0	Assignment 3 – Use Cases	Kelly Woodworth

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Use Case Specification: Add User - Administrator

1.   Add Administrator

1.1   Brief Description

The administrator role will control the permissions of the student and alumni users. Administrative users will also have access to run reports within the system and will receive error and crisis notifications from users as they are submitted. An administrator role will be created, modified, or deleted as necessary.

2.   Flow of Events

2.1   Basic Flow

- Add Administrator User Role
    - A user requests a new account with the system
    - The system prompts the user for required information:
        - First name
        - Last name
        - Email address
        - Desired password
        - Gender
        - Professional title
        - Interests
        - User photo
    - The user submits the registration form
    - The system requests verification from system Admin role
    - Admin verifies the user as an Administrator
    - The system notifies the user that the account has been approved in an email to their provided email account, and provides a verification link
    - The user navigates back to the system via the verification link
    - The user provides their login credentials
    - The system validates the credentials and signs in the user
- Modify Administrator User Role
    - A user account will be promoted to administrator role as needed by the Key Administrator User (Project Sponsor)
    - An administrator account can be demoted to a regular user role (Alumni)
- Delete Administrator User Role
    - An administrator account can be deleted and removed from the system

2.2   Alternative Flows

2.2.1   User omits required account information

- The alternative flow begins at any time
- The user omits required information when registering account

- The system identifies to the user which field is required to continue the registration process
- The user provides the information
- The basic flow resumes

2.2.2 Cancel

- The alternative flow begins at any time
- The user elects to cancel registration

3. Special Requirements

An Administrator User's account will be updated to have special features and access only available to administrative roles within the system. The system will be initially established with one Key Administrator Role, designed for the project sponsor, that will have permissions to promote, modify, or delete other users in the system.

3.1 Key Administrator User Role must be established

4. Pre-conditions

4.1 A user account is established

4.2 User account is identified and updated to have Administrative permissions

5. Post-conditions

5.1 The user account is established as an Administrative User account

6. Extension Points

6.1 None

Use Case Specification: Add User - Student, Underclassman

1. Add Student – Underclassman

1.2 Brief Description

A user that qualifies for an underclassman account (Freshman within the UofL system) will create an account. If and when necessary, the system administrators have authority to modify or delete the account. Once a user earns over 30 credit hours from the university, the user may request to update their account to Student – Upperclassman.

2. Flow of Events

2.1 Basic Flow

- Add Student – Underclassman
    - A user requests a new account with the system
    - The system prompts the user for required information:
        - First name
        - Last name
        - Email address
        - Desired password
        - Gender
        - Credit hours
        - CIS Concentration (if known)
        - Interests
        - User photo
    - The user submits the registration form
    - The system requests verification from system Admin role
    - Admin verifies the user as a Student – Underclassman
    - The system notifies the user that the account has been approved in an email to their provided email account, and provides a verification link
    - The user navigates back to the system via the verification link
    - The user provides their login credentials
    - The system validates the credentials and signs in the user
- Modify Student – Underclassman
    - A student user requests their account be updated to upperclassman after 30 credit hours have been earned
    - A system administrator reviews the request
    - Once verified, the system administrator updates the student account to Upperclassman
- Delete Student – Underclassman
    - A user requests their account be terminated
    - A system administrator reviews the request with the option to reach out to the student user for more information as needed
    - A system administrator deactivates the user account

o The student user no longer has access to the site

2.2 Alternative Flows

2.2.1 User omits required account information
- The alternative flow begins at any time
- The user omits required information when registering account
- The system identifies to the user which field is required to continue the registration process
- The user provides the information
- The basic flow resumes

2.2.2 Cancel
- The alternative flow begins at any time
- The user elects to cancel registration

3. Special Requirements
A student user within the system is considered an underclassman if they have 30 or fewer credit hours in the University of Louisville system. The system administration will verify this information when authorizing the user account.

3.1 Verification of Student Status

4. Pre-conditions

4.1 A user initiates registration as a Student – Underclassman

5. Post-conditions

5.1 A user is granted access to the system with a Student – Underclassman account

6. Extension Points

6.1 None

Use Case Specification: Add User - Student, Upperclassman

1. Add Student – Upperclassman

1.2 Brief Description

A user that qualifies for an upperclassman account (More than 30 credit hours within the UofL system) will create an account. If and when necessary, the system administrators have authority to modify or delete the account. An Upperclassman user may elect to be available in the pool of mentors within the system.

2. Flow of Events

2.1 Basic Flow

- Add Student – Upperclassman
    - A user requests a new account with the system
    - The system prompts the user for required information:
        - First name
        - Last name
        - Email address
        - Desired password
        - Gender
        - Credit hours
        - CIS Concentration
        - Interests
        - User photo
    - The user submits the registration form
    - The system requests verification from system Admin role
    - Admin verifies the user as a Student – Upperclassman
    - The system notifies the user that the account has been approved in an email to their provided email account, and provides a verification link
    - The user navigates back to the system via the verification link
    - The user provides their login credentials
    - The system validates the credentials and signs in the user
- Modify Student – Upperclassman
    - A user requests the account be updated to Alumni to serve as a mentor once the student has successfully graduated
    - A system administrator reviews the request
    - Once verified, the system administrator updates the student account to Alumni
- Delete Student – Upperclassman
    - A user requests their account be terminated
    - A system administrator reviews the request with the option to reach out to the student user for more information as needed
    - A system administrator deactivates the user account

o   The student user no longer has access to the site

2.2   Alternative Flows

2.2.1   User omits required account information
- The alternative flow begins at any time
- The user omits required information when registering account
- The system identifies to the user which field is required to continue the registration process
- The user provides the information
- The basic flow resumes

2.2.2   Cancel
- The alternative flow begins at any time
- The user elects to cancel registration

3.   Special Requirements
A student user within the system is considered an upperclassman if they have more than 30 credit hours in the University of Louisville system. The system administration will verify this information when authorizing the user account.

3.1   Verification of Student Status

4.   Pre-conditions

4.1   A user initiates registration as a Student – Upperclassman

5.   Post-conditions

5.1   A user is granted access to the system with a Student – Upperclassman account

6.   Extension Points

6.1   None

Use Case Specification: Add User - Alumni

1. Add Alumni

1.2   Brief Description

A user that qualifies for an alumni account will be either a graduate of UofL that will continue in the Branches system serving as a mentor, or a member of the professional tech community in Louisville that wishes to serve as a mentor within the system. Active alumni accounts will automatically be included in the pool of potential mentors. If and when necessary, the system administrators have authority to modify or delete the account.

2.   Flow of Events

2.1   Basic Flow

- Add Alumni
    - A user requests a new account with the system
    - The system prompts the user for required information:
        - First name
        - Last name
        - Email address
        - Desired password
        - Gender
        - Professional title
        - Employer
        - Interests
        - User photo
    - The user submits the registration form
    - The system requests verification from system Admin role
    - Admin verifies the user as an Alumni
    - The system notifies the user that the account has been approved in an email to their provided email account, and provides a verification link
    - The user navigates back to the system via the verification link
    - The user provides their login credentials
    - The system validates the credentials and signs in the user
- Modify Alumni
    - System administration modifies access to Alumni account
- Delete Alumni
    - A user requests their account be terminated
    - A system administrator reviews the request with the option to reach out to the student user for more information as needed
    - A system administrator deactivates the user account
    - The user no longer has access to the site

2.2   Alternative Flows

2.2.1   User omits required account information

- The alternative flow begins at any time
- The user omits required information when registering account
- The system identifies to the user which field is required to continue the registration process
- The user provides the information
- The basic flow resumes

2.2.2   Cancel

- The alternative flow begins at any time
- The user elects to cancel registration

3.   Special Requirements

An alumni user role may be a former student of UofL or a member of the professional tech community. The user must be reviewed by system admin, with the option for admin to reach out to the potential user for clarified information before approving the account to use the system.

3.1   Verification of Alumni Status

4.   Pre-conditions

4.1   A user wants to register as an Alumni

5.   Post-conditions

5.1   A user is granted access to the system with an Alumni account

6.   Extension Points

6.1   None

Use Case Specification: User Login

1.   Login

1.2   Brief Description
A user can log into their profile by accessing the login page. By providing their email address and password, a user will be granted access to the system.

2.   Flow of Events

2.1   Basic Flow
- Student login - Underclassman
  - A user will access the Login page of the system
  - A user will provide email address
  - A user will provide their password
  - A user will be granted access to the system
- Student login - Upperclassman
  - A user will access the Login page of the system
  - A user will provide email address
  - A user will provide their password
  - A user will be granted access to the system
- Alumni login
  - A user will access the Login page of the system
  - A user will provide email address
  - A user will provide their password
  - A user will be granted access to the system
- Administrator
  - A user will access the Login page of the system
  - A user will provide email address
  - A user will provide their password
  - A user will be granted access to the system

2.2   Alternative Flows

2.2.1   Invalid Email Address
- The alternative flow begins after step 2 of the main flow
- The system informs the user that an invalid email address has been entered
- The system prompts the user to attempt another login

2.2.2   Invalid Password
- The alternative flow begins after step 3 of the main flow
- The system informs the user that an invalid password has been entered
- The system prompts the user to attempt another login

2.2.3 Forgotten Password

- The alternative flow begins after step 3 of the main flow
- The user has forgotten their password
- The user clicks the link provided
- The user is redirected to a new page in order to recover their login credentials

2.2.4 Cancel

- The alternative flow begins at any point in the main flow
- The user leaves the login page without providing information or attempting successful login

3.   Special Requirements

3.1   User must have a verified account within the system in order to successfully log in

4.   Pre-conditions

4.1   A user accesses the Login page of the system

4.2   A user provides valid login credentials

5.   Post-conditions

5.1   A user is granted access to the system

6.   Extension Points

6.1   None

Use Case Specification: Add User Interests

1. Interests

1.1 Brief Description

Interests listed on a user profile serve as part of the data used to determine appropriate mentor-mentee matches. The information about which interests are relevant to a user is provided by the user and presented on their profile to be viewed by other users within the system.

2. Flow of Events

2.1 Basic Flow

- Add interest
    - A user will log into the system
    - A user will access their personal profile information
    - A user will search for an item relevant to their interests to their profile
    - A user will add the relevant interest to their profile
- Modify/delete interest
    - A user will have the ability to remove an interest from their profile as necessary
    - A user will select the interest to be removed from their profile
    - The interest will be removed from the user profile

2.2 Alternative Flows

2.2.1 None

3. Special Requirements

Interest from other accounts may be stored in the DBMS and used to suggest interest other users may add to their profiles.

3.1 Interest Data Storage

4. Pre-conditions

4.1 A user is logged into their account

4.2 A user selects an interest to add to their profile

5. Post-conditions

5.1 A user profile is updated with the additional interest

6. Extension Points

6.1 None

Trace Matrix

The following page contains a trace matrix that outlines the different use cases described in this document, and associates each use case with system requirements. Each row represents a use case with their corresponding requirements listed in each column. The requirements highlighted in blue are functional requirements, while the non-functional requirements are highlighted in green.

blue = functional | green = nonfunctional	Enrollment	Authentication	Matching	Donations	Communication Channel	Diagnostics	Calendar	Crisis Button	Feedback	Email Blast	Cloud Storage	Web Server	DBMS	Security	PMS	CMS
Add Administrator	x	x									x	x	x	x		x
Modify Administrator	x	x									x	x	x	x		x
Delete Administrator	x	x									x	x	x	x		x
Add Student - Upperclassman	x	x									x	x	x	x		x
Modify Student - Upperclassman	x	x									x	x	x	x		x
Delete Student - Upperclassman	x	x									x	x	x	x		x
Add Student - Underclassman	x	x									x	x	x	x		x
Modify Student - Underclassman	x	x									x	x	x	x		x
Delete Student - Underclassman	x	x									x	x	x	x		x
Add Alumni	x	x									x	x	x	x		x
Modify Alumni	x	x									x	x	x	x		x
Delete Alumni	x	x									x	x	x	x		x
Login - Student												x	x	x		x
Login - Alumni												x	x	x		x
Login - Admin											x	x	x	x		x
Add Interests	x		x								x	x	x			x
Modify Interests	x		x								x	x	x			x

Use Case Diagrams

This section contains use case diagrams elaborating on how actors and the system will interact during the use case.

- User Registration
  - A new user will be an admin, student, or alumni user. Each new user account requires verification from a system administration account, which then allows the user to log in and use the system.
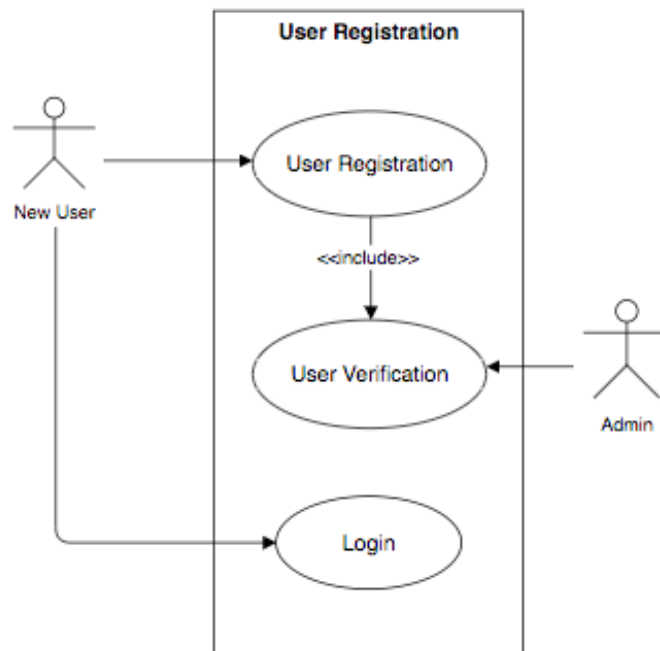
- User Login
  - An established user can log into their account and begin using the Branches system.
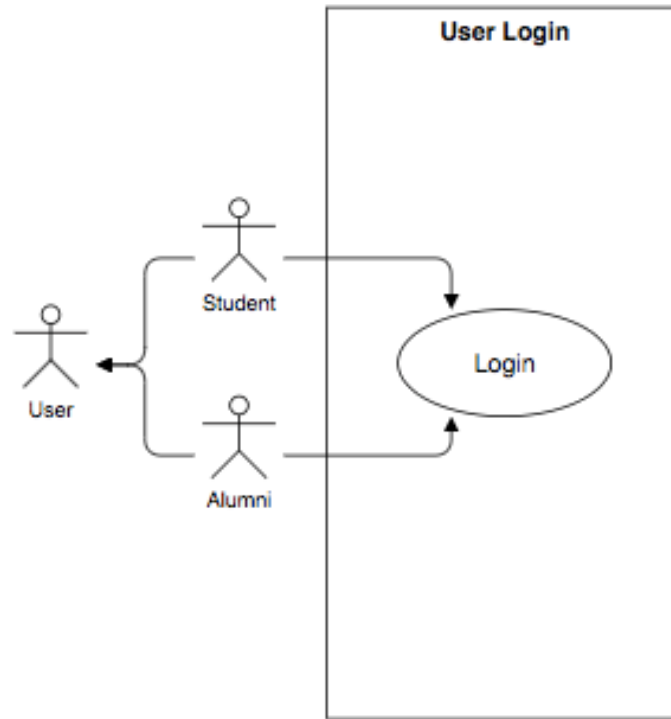
- User Profile Interests
  - An established user – either a student user or alumni – can log into their account, access their profile information, and add or delete interests listed on their profile.
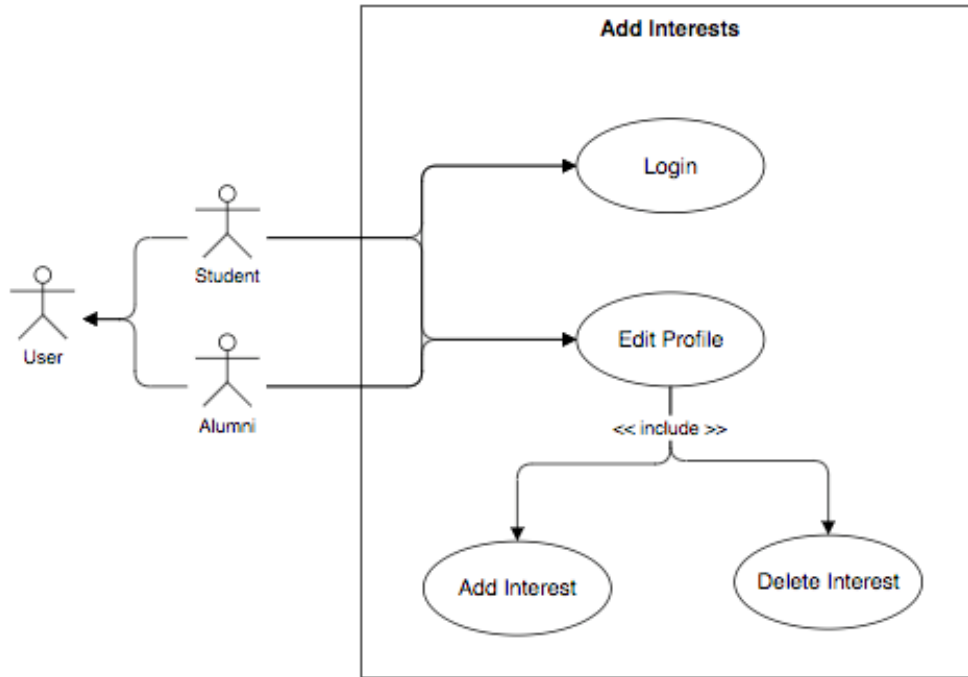
Use Case Prototypes

This section contains several high-level prototypes that are associated with the use cases discussed in this paper. The selected prototypes represent user registration, administration approval, user login, and user profile view. A brief explanation of the proposed mechanisms within each model follows the prototype.

User Registration

Each new user will be required to provide a first name, last name, email, password, and gender. The user will be required to provide a profile photo in a supported format as part of registering their profile.

The New User Registration form will be responsive to the user's choices. If the user is a student, the options under "Alumni" will be unavailable. A student will be required to provide the number of credit hours they have earned in order to calculate their class standing, which will result in either an underclassman or upperclassman account. The student will be required to specify their CIS concentration using the drop-down menu. Additional majors or minors are able to be specified after user registration within Edit User Profile prototype addressed on a later page.

If the user is an Alumni, the options under "CIS Student" options will be unavailable, and the text boxes for entering the user's professional title and employer will become the focus.

In "Areas of Interest" the user will be able to add or delete any specific languages, systems, or hobbies they want to be visible on their profile and used in finding a mentor match. Before submitting their registration request, the user will be required to review and agree to both the privacy policy and code of conduct.

User Authentication

Information submitted through the new user registration form will be reviewed by the Admin user and either accepted or rejected, as we want the pool of users to be restricted to legitimate UofL students and professional mentors. Authorization of the user will send a verification link to the user's email address on file, and once clicked, will allow the user to access and begin using the system immediately. Rejection will allow the site administration to either reject outright, or contact the user for more information as needed.

User Login

Once a user is approved to use the system, the user may access the User Login page and provide their email address and password on file to access their account. In the event the user has forgotten their login credentials, they may select the "Forgot Password" link and have a verification email sent to their email address that will allow them to reset their password.

Edit User Profile

Branches for UofL

http://brancheslou.com

Branches
For UofL

Home	About	Resources	Contact	User Login	Donation

Profile
Calendar
News Feed
Messaging
Mentor Center
Help & Feedback

Sally User

University of Louisville - Junior
Information Security

⚙

Additional Profile Information ✏

Hometown: Louisville, KY
Birth date: February 3, 1990
Expected graduation date: December 2020

Courses *Edit*

- 🌱 CIS 150 - Fundamentals of Info Sys
- 🌱 CIS 199 - Software Development I
- 🌱 CIS 200 - Software Development II
- 🌱 CIS 250 - Intro Data/Info Mgmt
- 🌱 CIS 300 - Computer Info Systems

Organizations & Extracurriculars *Edit*

- 🔖 Volunteer, Kentucky Humane Society
  2017 - Present (2 years) | Louisville, KY

- 🔖 GSA, UofL
  Jan 2019 - Present (2 months) | Louisville, KY

Events & Projects *Edit*

- 📷 JavaScript Weekend Workshop
  November 2018

- 📷 COB Hackathon
  February 2019

- 📷 Lesbians Who Tech Conference
  March 2019 | Palo Alto, CA

Social Links

f twitter in git 🔗

Interests

🔍 Search...

X html   X css   X c#
X javascript   X hockey
X reading

Documents

✏ SallyUserResume2019

After the user is logged into the system, they may select the Profile section in the navigation menu to view information on their profile. As the information used in registration is only the necessary information to verify that a user may use the system, accessing the Profile section allows the user to add any additional information they would like available to other users.

The cog icon at the top of the page allows the user to manipulate the data that is fundamental to their account. They may update their name, class standing, or concentration at UofL as necessary. This area would also allow users to request updates to their account such as moving from Student to Alumni once graduated, or request that they be removed from the Branches system.

A user may elect to add other information to their profile under the Additional Information section. They may elect to make available their hometown, birth date, ethnicity, or expected graduation date, among other information that they may want to use to match with potential mentors.
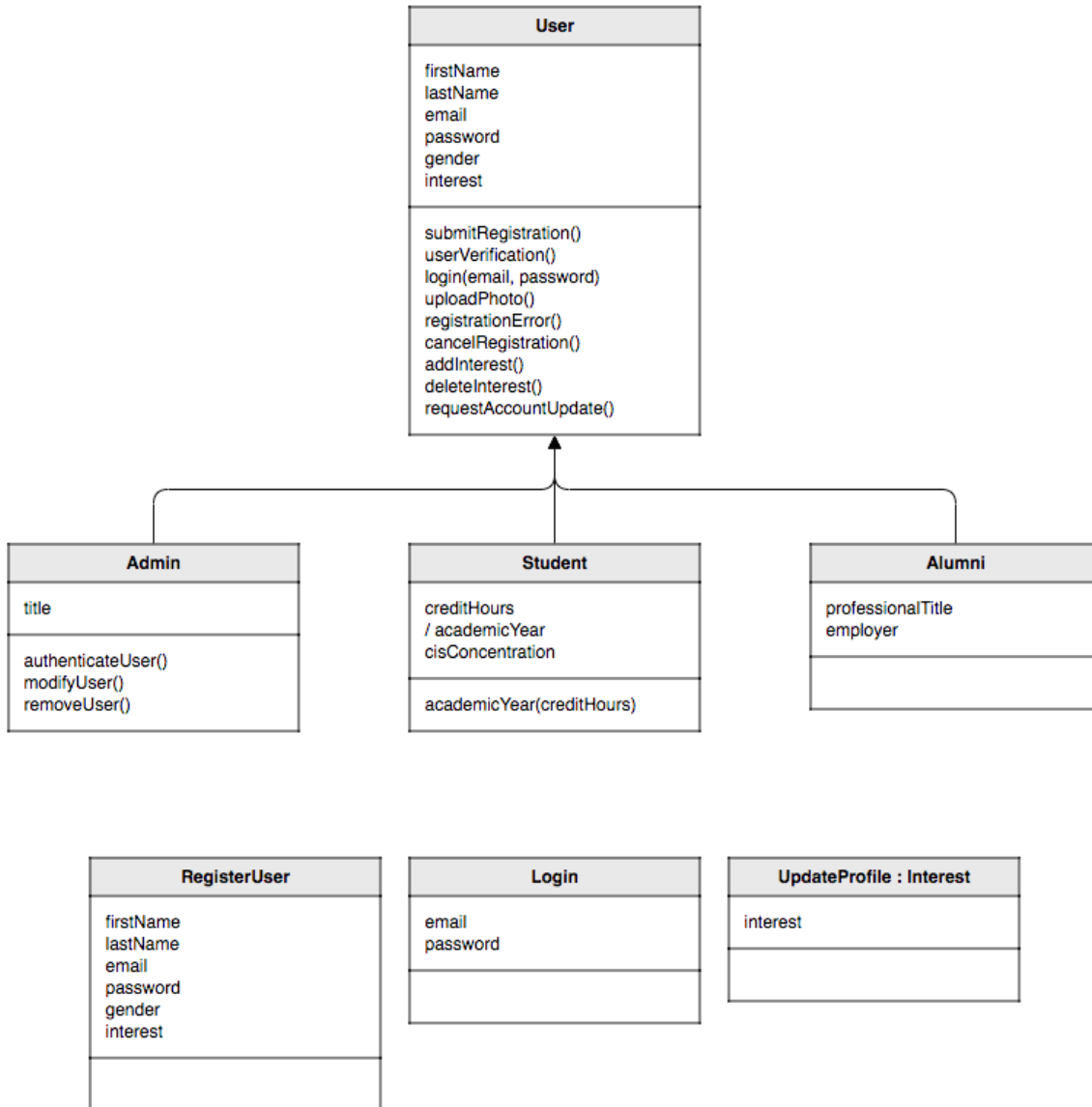
A Student user can select which courses they've completed within the CIS program. The courses in this section dictate which pages of the News Feed they have access to, which is elaborated on in a later prototype.

The sections of Organizations & Extracurriculars allow a student to list if they are involved in any campus activities, or if they volunteer with any organizations, which may facilitate networking among students with similar interests. Events & Projects allow a user to list any events or workshops they've attended, with the opportunity to attach additional information about the event for other users to view. For example, If a user coordinates an event on campus that other users may add to their own calendars and events, the event may be viewed on the creator's profile.

To the right of the page, the user may link their profile to other social media pages they use. The user can also add or delete interests, which contribute to the mentor-mentee matching criteria. If the user would like to upload documents, such as a current resume, they may do so.
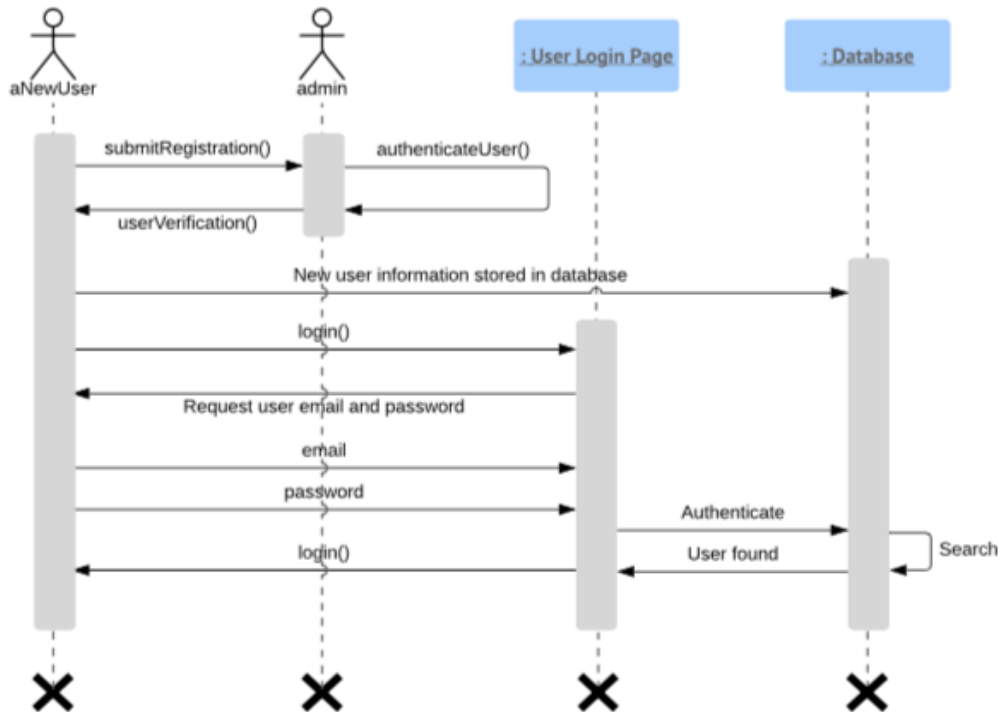
Class Diagram

This section contains the class diagram, which shows the classes and relationships among the classes within the use cases described in this document. Each class contains attributes and methods associated with the class.

User

firstName
lastName
email
password
gender
interest

submitRegistration()
userVerification()
login(email, password)
uploadPhoto()
registrationError()
cancelRegistration()
addInterest()
deleteInterest()
requestAccountUpdate()

Admin

title

authenticateUser()
modifyUser()
removeUser()

Student

creditHours
/ academicYear
cisConcentration

academicYear(creditHours)

Alumni

professionalTitle
employer

RegisterUser

firstName
lastName
email
password
gender
interest

Login

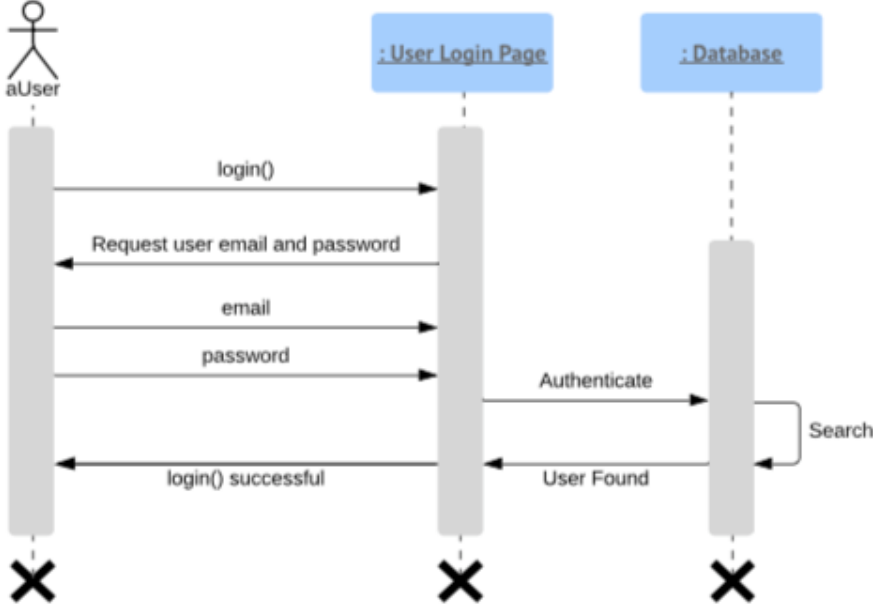email
password

UpdateProfile : Interest

interest

Sequence Diagrams

This section contains a sequence diagram, which illustrates the objects that participate in the use cases described in this document, and the messages that pass between them over time.

User Registration

User Login

Add Interest