

# SW Engineering

## CSC648/848 Spring 2020

### Gator Trade

**By:**

Team 03

Samuel Bahlibi (Team Lead) [samuel.bahlibi@gmail.com](mailto:samuel.bahlibi@gmail.com)

Qian Hu (Front-end Lead)

Tingfeng Wan (Back-end Lead)

John Joshua Gutierrez (Github Master)

Eric Ngo (Full-Stack Developer)

Marvin Nguyen (Front-end Team)

Local Team

Milestone 2


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## **1. Functional Requirements**

### **Priority 1:**

#### **Unregistered User:**

- 1.1 - An unregistered user shall be able to view media being posted or sold.
- 1.2 - An unregistered user shall be able to browse for media.
- 1.3 - An unregistered user shall be able to register.

#### **Registered User:**

- 2.1 - A registered user shall inherit everything an unregistered user can do.
- 2.3 - A registered user shall be able to download free digital media.
- 2.4 - A registered user shall be able to ping another user for their contact info.
- 2.7 - A registered user shall be able to accept a request for their contact info.
- 2.8 - A registered user shall be able to upload digital media to the website.
- 2.12 - A registered user shall be able to login.

#### **Admin:**

- 3.1 - An administrator shall inherit everything a Registered User can do.
- 3.2 - An administrator shall be required to moderate(approve) all media posted on the site before they go live.
- 3.3 - An administrator shall be able to delete any post on the site.
- 3.4 - An administrator shall be able to ban users from the site.

### **Priority 2:**

#### **Unregistered User:**

- 1.4 - An unregistered user shall be able to filter media by SFSU specific classes.
- 1.5 - An unregistered user shall be able to search for media.

#### **Registered User:**

- 2.5 - A registered user shall be able to ping for a meetup location.
- 2.6 - A registered user shall be able to accept a meetup location.
- 2.9 - A registered user shall be able to delete their digital media from the website.

#### **Admin:**

- 3.5 - An administrator shall have a login protected admin-panel to facilitate

**Priority 3:**

Unregistered User:

N/A

Registered User:

2.2 - A registered user shall be able to purchase digital media from the website.

2.10 - A registered user shall have a profile page showing their current listings.

2.11 - A registered user shall be able to view purchased items.

2.13 - A registered user shall have a dashboard to view the list of media they posted and messages.

Admin:

N/A

## **2. List of Main Data Items and Entries**

### **Unregistered User:**

- User who does not have an account on the website.
- They can register for an account.
- They are able to browse the website, search, and view any of the media being posted or sold.

### **Registered User:**

- They have the same privileges of an unregistered user.
- User who has created an account on the website.
- They are able to purchase media and download free media
- They can create posts for free media or purchasable media.
- They can contact the seller.

### **Admin:**

- User with full admin privileges.
- Admins must approve all posted content before it goes live on the website.
- Privileges include the ability to ban users and remove posts if it violates any rules.

### **Post:**

- Post is an item media with the following information:
  - Owner ID such as username/email
  - Price if the item is not free
  - Download link if item is free
  - Category
  - Media Type (Video, photo, book, etc.)
  - Description (background information about the media)
- Pictures shall be low res.
- Download will be available if the media is free.

### **User Registration Record:**

- Contains the following information of a registered user:
  - Email address
  - Password (Encrypted)
  - First Name
  - Middle Name (Optional)
  - Last Name
  - Student or Faculty

**Message:**

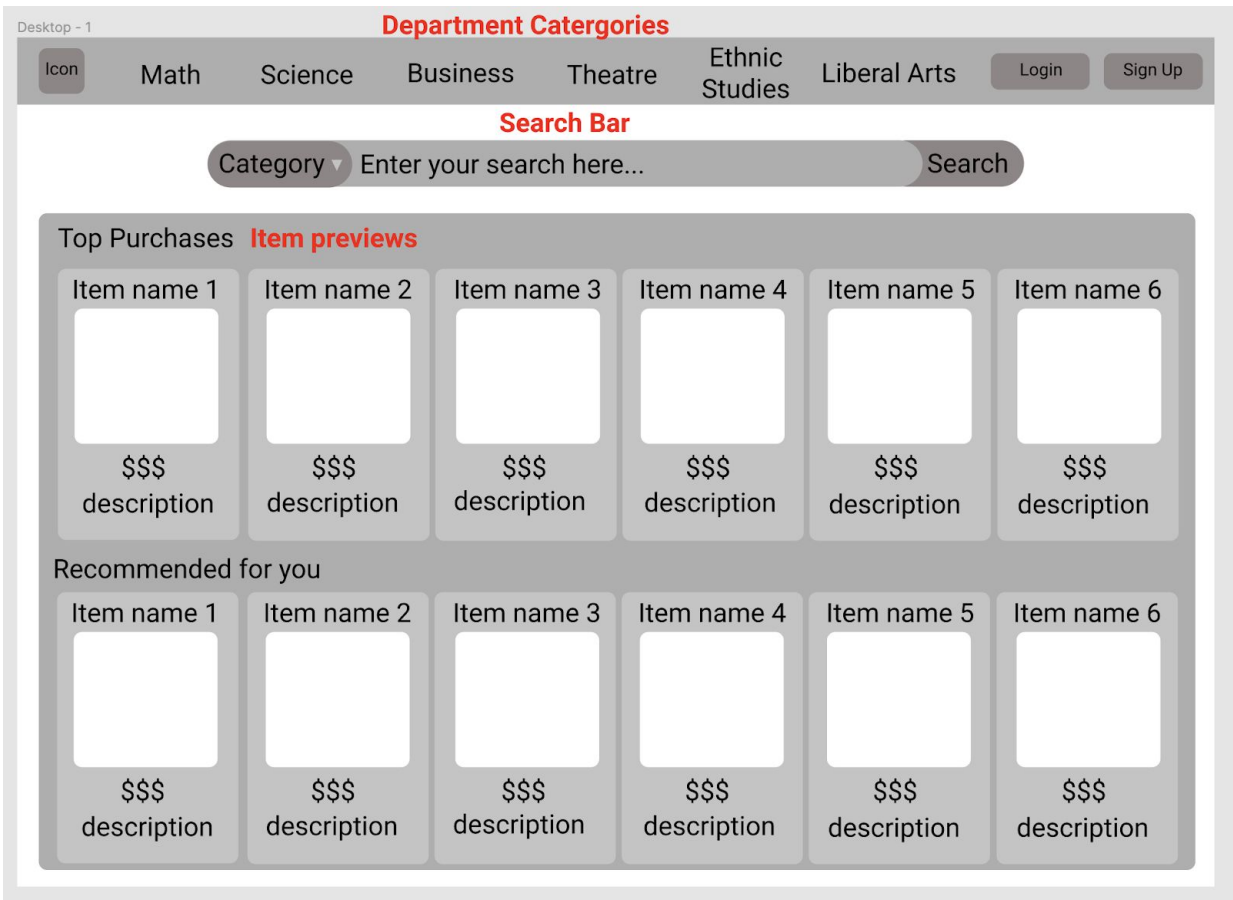
- Can be used by registered users.
- Contains text that a registered user can create to send to a seller.
- Contains the time the message is sent and the sender's information such as their name.
- Sellers can send messages back to a registered user that contacted them.

### 3. User Interface Mockups and Storyboards

**Pages we need to make on FIGMA:**

- **Home Page**

- A search bar
- Items, like a catalogue
- Somewhere in the corner is register or login
- Can browse



- **Search Results Page**
  - Main purpose is to browse

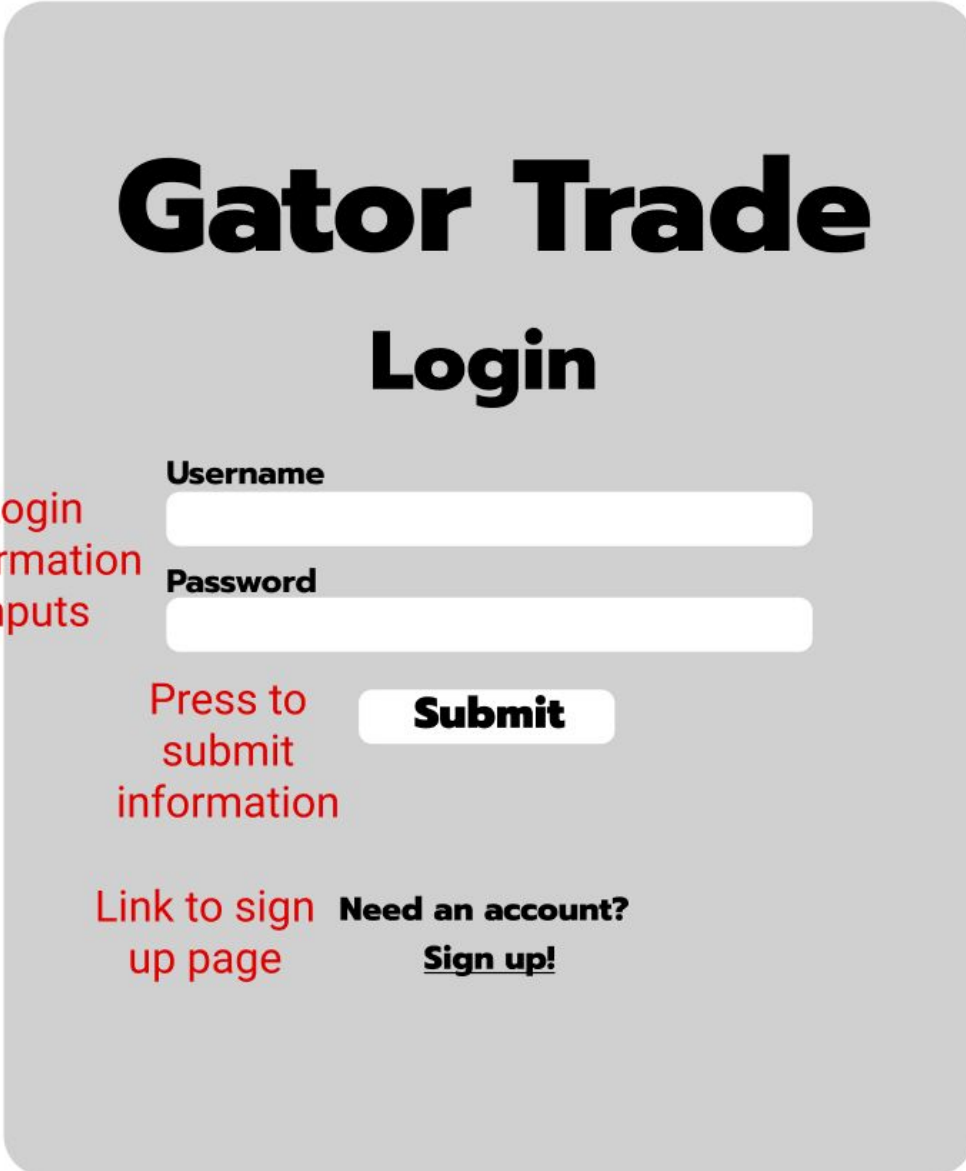
The screenshot shows a web interface for a search results page. At the top, there is a navigation bar with links: Icon, Math, Science, Business, Theatre, Ethnic Studies, Liberal Arts, Login, and Sign Up. Below the navigation bar is a search bar with the text "Search Bar" in red. The search bar contains a dropdown menu labeled "Category", a text input field with the placeholder "Enter your search here...", and a "Search" button. Below the search bar, there is a grid of search results. Each result is represented by a card with a placeholder image (labeled "\$\$\$"), a title (labeled "Date - Description - \$\$\$"), and a price (labeled "\$\$\$").

- **Register Page**

The screenshot shows a "Gator Trade Register" form. The form has a title "Gator Trade" and a subtitle "Register". It contains four input fields: "First Name:", "Last Name:", "Email:", and "Password:". Each input field is numbered with a red number: 1, 2, 3, and 4 respectively. To the left of the form, there is a red label "Input 1-4 information" pointing to the first four input fields. Below the "Password:" field, there is a red label "Click when finished" pointing to a "Create Account" button, which is numbered with a red number 5. Below the "Create Account" button, there is a link "Already registered? Sign in".



- Login Page



The image shows a login form for 'Gator Trade'. The form is centered on a light gray background. It features a title 'Gator Trade Login' in large, bold, black font. Below the title are two input fields: 'Username' and 'Password', both with white text and white input boxes. A 'Submit' button is located below the password field. At the bottom, there is a link to sign up, 'Need an account? Sign up!', where 'Sign up!' is underlined. Red text annotations are present on the left side of the form, pointing to the input fields and the submit button.

# Gator Trade

## Login

Username

Password

**Submit**

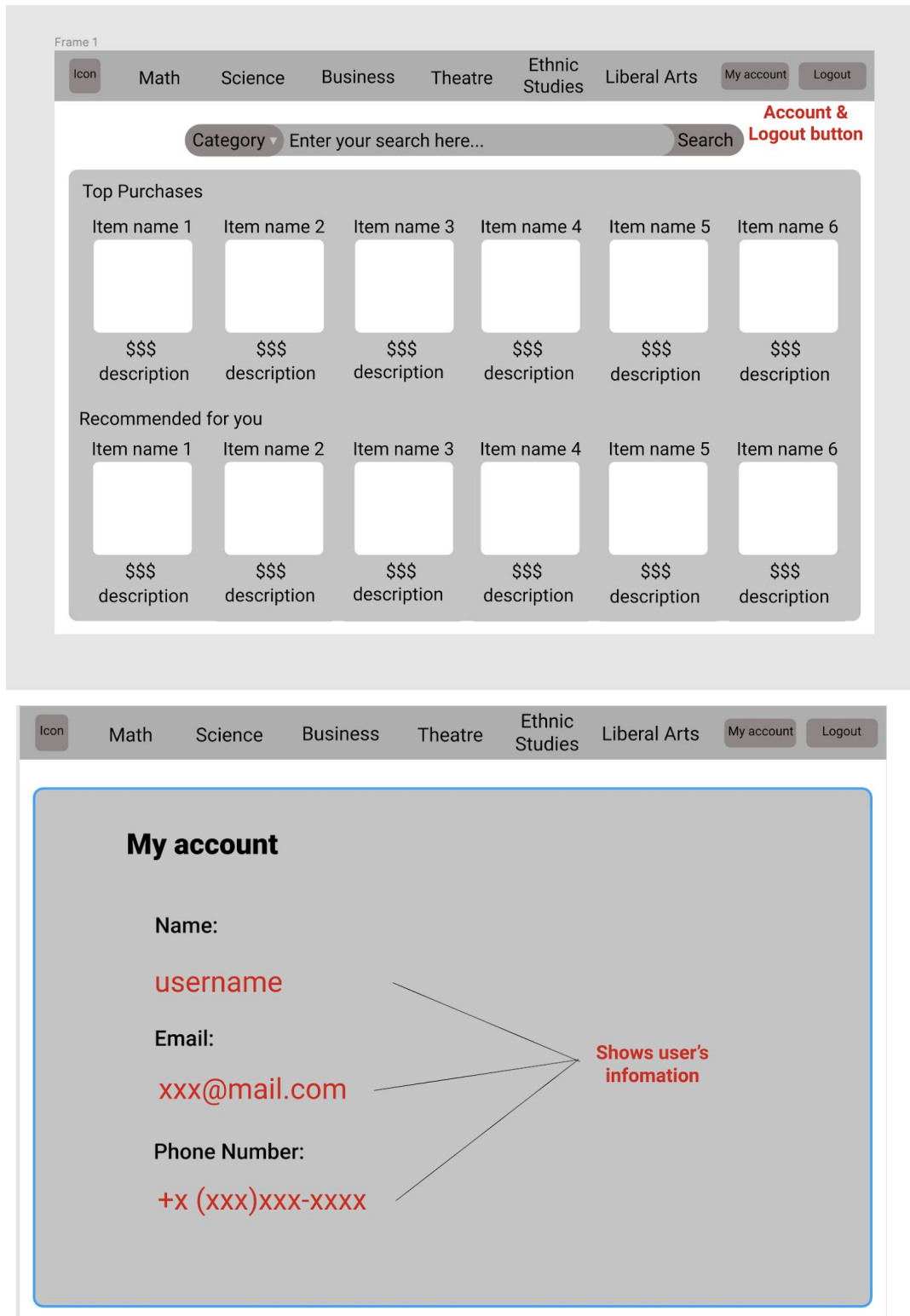
[Need an account? Sign up!](#)

Login Information Inputs

Press to submit information

Link to sign up page

- **Account Page:**  
Show's account info



- **Priority 3: Settings Page**

**Setting**

Username:

Email:

Phone Number:

Password:

Notification:  
☒ Email feedback

- **Create a Posting Page**

**Create a Post**

1

2   **Drop down menus**

3  **Typed or incremented**

4

5 

Image preview

  
*Note: The image inserted is used for the post. It is not for uploading a picture.*

**Input all information (1-5) required**

**Upload file if it is not a physical object (Picture, Video, etc.)**

6  **Click when finished**

[illegible]

## 4. High Level Architecture, Database Organization

### **DB Organization:**

**User table:** Contains information of registered users as well as administrators.

Column	Type	Default
ID	ObjectId	
First Name	String	
Last Name	String	
Email Address	String	
School Role	String (either "student" or "faculty")	Student
Admin	Boolean(T is Admin, F, not admin)	False
Password	String	
Purchased	ObjectId[]	[]
Phone Number	String	""

**Post Table:**

Column	Type	
ID	ObjectId	
Author ID	ObjectId (foreign key by User)	
Title	String	
Media Preview	BLOB	None
Media BLOB	BLOB	
Media Type	String	
Physical	Boolean	
Cost	Float	Dollar amount. 0.00
Approver ID	ObjectId (foreign key by User)	
Description	Text	""
Class	String	
Status (approved or not yet approved)	Boolean	False

## **Media Storage:**

- Keep maintenance simple by using DB BLOBs.

## **Search/filter architecture and implementation:**

- Use SQL to perform search queries.
- Do simple search for browse by classes and free text (title) search (typeahead).
- Search items can be ordered alphabetically or by date.

## **APIs:** APIs will follow REST patterns

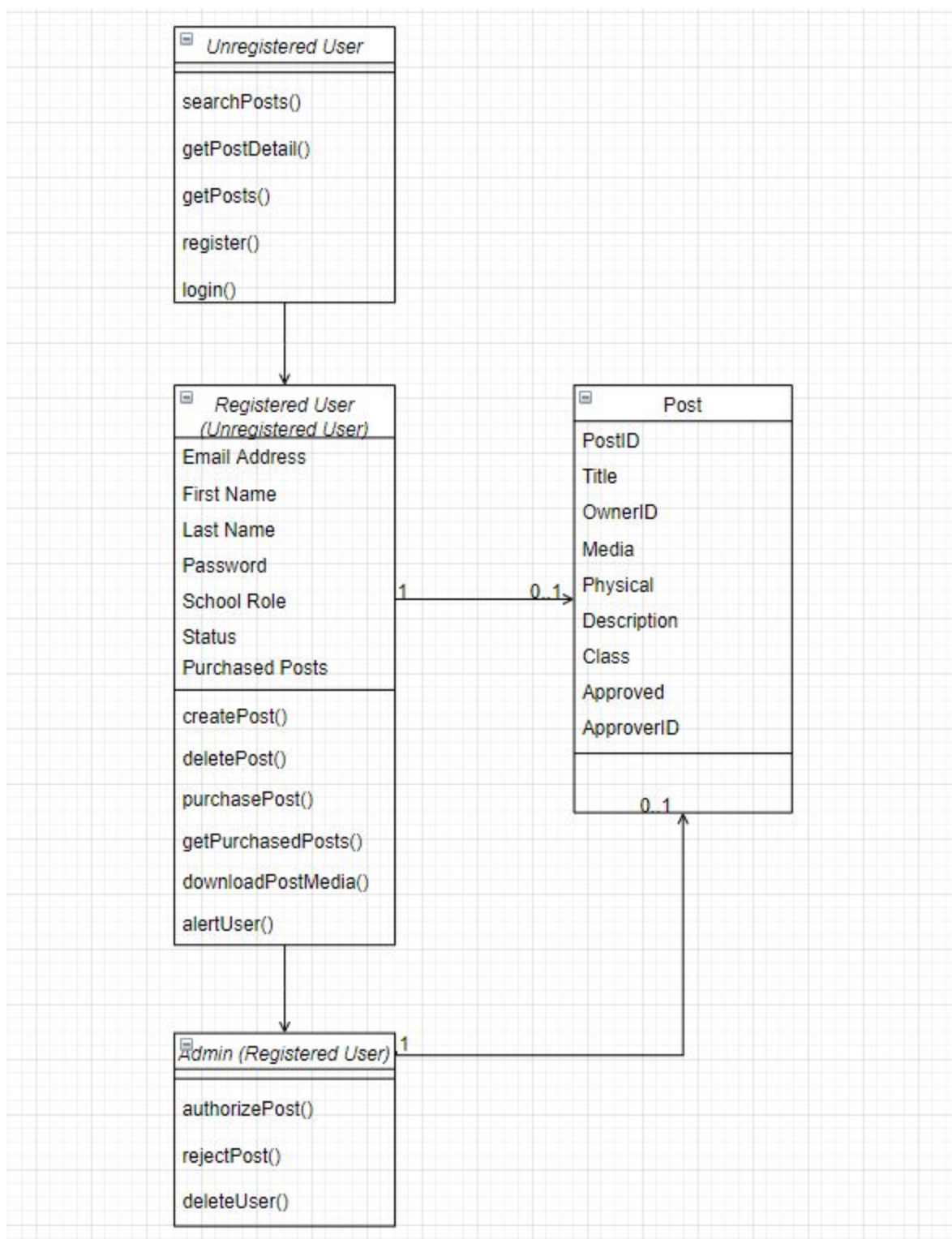
### Users API:

- GET /user : Get user information
- GET /user/posts : Get user's authored posts
- GET /user/posts/purchased : Returns an array of user's purchased posts.
- 
- POST /user : Create new user
  - Body: {Firstname, LastName, email, password, school role}
- PUT /user : Update user information
- DELETE /user: Delete user

### Post API:

- GET /post/all : Return all approved posts
- GET /post?id={id} : Return a post's information.
- GET /post/approval : returns a list of posts to be approved (used by admin).
- GET /post/requests : returns a list of buyers/post pairs for current user/seller to approve (purchase confirmation).
- POST /post : Create a new post
  - BODY: Multipart data format containing {title,media preview,media BLOB(if applicable),description,physical, class}
- POST /post/purchase : Update user's purchased items. If post is not free, requests confirmation from user.
  - BODY: {post\_id, purchase:true/false, approve:true/false.
- POST /post/requests : Allows seller to approve a buyer's purchase
  - BODY: {buyer\_id, post\_id}
- PUT /post/approval : Admin to approves or rejects a post.
  - BODY: {post\_id, approve: true/false}.
- DELETE /post?id={id} : Deletes a post

## 5. High Level UML Diagrams





## 6. Identifying key risks

**Skills risks:** We have no skill risks. As a preventative measure we have discussed the idea of everyone doing a quick boot camp to understand the languages we are using.

**Schedule risks:** We currently have no schedule risks, everyone is meeting their goals discussed in our meetings. We hold three meetings per week practicing Scrum. In the future I plan to move into an Agile team development.

**Technical risks:** As far as any technical issues, we seem to be well off. Eric is a great asset to our team. Having industry experience, as well as, knowing good programming practices he is a source we will look towards for any technical risks.

**Teamwork risks:** In the beginning we had issues with team members not showing up to meetings. As of now we have ironed out those wrinkles and are proceeding without any issues. We had our first team bonding experience after our meeting on March 20th.

**Legal/content risks:** As far as any legal risks there are none. We do not plan to take any copyrighted materials and use it in our project.

## 7. Product Management

For product management, I used Trello to show the current flow of work that needed to be done. It helps to have a team that's very active and involved with the whole project. We had a rocky start with Milestone 1, but things quickly shifted after we began Milestone 2. We're currently dealing with the COVID-19 pandemic, but this has actually turned into a positive for us. Our previous Milestone we were only meeting once a week. Our weekly scrum meetings have tripled and I feel that has increased our productivity. These three scrum meetings per week turn into miniature checkpoints before we hit the Milestone.

