SW Engineering CSC648/848 Fall 2018

EduGator
Team 03

Milestone 2
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Team Members

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Revision Number	Description	Date
1.0	Initial Version	10/18/2018
2.0	Revision of CEO comments	10/31/2018

1. Data Description v2

1. Unregistered Users:
Shall be able to browse items, course books, and tutoring services without having to log in or register, but cannot post the aforementioned, and cannot message registered users about them.

2. Registered Users:
Shall be able to browse, post, view the approval status of, remove, and send messages to other users about items, course books, and tutoring services. They must be registered and logged in to access this functionality for their account, and each account shall be linked to a user registration record that the registered user completed when initially creating their account.

3. Admin:
An employee of the company who shall be able to change the approval status of or remove a course book, item, or tutor service that a registered user has posted. They shall not register for an account, but must be logged in to gain access to the aforementioned functionality. They shall not message registered users about or post items, course books, or tutoring services.

4. Post
An item, course book, or tutor service that a registered user can add to our website. They shall be approved by the admin before being searchable/viewable.

5. Item:
An item available to be purchased, other than a course book. It shall have a timestamp, name, photo, price, description, category, condition, approval status, post ID, and an associated registered user (the one who posted it).

6. Course Book:
A book associated with a particular course at SFSU. It shall have a timestamp, name, photo, price, description, course, condition, approval status, post ID, and an associated user (the who posted it).

7. Tutor Service:
A post by a registered user to tutor for a specific course. It shall have a timestamp, name, price, description, course, approval status, post ID, and an associated registered user (the one who posted it).

8. Approval Status:
The approval status of a particular tutor service, item, or course book. It shall be viewable by admins and by the registered user who created the post, but only admins shall be able to change this status. The status shall be either be pending or approved.

9. Course:
The name of a course at SFSU. Each course book and tutoring service shall have a course associated with, and the courses shall be pre-populated in the database to avoid user error.

10. Category:
A classification for items which enables them to be sorted into different groups that the user shall select when posting an item for sale. The categories shall be pre-populated into the database to avoid user error.

11. Message:
A message sent between two registered users that shall have a maximum length of 256 characters, and a message ID. It shall be used for registered users to communicate about tutoring services, course books, and items.

12. User Registration Record
A record that an unregistered user shall complete to become a registered user on EduGator. The user registration record shall have the name of the user, the user's password, and the user's email.

13. Condition
The state of an item or course book. This selectable conditions that a user can choose from shall be pre-populated into the database, and shall be either "excellent", "good", "fair", or "poor".

14. Price
The cost for a tutoring service, course book, or item. It shall be set by a registered user and shall be a floating point value with two decimal places.

2. Functional Requirements v2

Priority 1:

2.3 Unregistered User:

Browsing:
Unregistered users shall see a list of items, tutoring services, and course books to browse that other registered users have posted and have been approved by an admin.

Search Bar:
Unregistered Users shall be able to search for approved posts using a free text search on the description and name of a post.

Post Filters:
Unregistered users shall be able to filter by type of post: item, course book, or tutoring service.
Unregistered users shall be able to filter items by: category, price, condition.
Unregistered users shall be able to filter course books by: course, price, condition.
Unregistered users shall be able to filter tutoring services by: course and price.

User Registration:
Unregistered users shall be able to register for an account on EduGator.

2.4 Registered User:

Posting Items/services:
Registered users shall be able to post their personal items to be sold. Registered users shall be able to set the price, condition, type, and name of the item.

Browsing:
Registered users shall see a list of items and tutoring services to browse that other users have posted with approved status.

Messaging for Buying Items/Services:
Registered users shall be able to contact other users to buy items/services they have posted.

Search Bar:
Registered users shall be able to search items by name, category, and condition.
Registered users shall be able to search books by name, course, based on the type of item being searched.
Registered users shall be able to search by course for tutors.

Post Filters:
Registered users shall be able to filter by type of post: item, course book, or tutoring service.
Registered users shall be able to filter items by: category, price, condition.
Registered users shall be able to filter course books by: course, price, condition.
Registered users shall be able to filter tutoring services by: course and price.

User Registration:
Registered users shall be able to login into their account on EduGator.

2.5 Admin:

Posting Items/services:
Posted items and tutoring services shall be subject to approval via admins of the site.

Browsing:
Admin users shall see a list of items/services to browse that have not yet been approved(pending status).

Search Bar:
Admins shall be able to view items, books, and tutoring service posts that have a pending status.

Post Filter:
Admins shall be able to filter posts by approval status.

User Registration:
Admins shall be to login to their account on EduGator.

Priority 2:

2.5 Admin:

Admin controls:
Admins shall be the only users to approve posts.
Admins shall be able to remove posts.

Deleting Post:
Admin shall be able to delete a post.

Priority 3:

2.9 Registered User:

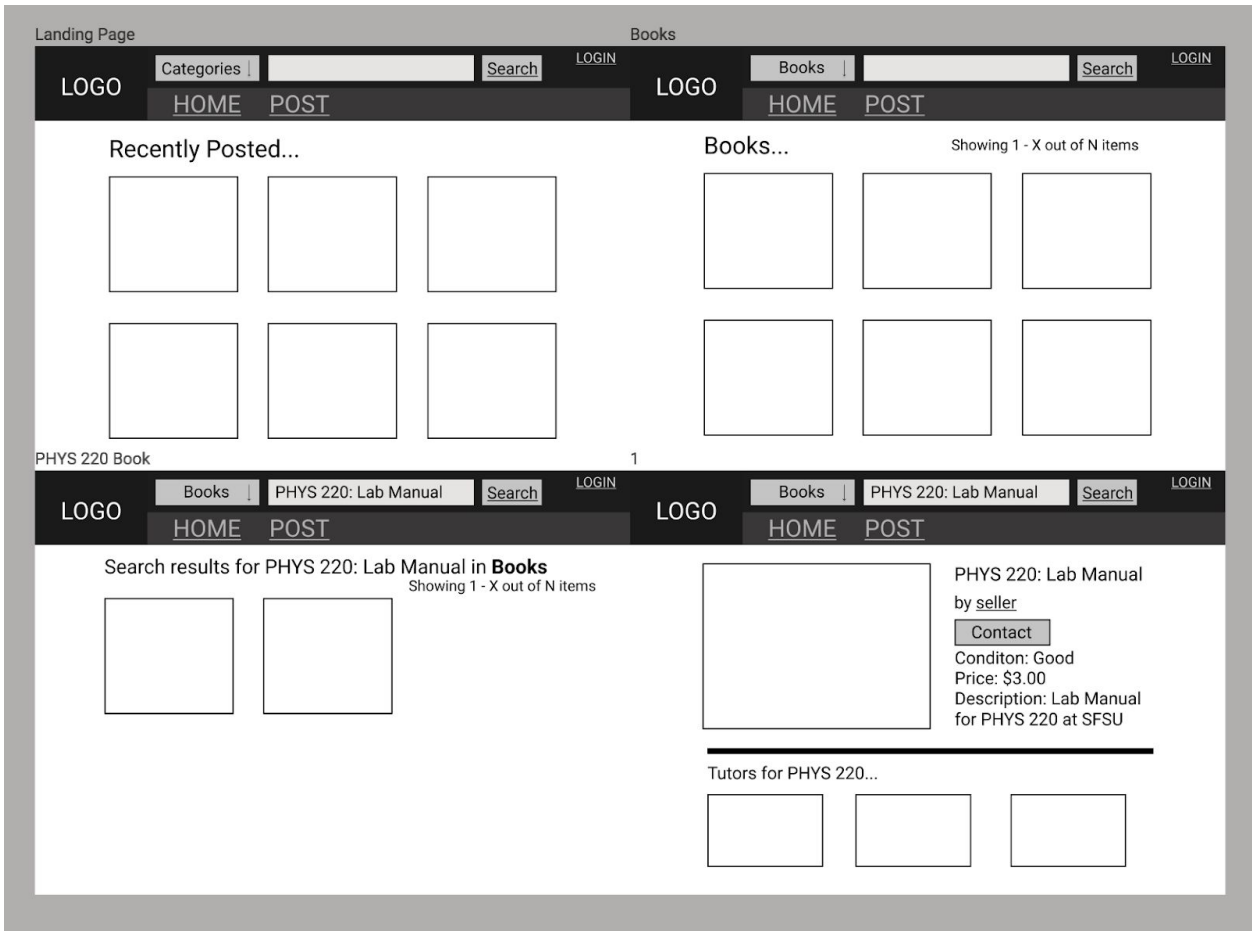
Wanted Items:
Register users shall be able to post items that they are currently looking for with a negotiable price amount.

Reporting User:
Registered users shall be able to report other users.

Reporting posts:
Registered Users shall be able to report posts of other users that they believe are offensive or nondescript.

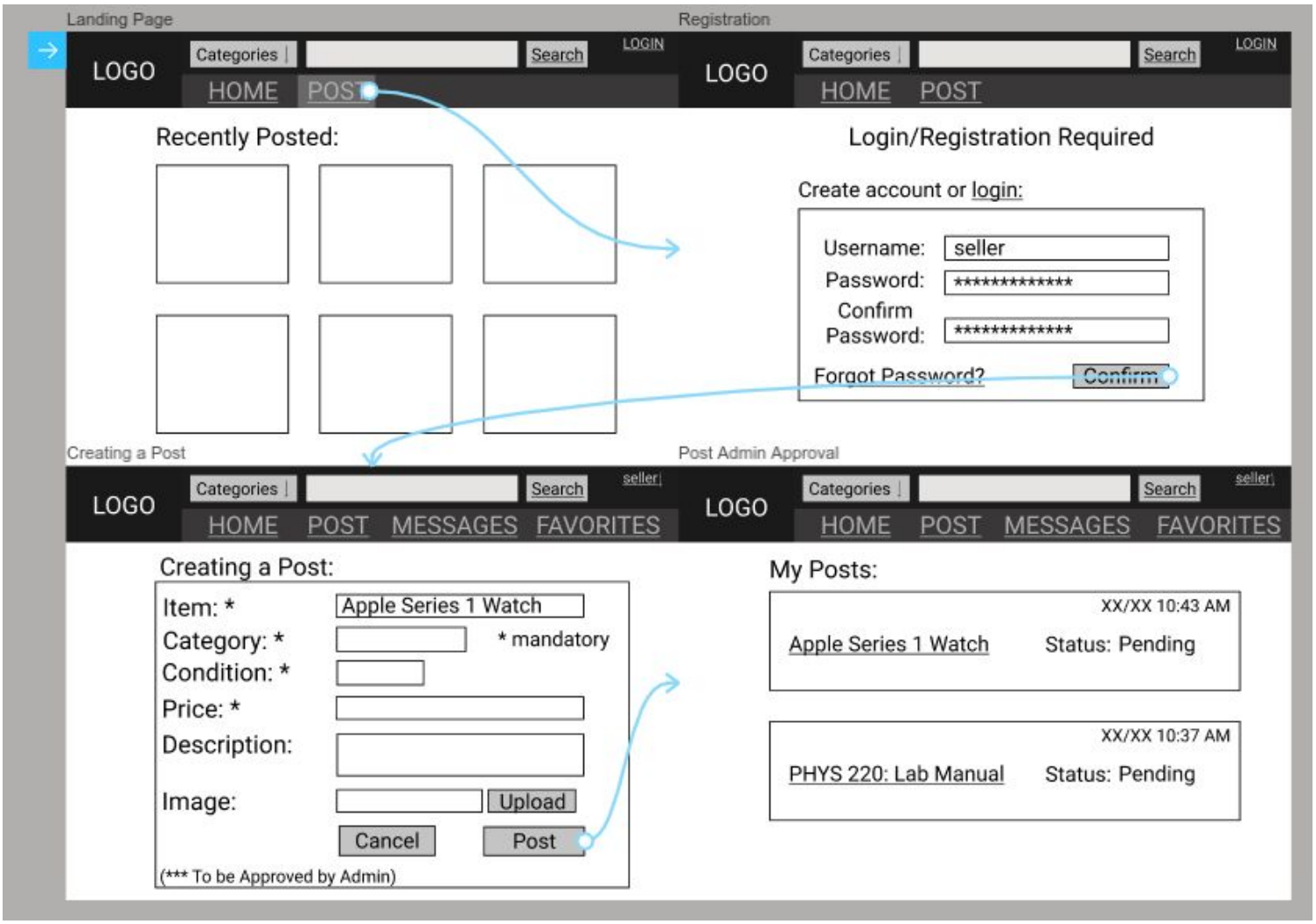
3. UI Mockups and Storyboards

3.1 Use Case 1 - Unregistered user browsing items and buying items



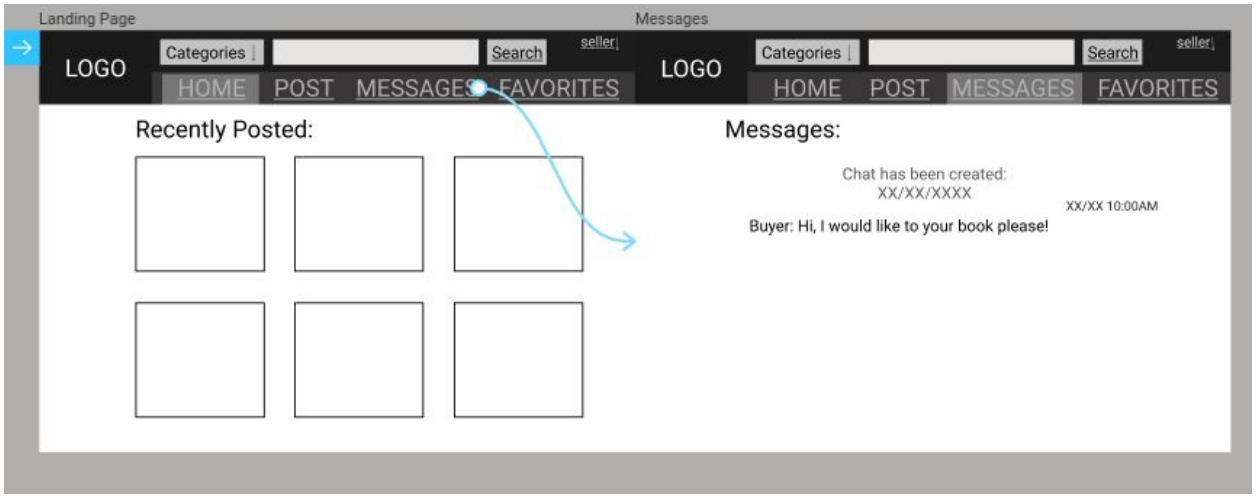
User starts at Home page and then clicks on the categories drop down and selects the books categories, the page then changes to show available books. The user specifies what they want by using the search bar, items matching the search query are then displayed. The user then clicks on an item that interests them and is greeted by a page containing all the information about the post.

3.2 Use Case 2 - Seller wants to Create a Post and Check the Status of the Posted Item



User starts at the landing page and wants to make a post. The user clicks on the Post tab found on the navigation bar and is prompted with a mandatory login/registration page. Creating an account the user is redirected to a form page where the user can fill out fields for the item he/she is selling, such as the name of the item, category, price, and if he or she wants they can add a description and a photo. Clicking post will submit all the data the seller enters in the form field, and then the seller is routed to a status page of the Sell's posts. This page will give the status of the user's posted items, and will change when admin reviews the post.

3.3 Use Case 3 - Seller wants to Check Messages



When a seller is logged in, the seller can check if anyone messaged by clicking on the Messages tab which can be found on the navigation bar. Clicking on the Messages tab will redirect the seller to a page where he or she can view the number of messages he has received and the messages he gets from interested buyers.

Use Case 4 - Admin Managing Posts

Admin starts at the landing page. Clicks on the login link and logs in. Logging, the Admin is redirected to an admin page of all the items and services waiting to be reviewed. Clicking on a pending item or service will redirect them to that post with an admin only option of approve or deny.

4. High Level Architecture, Database Organization

4.1 DB Organization

User Registration Record
- email - varchar (PK)
- username - varchar
- password - varchar

Admins
- email - varchar
- username - varchar
- password - varchar
- admin Id - varchar (PK)

Items
- post id - varchar (PK)
- email - varchar (FK)
- name - varchar
- category - varchar
- description - varchar
- price - decimal
- condition - varchar (FK)
- photo - varchar
- timestamp - timestamp

Conditions
- condition - varchar (PK)
- post id - varchar (FK)

Approved Posts
- post id - varchar (PK)
- status - varchar

Course Books
- post id - varchar (PK)
- email - varchar (FK)
- name - varchar
- description - varchar
- price - varchar
- condition - varchar (FK)
- course - varchar
- photo - varchar
- timestamp - timestamp

Tutor Services
- post id - varchar (PK)
- email - varchar (FK)
- name - varchar
- description - varchar
- price - varchar
- course - varchar (FK)
- photo - varchar
- timestamp - timestamp

Messages
- message id - varchar (PK)
- sender - (FK)
- receiver - (FK)
- message - varchar
- timestamp - timestamp

4.2 Media Storage

We are not using file BLOBs, and will be using Amazon S3 to host our images.

4.3 Search/Filter Architecture and Implementation

1. Items
    a. Filtering based on SQL queries on category, condition, timestamp and price keys.
    b. Can be searched by free text by using SQL %like
2. Course Books
    a. Filtering based on SQL queries on course, condition, timestamp and price keys.
    b. Can be searched by free text by using SQL %like
3. Tutoring Services
    a. Filtering based on SQL queries on course and price keys.
    b. Can be searched by free text by using SQL %like

4.4 Our APIs

REST API that uses express.js as our server and postgres as our database.

4.5 Non-trivial Algorithms

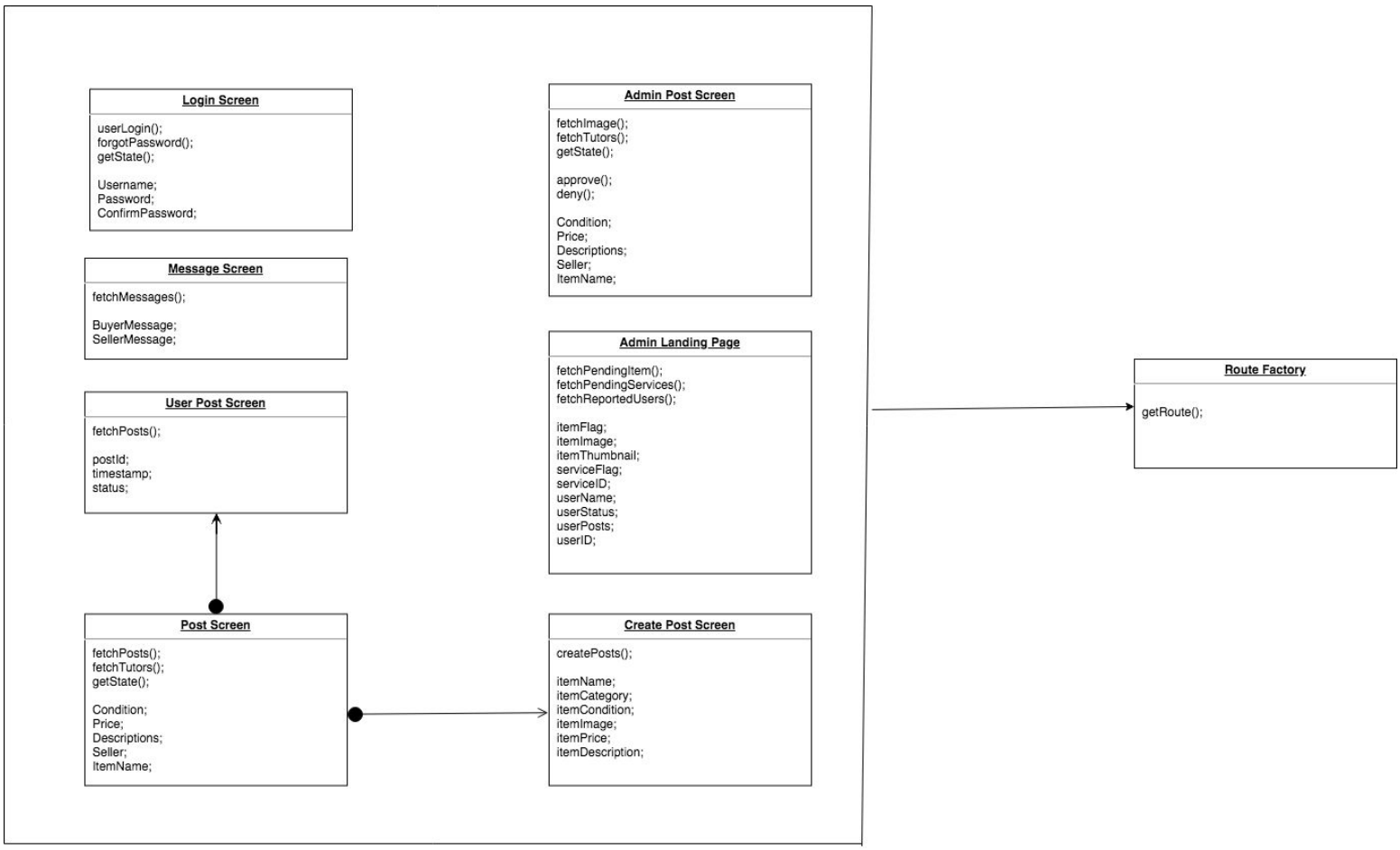
None

4.6 Software Tool Changes

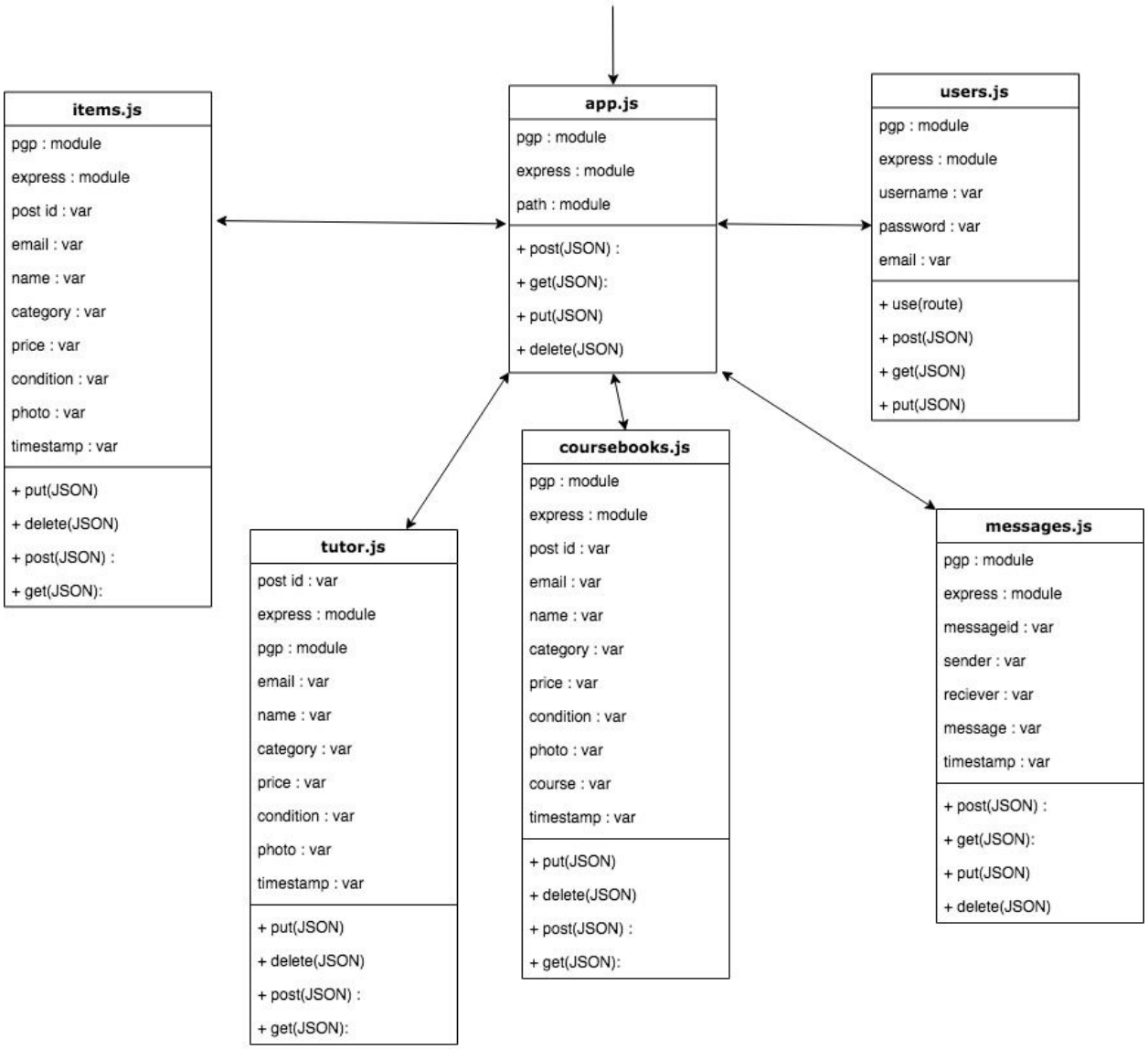
+ Amazon s3 instance to host the images for our website.

5. High Level UML Diagrams

5.1 Front-end:



5.2 Backend:


items.js
pgp : module
express : module
post id : var
email : var
name : var
category : var
price : var
condition : var
photo : var
timestamp : var
+ put(JSON)
+ delete(JSON)
+ post(JSON) :
+ get(JSON):
app.js
pgp : module
express : module
path : module
+ post(JSON) :
+ get(JSON):
+ put(JSON)
+ delete(JSON)
users.js
pgp : module
express : module
username : var
password : var
email : var
+ use(route)
+ post(JSON)
+ get(JSON)
+ put(JSON)
tutor.js
post id : var
express : module
pgp : module
email : var
name : var
category : var
price : var
condition : var
photo : var
timestamp : var
+ put(JSON)
+ delete(JSON)
+ post(JSON) :
+ get(JSON):
coursebooks.js
pgp : module
express : module
post id : var
email : var
name : var
category : var
price : var
condition : var
photo : var
course : var
timestamp : var
+ put(JSON)
+ delete(JSON)
+ post(JSON) :
+ get(JSON):
messages.js
pgp : module
express : module
messageid : var
sender : var
reciever : var
message : var
timestamp : var
+ post(JSON) :
+ get(JSON):
+ put(JSON)
+ delete(JSON)

6. Key Risks

Front-End Risks

Skills Risk

The front end team has varying skill levels with CSS, and for most of the team, React and Node are software tools they have not used extensively before. This will cause some time overhead as the team gets familiar with the tools.

To resolve this, the team is studying the tools they are unfamiliar with, and those that are familiar with the tools are helping to get everyone else to a level that they can work productively. The vertical prototype will also act as a vehicle for team members unfamiliar with our tools to see how to use them.

Schedule Risk

The team is comprised of students with diverse schedules and unforeseen circumstances could affect the team's ability to deliver on all features.

To compensate for this, the Priority 1 tasks are mainly the bare requirements for the project and our special, competitive feature. If need be, members from the back-end team can assist on front-end work if the back-end completes their Priority 1 tasks before the front-end team.

Back-End Risk

Skills Risk

The most of the backend team has not used the Express framework, Node, or PostgreSQL extensively before this project. This will cause some time overhead as the team gets familiar with the tools.

To resolve this, the team is studying the tools they are unfamiliar with, and assisting others where possible so that the entire team can work productively. The vertical prototype will also allow team members unfamiliar with Express, Node, and PostgreSQL to see demos of syntax and usages.