

## SW Engineering CSC648/848 Summer 2022

### College Essentials

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## [Section I] Data Definitions

1. **General User:** A user who is not signed in or does not have an account with College Essentials. A general user has the minimum permissions on the website and can **register** for more permissions.
  - 1.1. **Registration:** A general user shall be able to create an account to get more permissions.
  - 1.2. **Account Contains:**
    - 1.2.1. **Username:** Needs a username to create an account
    - 1.2.2. **Password:** Needs a password that is encrypted to create an account.
    - 1.2.3. **Email:** Needs a unique edu email to create an account.
    - 1.2.4. **School:** Can choose to register a school to the account.
    - 1.2.5. **Accept Terms of Service:** Must accept the terms of service to create an account.
2. **Registered User:** A user who has signed up to use College Essentials. This user gains the extra permissions needed to access the other features on the website. A general user shall be able to **login** to gain access to all these features.
  - 2.1. Can login to the system.
    - 2.1.1. Username: Needs a unique username to login.
    - 2.1.2. Password: Needs a unique password to login.
  - 2.2. Has the ability to post Marketplace Posts.
    - 2.2.1. **Buyers:** All registered users are buyers by default. They can see and interact with Marketplace posts.

- 2.2.2. **Sellers:** All registered users can put up their own Marketplace posts to become a seller. Sellers will be differentiated on the Marketplace post that they have posted.
  - 2.3. Has the ability to post forum Posts.
  - 2.4. **Profile:** Contains username, school, ratings, private messaging section and marketplace posts.
    - 2.4.1. **Username:** Shows the unique username of the user.
    - 2.4.2. **School:** Shows the listed schools linked with the user.
    - 2.4.3. **Ratings:** Shows the ratings on the user posted by other users.
    - 2.4.4. **Private Message:** Has an area that allows users to private message other users.
    - 2.4.5. **Marketplace Posts:** Has a list of marketplace posts made by the user.
    - 2.4.6. **Service Listings:** Has a list of service listings made by the user.
- 3. **Admin:** A user who moderates content on the website. A moderator still has the same permissions that registered users have, but have additional **admin tools** on our website.
  - 3.1. **Admin Tools:** Contains the ability to delete posts, and temporarily restrict users.
    - 3.1.1. **Delete Posts:** Can choose to delete posts by other users.
    - 3.1.2. **Restrict Users:** Can restrict user accounts who break the terms of service.
- 4. **Guest:** This is a user who is unregistered or not logged in who is able to view all posts but not reply. Guests will be ghosts within the site, they are able to search and look but not interact.

- 4.1. **Username:** Will show as a guest with numbers ie. Guest####
  - 4.2. **Browsing:** A guest will be able to browse listings, and add them to cart but not complete the transaction
  - 4.3. **Ads:** A guest shall be able to contact, and pay us to have their ads on the site.
5. **Login / User Registration:** This is the section that would allow users to login or register accounts with College Essentials.
- 5.1. **Login Section:** Users have the ability to login to their accounts here.
    - 5.1.1. **Username:** Users will have to enter a unique username to login.
    - 5.1.2. **Password:** Users will have to enter a unique password to login.
  - 5.2. **Registration Section:** Users have the ability to register new accounts here.
    - 5.2.1. **Username:** Needs a username to create an account
    - 5.2.2. **Password:** Needs a password that is encrypted to create an account.
    - 5.2.3. **Email:** Needs a unique edu email to create an account.
    - 5.2.4. **School:** Can choose to register a school to the account.
    - 5.2.5. **Accept Terms of Service:** Must accept the terms of service to create an account.
6. **Private Message:** This is the section that allows users to private message each other through their profiles.
- 6.1. **Contacting a Person:** Will allow the contacting of a user, client, seller, guest, etc.
  - 6.2. **Timestamp:** Shows when a message was sent.

- 6.3. **Read Status:** Will show if a message was seen
7. **Forum Post Section:** This is where users are able to post miscellaneous forum posts that don't fit within the other categories. Users must be registered users to make a forum post.
- 7.1. **Forum Posts:** Contains a post body and post replies.
- 7.1.1. **Post Body:** A registered user will be able to post a forum post that contains username, post body, and timestamps.
- 7.1.2. **Post Replies:** A registered user will be able to reply underneath the forum posts that contains a body, the replier's username, and a timestamp.
8. **Marketplace Listings:** A place for registered users to post if they want to buy or sell marketplace listings.
- 8.1. **Marketplace Listing:** Contains title, location, photo, price, description, expiration date, bidding(If allowed by seller), and tags.
- 8.1.1. **Title:** Gives a small description of the item at hand.
- 8.1.2. **Location:** Gives the location of where the deal is to be held.
- 8.1.3. **Photo:** If provided there will be a picture of the product.
- 8.1.4. **Price:** Displays the price of the item being sold.
- 8.1.5. **Description:** A body section that describes the listing.
- 8.1.6. **Expiration Date:** Displays how long the listing is valid.
- 8.1.7. **Bidding:** Shows the current minimum bid.
- 8.1.8. **Tags:** Key words appended to a listing to categorize for searching.
9. **Service Listings:** A place for registered users to post if they need or provide

services.

9.1. **Service Listings:** Contains, a Title, Location, Photo, Price, Description, an expiration date, and tags.

9.1.1. **Title:** Gives a small description of the item at hand.

9.1.2. **Location:** Gives the location of where the deal is to be held.

9.1.3. **Photo:** If provided there will be a picture of the product.

9.1.4. **Price:** Displays the price of the item being sold.

9.1.5. **Description:** A body section that describes the listing.

9.1.6. **Expiration Date:** Displays how long the listing is valid.

9.1.7. **Tags:** Key words appended to a listing to categorize for searching.

10. **User Rating:** This is a section after completing a listing that will allow registered users to leave ratings for the sellers after a purchase. We will provide the section in order to fight against fraud.

10.1. **User Ratings:** Will contain the sellers username, the buyers username, a star rating on the seller, and a description body.

10.1.1. **Seller Username:** This is the username of the seller who provided the listing.

10.1.2. **Buy Username:** This is the username of the buyer who purchased the listing.

10.1.3. **Star Ratings:** This is the section where buyers are allowed to rate a seller out of 5.

10.1.4. **Description:** This is a description box with a body for a short description of the rating.

11. **Payment System:** The place where you choose your payment method for



the services or items involved.

11.1.    **Type:** type of the payment.

11.2.    **Amount:** The shown amount needed to be paid.

## **[Section II] Functional Requirements**

### **Priority 1:**

1. General User
  - 1.1. A general user shall be able to browse forum posts.
  - 1.2. A general user shall be able to browse items on the marketplace.
  - 1.3. A general user shall be able to browse service listings.
  - 1.4. A general user shall be able to search for their needed service.
  - 1.5. A general user can search by college institution in the marketplace.
  - 1.6. A general user can search by college institution in the service listing section.
  - 1.7. A general user shall accept our terms of conditions.
  - 1.8. A general user shall be able to submit their own ads to be promoted on our website.
  - 1.9. A general user shall be able to search by item condition in the marketplace.
2. Registered User
  - 2.1. A registered user shall be able to log in with their username.
  - 2.2. A registered user shall be able to review another user.
  - 2.3. A registered user shall be able to create their own profile with text.
  - 2.4. A registered user shall be able to create their own profile with pictures.
  - 2.5. A registered user shall be able to edit their own profile with text.
  - 2.6. A registered user shall be able to edit their own profile with pictures.
  - 2.7. A registered user shall be able to post a picture as their profile picture.
  - 2.8. A registered user shall be able to post a service listing.
  - 2.9. A registered user shall be able to list items for sale in the marketplace.

- 2.10. A registered user shall be able to post on the forums.
- 2.11. A registered user shall be able to edit a forum post.
- 2.12. A registered user shall be able to edit a service listing.
- 2.13. A registered user shall be able to edit a sales listing.
- 2.14. A registered user shall be able to log out.
- 2.15. A registered user shall be able to message other registered users.
- 2.16. A registered user shall be able to pay with different methods, ie. Cash, debit, etc.
- 2.17. A registered user shall have setting options
- 2.18. A registered user shall be able to pay to be on the top of the forums.
- 2.19. A registered user shall be able to report another user.
- 2.20. A registered user shall be able to block another user.
- 2.21. A registered user shall be able to rate other general users.

### 3. Service Listing

- 3.1. A service listing shall have a title.
- 3.2. A service listing shall have the location of where the service will be needed.
- 3.3. A service listing post shall have characters in its content body.
- 3.4. A service listing post shall be able to have images in its content body.
- 3.5. A service listing post shall have basic information like time posted.
- 3.6. A service listing post shall be able to have its content body edited.
- 3.7. A service listing post shall be able to have its title edited.
- 3.8. A service listing post shall be able to be unlisted.
- 3.9. A service listing post shall be able to have filters.
- 3.10. A service listing post shall have optional tags.

#### 4. Shopping Cart

- 4.1. A shopping cart shall remember what has been stored within it.
- 4.2. A shopping cart shall remember how many of one entity have been stored within it.
- 4.3. A shopping cart shall allow users to edit products within it.
- 4.4. A shopping cart shall allow for check out.
- 4.5. A shopping cart shall give descriptions of products stored within it

#### 5. Checkout

- 5.1. Checkout shall allow a user to input their payment information.
- 5.2. Checkout shall allow a user to input their shipping address.
- 5.3. Checkout shall allow a user to input their billing address.
- 5.4. Checkout shall allow users to review their purchase on last time.

#### 6. Navigation Bar

- 6.1. A navigation bar shall have a section for students selling their products.
- 6.2. A navigation bar shall have a section for teachers to look for student assistants.
- 6.3. A navigation bar shall have a section for the student forums.
- 6.4. A navigation bar shall have a section for the about us page.

#### 7. Marketplace Listing (Buy/Sell Listing)

- 7.1. A marketplace listing shall have a title.
- 7.2. A marketplace listing shall have a description.
- 7.3. A marketplace listing shall have a photo (or many).
- 7.4. A marketplace listing shall have a price.

- 7.5. A marketplace listing shall be able to be unlisted.
- 7.6. A marketplace listing shall have filters to categorize.
- 7.7. A service listing shall have optional tags.
- 7.8. A service listing shall have the option to be returned or not.

## 8. Ratings

- 8.1. User ratings shall rate a profile on a scale of 1 to 5.
- 8.2. User ratings shall be visible on a registered user's profile.
- 8.3. User ratings shall be visible on a registered user's marketplace listing.
- 8.4. User ratings shall be visible on a registered user's service listing.
- 8.5. User ratings shall be able to be posted by registered users.

## Priority 2:

### 1. General User

- a. A general user shall be able to leave comments on products/services.

### 2. Registered User

- a. A registered user shall do anything an unregistered user can.
- b. A registered user shall rate products they have used.
- c. A registered user shall be allowed to save payment information.
- d. A registered user shall be able to save products they like.
- e. A registered user shall be able to log in using their user id.
- f. A registered user shall be able to log in using their email.

### 3. Admin

- a. An admin shall be able to review reports.
- b. An admin shall be able to ban registered users.

- c. An admin shall be able to unban registered users.
- d. An admin shall be able to delete forum posts of other users.
- e. An admin shall be able to remove service listings from the website.
- f. An admin shall be able to remove marketplace listings from the website.
- g. An admin shall be able to view a chat log between two users.
- h. An admin shall be able to do all that a registered user can.
- i. An admin shall be able to see personal information of users.
- j. An admin shall be able to close group posts.
- k. An admin shall be able to re make posts.
- l. An admin shall be able to see IP's.

#### 4. Receipt

- a. A receipt shall have a way to contact admin service support.
- b. A receipt shall have the product bought.
- c. A receipt shall have the price of the product bought.
- d. A receipt shall have the time of the transaction.
- e. A receipt shall have the email of the user involved.
- f. A receipt shall have the method of contacting the seller via email..
- g. A receipt shall have the method of contacting the seller via phone number.

#### 5. Shopping Cart

- a. The shopping cart shall have a button to relocate you to the marketplace

#### 6. Navigation Bar

- a. The Navigation Bar shall have zip code search.

## 7. Messages

- a. A message shall have characters in its content body.
- b. A message shall have a timestamp.
- c. A message shall have a status (sent/received/read).
- d. A message shall allow a user to edit it.
- e. A message shall allow a user to delete it.

## 8. Marketplace Listing (Buy/Sell Listing)

- a. A marketplace listing shall have the location of where the deal is going to be held.
- b. A marketplace listing shall have an expiration date.
- c. A marketplace listing shall have a bidding minimum.

## **Priority 3:**

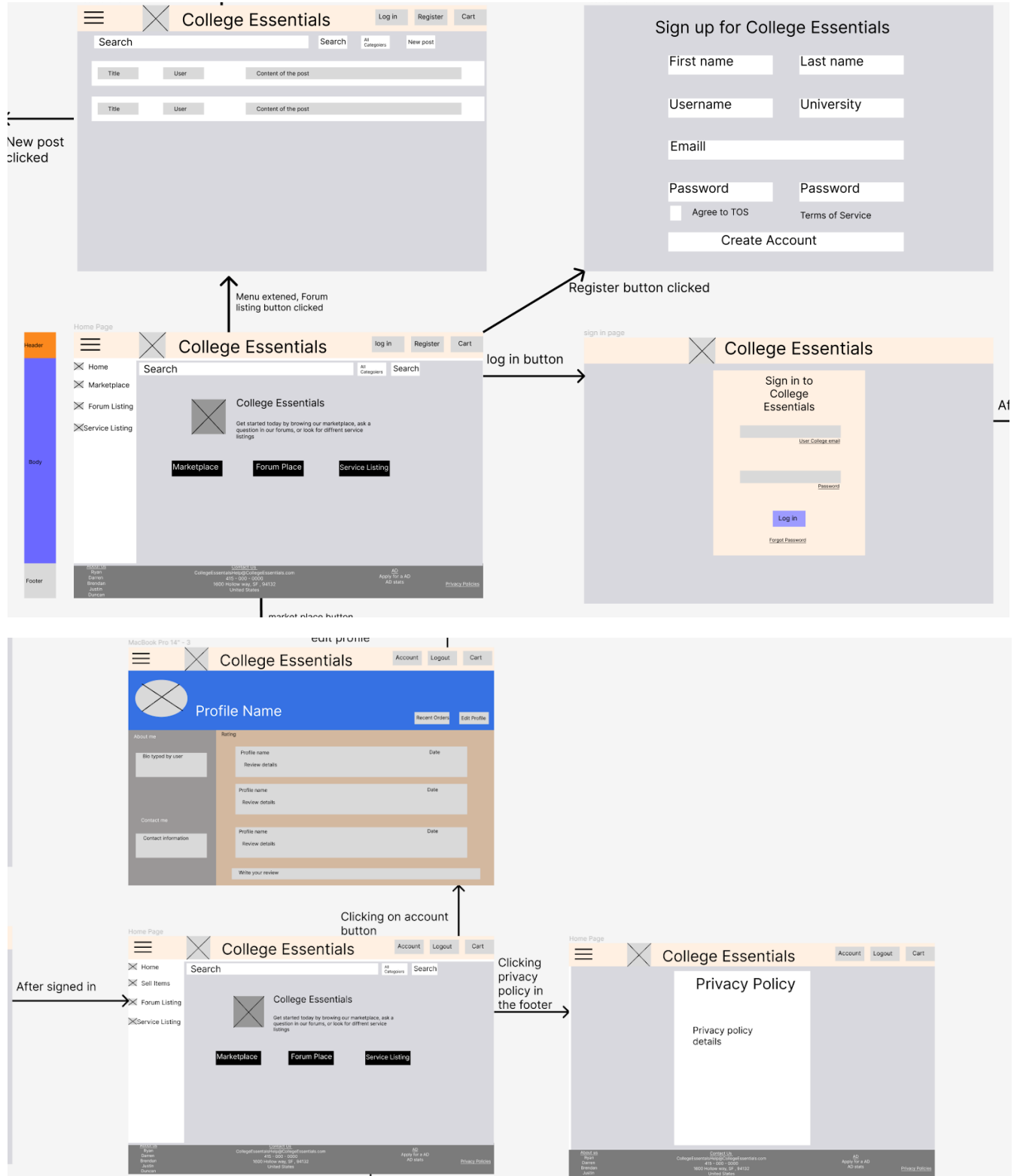
### 1. Shopping Cart

- a. A shopping cart will have a little number showing how many items are within it, while you are not on the checkout screen.

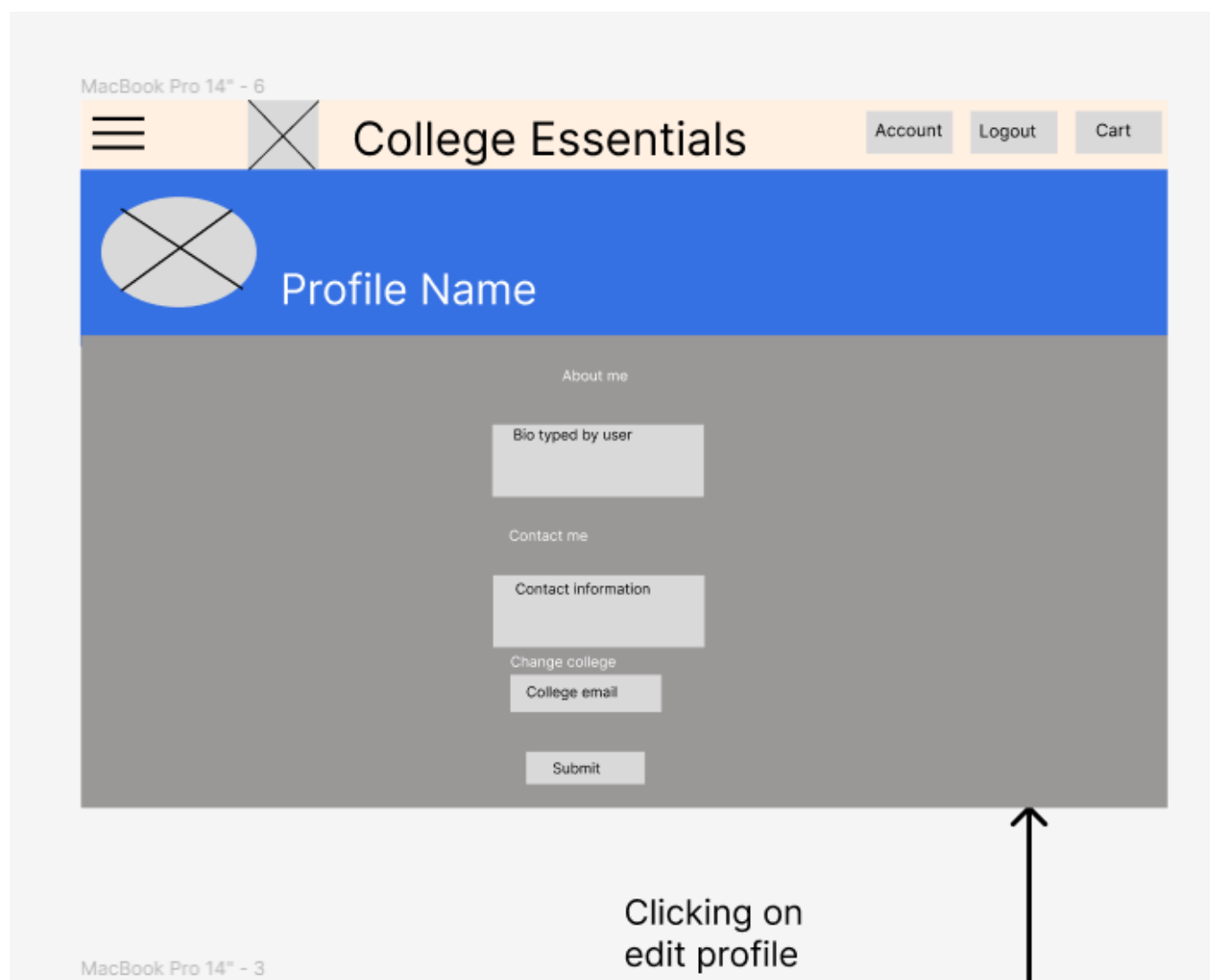
### 2. Checkout

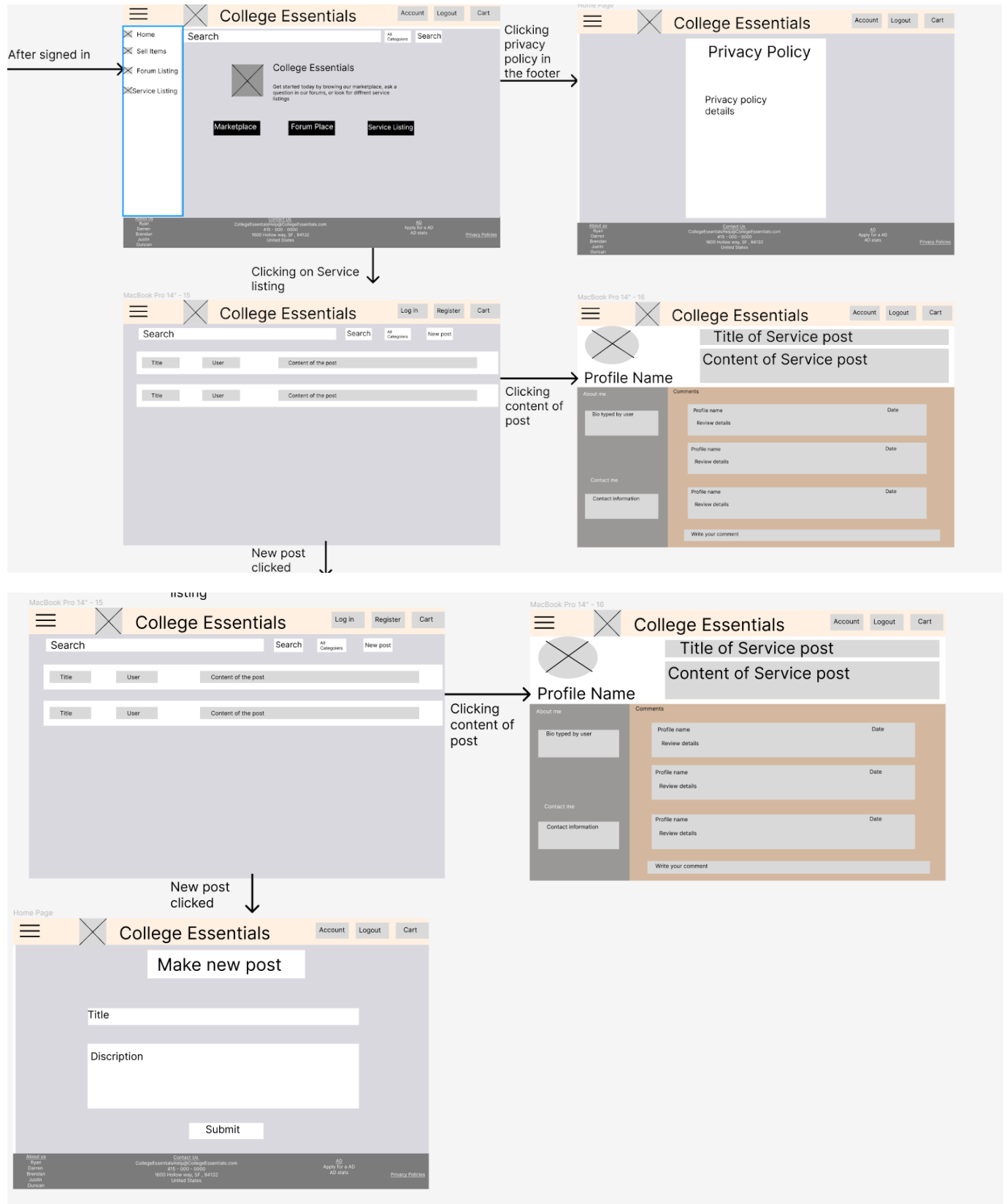
- a. Checkout shall prompt users to create an account if not yet registered.

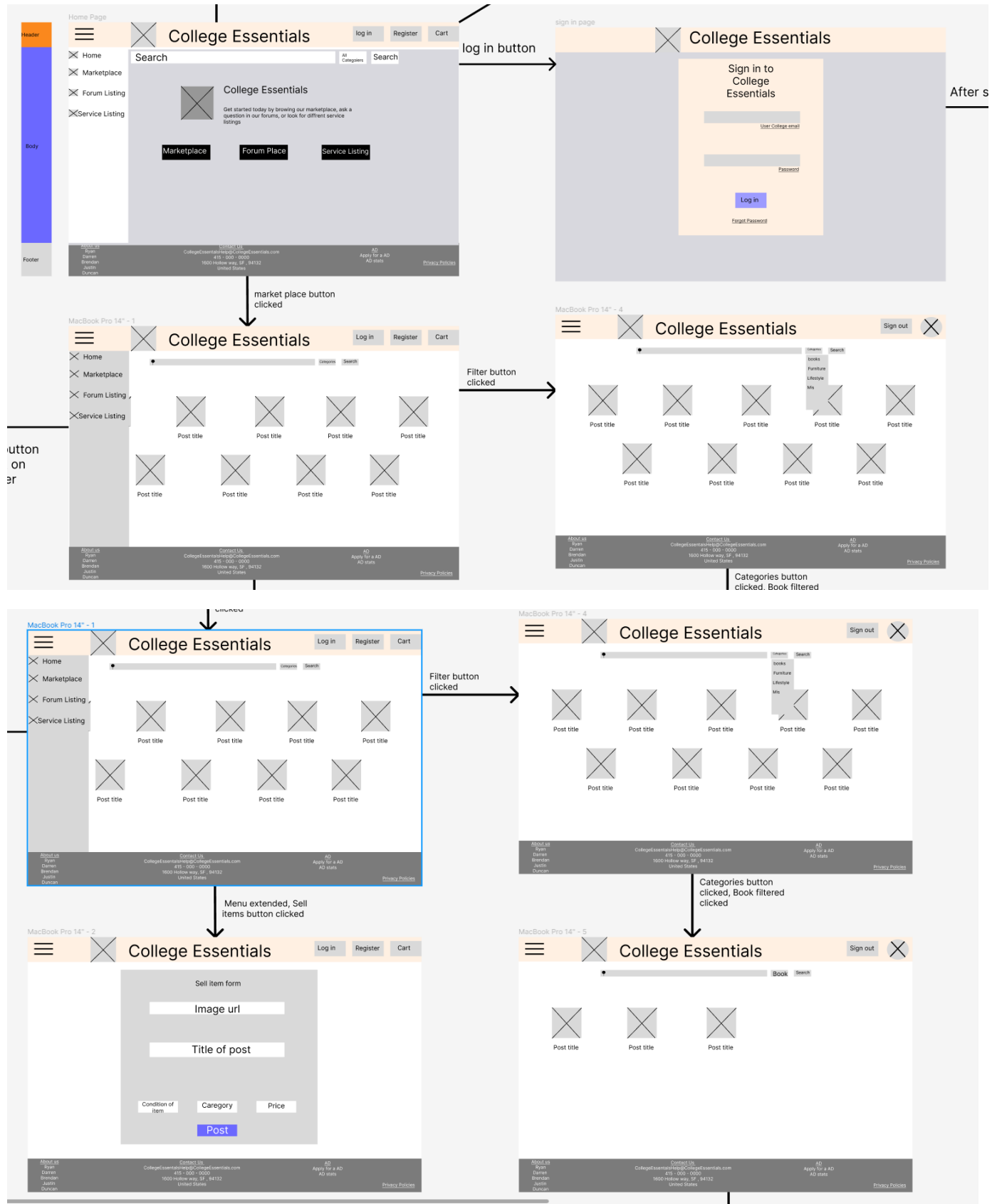
## [Section III] Wireframes Based on Mockups/Storyboards

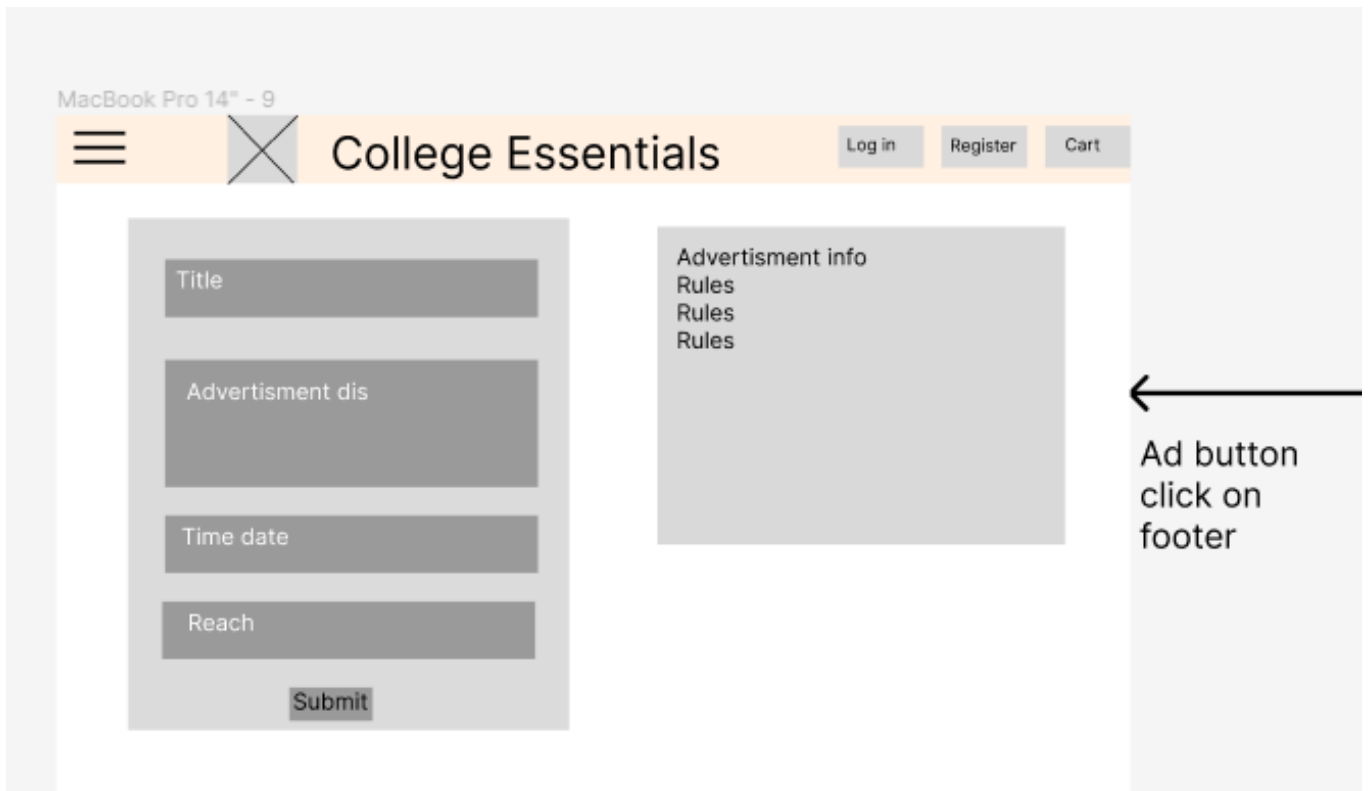
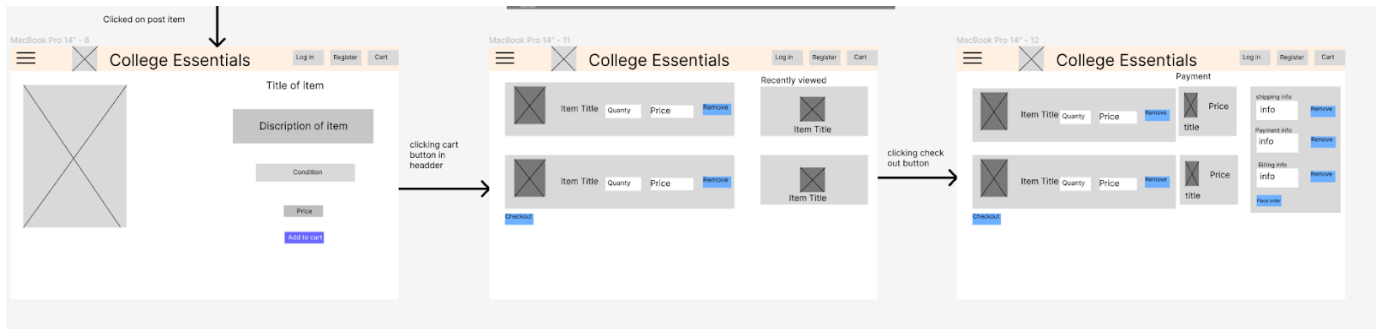


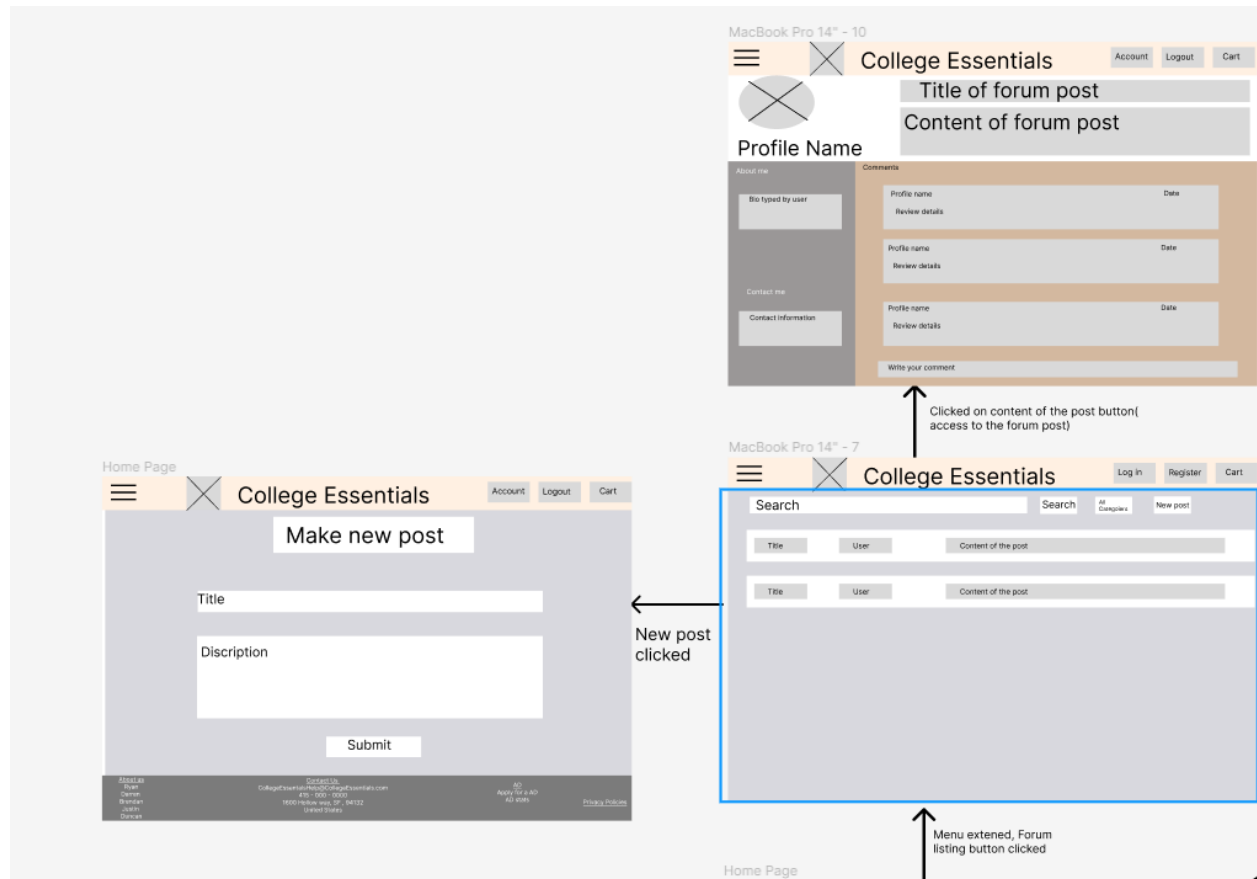


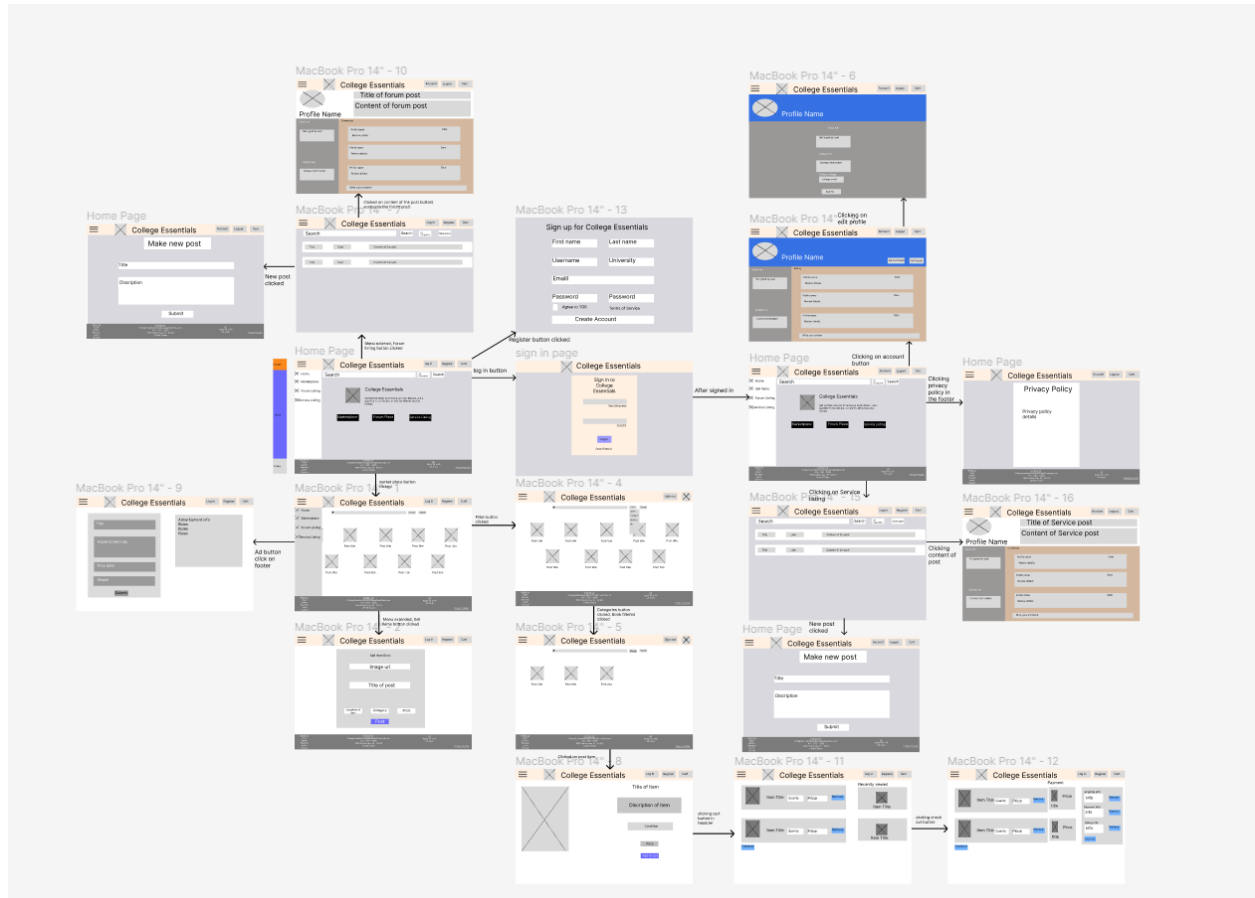












**Link to all the diagrams:**

<https://www.figma.com/file/nq07WHQeXEGWxPcPPLDjl7/Untitled?node-id=0%3A1>

## **[Section IV] High Level Database Architecture and Organization**

### **1. Business Rules**

#### **a. GeneralUser**

- i. A GeneralUser shall be able to log into a registered account (RegisteredUser)
- ii. A GeneralUser shall be a buyer.

#### **b. RegisteredUser**

- i. A RegisteredUser shall be a seller or buyer.
- ii. A RegisteredUser shall be able to be an Admin
- iii. A RegisteredUser shall have one or many Colleges associated with their accounts.
- iv. A RegisteredUser shall be able to post zero or many ServiceListings.
- v. A RegisteredUser shall be able to post zero or many ServiceReplies
- vi. A RegisteredUser shall be able to post zero or many ForumPosts
- vii. A RegisteredUser shall be able to post zero or many ForumReplies
- viii. A RegisteredUser shall have zero or many Ratings.
- ix. A RegisteredUser shall be able to post zero or many Ratings.

#### **c. Rating**

- i. A Rating shall belong to one RegisteredUser.
- ii. A Rating shall be posted by zero or many RegisteredUsers.

d. Buyer

- i. A Buyer shall be considered a GeneralUser or RegisteredUser.
- ii. A Buyer shall have at most one ShoppingCart at a time
- iii. A Buyer shall have ordered zero or many Products.
- iv. A Buyer shall have zero or many Payment methods.
- v. A Buyer shall receive a Receipt for their transaction.
- vi. A Buyer is linked to many Transactions

e. Seller

- i. A seller shall be considered a RegisteredUser
- ii. A seller shall have posted at least one MarketplaceListing
- iii. A seller shall receive many Receipts for their transactions.
- iv. A seller is linked to many Transactions

f. Admin

- i. An Admin shall be considered a RegisteredUser.

g. College

- i. A College shall be associated by many RegisteredUsers (e.g. college student or college faculty)

h. Marketplace Listing

- i. A Marketplace Listing shall be listed by one Seller.
- ii. A Marketplace Listing shall list at least one Product

i. ServiceListing

- i. A ServiceListing shall be listed by one RegisteredUser.



- ii. A ServiceListing shall be followed by many ServiceReplies
- j. ServiceReply
  - i. A ServiceReply will be tied to many ServiceListings
  - ii. A ServiceReply is posted by a RegisteredUser
- k. Transaction
  - i. A Transaction shall have many Receipts.
  - ii. A Transaction shall be linked to one Payment method.
  - iii. A Transaction shall be linked to a Buyer
  - iv. A Transaction shall be linked to a Seller
  - v. A Transaction shall be linked to a Rating
- l. ShoppingCart
  - i. A ShoppingCart is tied to one Buyer.
  - ii. A ShoppingCart is linked to one Transaction.
- m. Payment
  - i. A Payment shall belong to one Buyer.
  - ii. A Payment shall be linked to a Transaction.
- n. Receipt
  - i. A Receipt shall be given to one Buyer.
  - ii. A Receipt shall be given to one Seller.
  - iii. A Receipt shall belong to one Transaction.
- o. Product

- i. A Product is ordered by zero or many Buyers
  - ii. A Product is added to many ShoppingCarts
  - iii. A Product is listed on a MarketplaceListing
- p. ForumPost
  - i. A ForumPost is posted by one RegisteredUser
  - ii. A ForumPost shall be followed by many ForumReplies
- q. ForumReply
  - i. A ForumReply will be tied to many ForumPost
  - ii. A ForumReply is posted by a RegisteredUser

## **2. Entities**

- a. GeneralUser (Strong)
  - i. General\_user\_id: key, numeric; This is the unique id registered to each GeneralUser
  - ii. ip\_address: numeric; This is the IP address associated with a GeneralUser
- b. RegisteredUser (Weak)
  - i. registered\_user\_id: key, numeric; This is the unique id registered to each RegisteredUser.
  - ii. general\_user\_id: key, numeric; This is the id associated to the generalUser tied to RegisteredUser
  - iii. first\_name: alphanumeric; This is the first name registered to a RegisteredUser.
  - iv. last\_name: alphanumeric; This is the last name registered to a RegisteredUser

- v. password: alphanumeric; This is the unique password registered to each RegisteredUser.
- vi. email: alphanumeric; This is the unique username registered to each RegisteredUser.

c. Ratings (Weak)

- i. rating\_id: key, numeric; This is the unique id given to the specific rating.
- ii. rating: numeric: This is a value between 0 and 5 given to the rating.
- iii. description: alphanumeric: This is a short description of the given rating.
- iv. transaction\_id: key, numeric; This is the transaction linked to the rating.
- v. registered\_user\_sender\_id: key, numeric; This is the ID of the user giving/sending a rating
- vi. registered\_user\_receiver\_id: This is the ID of the user receiving the rating

d. Buyer (Weak)

- i. buyer\_id: key, numeric; This is the unique buyer id used in a transaction.
- ii. general\_user\_id: key, numeric; This is the unique GeneralUser id associated with a buyer
- iii. registered\_user\_id: key, numeric; This is the optional unique RegisteredUser id associated with a buyer

e. Seller (Weak)

- i. seller\_id: key, numeric; This is the unique seller id used in a transaction.
- ii. registered\_user\_id: key, numeric; This is the unique RegisteredUser id associated with a buyer

f. Admin (Weak)

- i. admin\_id: key, numeric; This is the unique id linked to an Admin account.
- ii. registered\_user\_id: key, numeric; This is the RegisteredUser id associated with an Admin

g. College (Strong)

- i. college\_id: key, numeric; This is the unique college id associated with each college
- ii. name: alphanumeric; This is the name for a college

h. MarketplaceListing (Strong)

- i. marketplace\_listing\_id: key, numeric; This is the unique id linked with the MarketplaceListing.
- ii. title: alphanumeric; This is the title given to the MarketplaceListing.
- iii. body: alphanumeric; This is the body given to the MarketplaceListing.
- iv. created\_at: timestamp; This is the timestamp given for when a marketplace listed was posted
- v. seller\_id: key, numeric; This is the unique seller id used in a

transaction.

- vi. price: numeric; This is the price associated with a MarketplaceListing

i. ServiceListing (Strong)

- i. service\_listing\_id: key, numeric; This is the unique id linked with the ServiceListing.
- ii. title: alphanumeric; This is the title given to the Service Listing.
- iii. description: alphanumeric; This is the description given to the ServiceListing.
- iv. created\_at: timestamp; This is the timestamp given to the ServiceListing.

j. ServiceReply (Weak)

- i. service\_reply\_id: key, numeric; This is the unique id linked with the ServiceReply.
- ii. description: alphanumeric; This is the description given to the ServiceReply
- iii. posted\_at: timestamp; This is when the ServiceReply was posted

k. Transaction (Strong)

- i. transaction\_id: key, numeric; This is the unique id of the transaction.
- ii. completed\_at: timestamp; This is the timestamp of when a transaction is completed
- iii. payment\_id: key, numeric; This is the unique id of a payment

- iv. seller\_id: key, numeric; This is the unique id associated with the seller in the transaction
- v. buyer\_id: This is the unique id associated with the buyer in the transaction

l. ShoppingCart (Strong)

- i. shopping\_cart\_id: key, numeric; This is the unique id for a ShoppingCart
- ii. buyer\_id: key, numeric; This is the unique id for a Buyer

m. Receipt (Strong)

- i. receipt\_id: key, numeric, This is the unique id of the receipt given in the transaction.
- ii. seller\_id: key, numeric; This is the unique id of the seller in the transaction.
- iii. buyer\_id: key, numeric; This is the unique id buyer in the transaction.
- iv. transaction\_id: key, numeric; This is the unique id of the transaction.

n. Payment (Strong)

- i. Payment\_id: key, numeric; This is the unique id given to the payment.
- ii. payment\_type: alphanumeric; This is the type of payment used by the buyer.
- iii. card\_number: numeric; This is the number associated with a card

o. Product (Strong)

- i. product\_id: key, numeric; This is the unique id of the product
- ii. general\_type: alphanumeric; This is the general type of the product (e.g. a textbook, bicycle, furniture, etc.)
- iii. picture: alphanumeric; This the picture link associated with the product
- iv. Condition: alphanumeric; This is the condition associated with a product

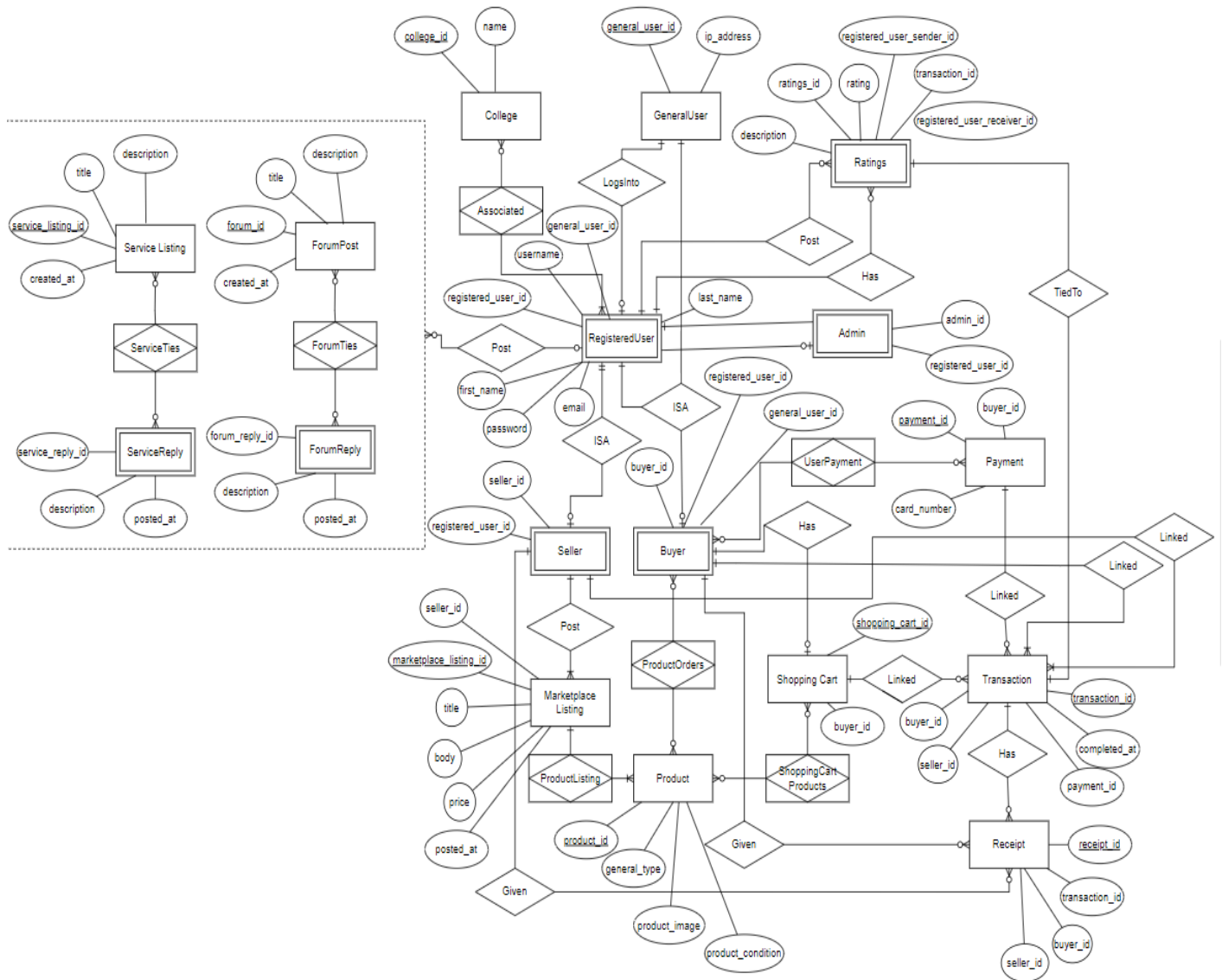
p. ForumPost (Strong)

- i. forum\_id: key, numeric; This is the unique id of a ForumPost
- ii. title: alphanumeric; This is the title of a ForumPost
- iii. description: alphanumeric; This is the description of a ForumPost
- iv. created\_at: timestamp; This is when a ForumPost was created

q. ForumReply (Weak)

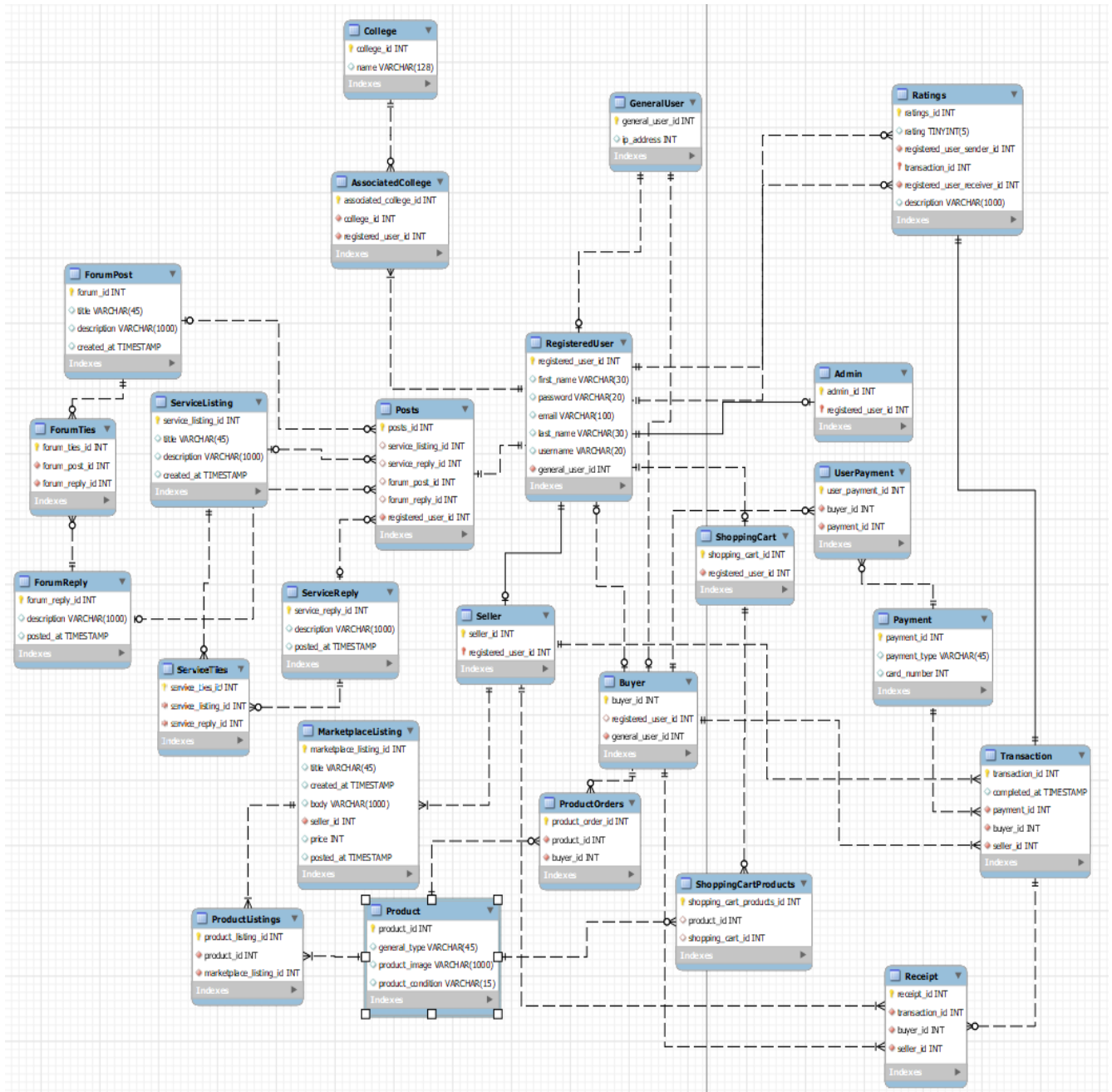
- i. forum\_reply\_id: key, numeric; This is the unique id of a ForumReply
- ii. description: alphanumeric; This is the description of a ForumReply
- iii. posted\_at: timestamp; This is when a ForumReply was posted

### 3. Entity Relationship Diagram (ERD)





#### 4. Database Model (EER)



## 5. DBMS

College Essentials will use MySQL as its DBMS, given its widely compatible and easy to use nature. MySQL has many tools available, such as

MySQL Workbench, and continues to grow alongside cloud data platforms.

## 6. Media Storage

The College Essentials database will store images in links within the Product table, but the image and files themselves will be stored within the project's file system. This will allow us to keep the files in a consistent location, and allow us to easily be able to locate and reference these files. Because all files will be in the file system in a possible “uploads” folder, we would be able to just implement a path in the SQL database to be able to point to the file.

## 7. Search/Filter Architecture and Implementation

- a. Our search algorithm will allow the user to use a search bar for terms within a marketplace listing. There will also be a drop down menu for specifying the condition of a product that will work in tandem with the search bar. At this time, we have filters that allow the user to search based on condition, but we plan to allow users to search based on college as well.
- b. In order to implement the search filters, we will have a table in the database that would show the specific keywords linked to each marketplace listing. Here is an example of how the search would be implemented based on no filters, using SQL LIKE to search for the keyword within the title of the marketplace listings:

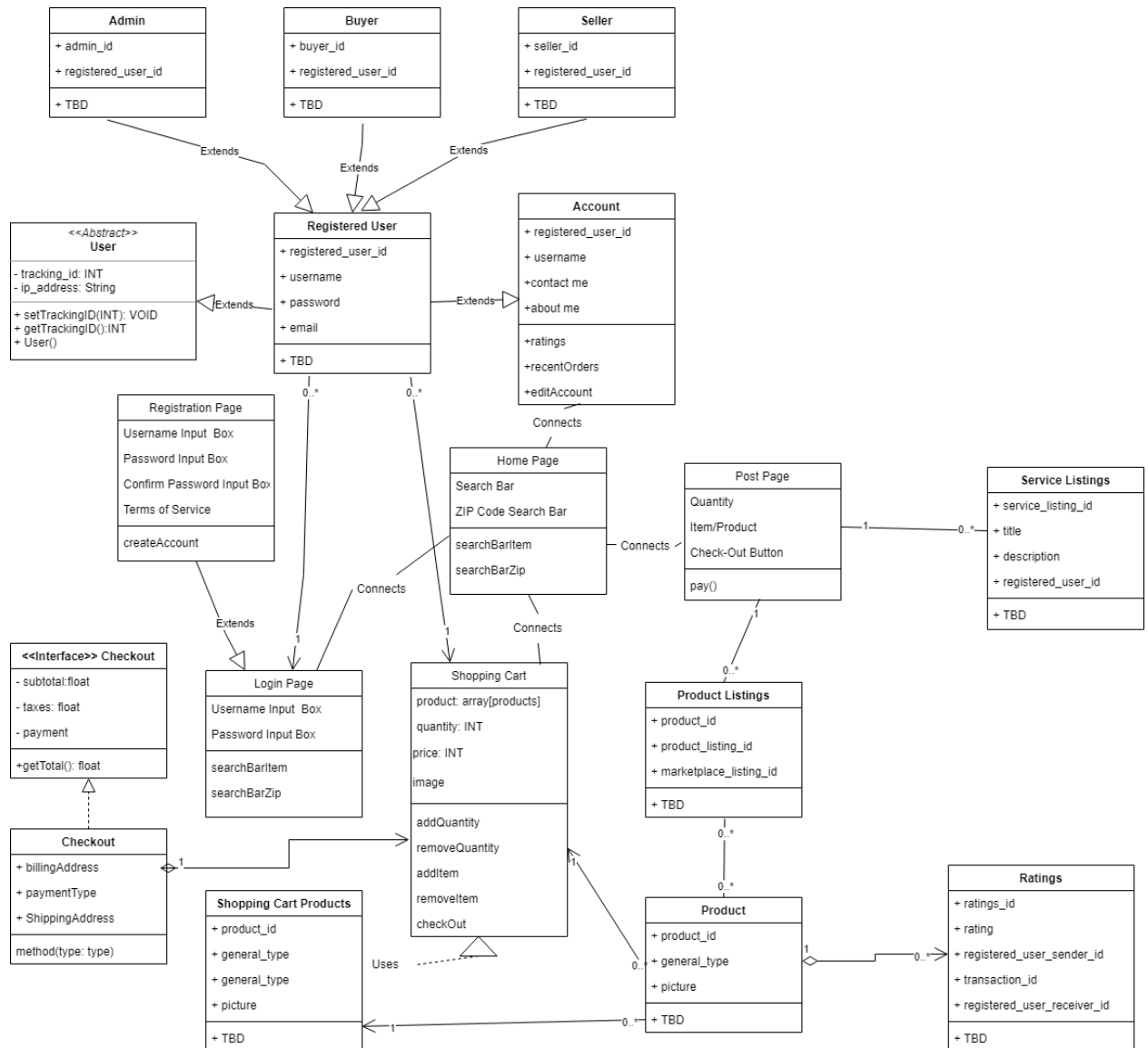
```
SELECT MarketplaceListing.title,  
Product.product_image FROM ProductListings  
JOIN MarketplaceListing ON  
ProductListings.marketplace_listing_id =
```

```
MarketplaceListing.marketplace_listing_id
JOIN Product ON ProductListings.product_id =
Product.product_id
WHERE MarketplaceListing.title LIKE '%tes%';
```

- c. When searching for products using a condition filter, we will use a similar SQL LIKE to search for the specific keyword given, however, the product condition will be added using the drop down menu with the SQL AND function. A Query example would be:

```
SELECT MarketplaceListing.title,
Product.product_image, Product.condition FROM
ProductListings
JOIN MarketplaceListing ON
ProductListings.marketplace_listing_id =
MarketplaceListing.marketplace_listing_id
JOIN Product ON ProductListings.product_id =
Product.product_id
WHERE MarketplaceListing.title LIKE '%searchterm%'
AND Product.condition = "NEW";
```

## [Section V] High Level Diagrams



## **[Section VI] List of Contributions**

### **I. Ryan**

- A. Facilitated group meetings and plans
- B. Worked on categorizing the priorities with the group
- C. Worked on frontend for the horizontal prototype
  - 1. Worked on the CSS for the login, register page, PostItem, SellItem, Home Page, and item View
  - 2. Worked on the CSS for the footer along with the java
  - 3. Worked on fixing Home backend, itemView, login, registration
- D. Worked on backend for the vertical/prototype
  - 1. Worked to refactor putting marketplace listing products into the remote database
  - 2. Worked to fix the search features for Marketplace listings (back-end)

### **II. Duncan**

- A. Created all the wireframes drawings for Milestone 3.
- B. Revised all High level UI Mock up drawings in Milestone 2.
- C. Revised use cases that were given in Milestone 1.
- D. Created the UI design of the Front end of each page (not the coding).

### **III. Justin**

- A. Worked on categorizing the priorities with the group.
- B. Revised the functional requirements on Milestone 3.
- C. Revised the data definitions for Milestone 3.
- D. Revised the UML diagram for Milestone 3.
- E. Worked on the frontend for the horizontal prototype.

1. Designed and wrote the code for the UI for the Shopping Cart and Checkout pages.
2. Worked on the routing for the Advertisements, Privacy Policies, and Term of Service pages.
3. Created the UI for the Advertisement page, designing an easy forum for users to fill out.
4. Added CSS for the Shopping Cart and Checkout pages.

#### **IV. Brendan**

- A. Assisted in altering CSS for various part of the site
  1. Login CSS assistance
  2. Home page search bar CSS assistance
- B. Worked on routing related to the forum and service listing
  1. Routing to proper external links
  2. Routing to proper dummy user pages mentioned in service and forum listing
- C. Created dummy user account pages for proper routing.
- D. Worked on UI for the pages of forum and service listing
  1. Implemented grid design to forum pages for a for fulfilling design
  2. A smoother design for forum and service listing for easy reading, and proper design to fit with background

## **V. Darren**

- A. Worked on categorizing the priorities with the group and reworked the documentation on the database (section IV)
- B. Worked on revising the database (on MySQL and AWS) based on the feedback from M2V1
- C. Worked on frontend for the horizontal prototype
  - 1. Made the home page more user friendly
  - 2. Made the account the page
  - 3. Added css to various details in the website, including the footer, buttons, and menu
- D. Worked on backend for the vertical/prototype
  - 1. Worked to refactor putting marketplace listing products into the remote database
  - 2. Worked to fix the search features for Marketplace listings (back-end)