

SW Engineering CSC648/848 Fall 2022  
Gatormmunity

Team 7: Team 7

Anthony Zhang (Team Lead),  
azhang12@mail.sfsu.edu

Marwan Alnounou

Mohamed Sharif

Jose Lopez

Florian Cartozo

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12/14/2022

History Table

Version	Submission Date
M3V1	11/10/2022
M3V2	12/14/2022

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# **1. Data Definitions V3**

## *Types of Users:*

**All Users:** Any person who visits Gatormmunity's website, whether they are logged in or not.

- All Users can see the home page, login page, and register page, but what they can do on each of these pages depends on whether they are logged in or not.

**Guest User:** A person that does not have an account.

- Guest Users can only see the pages that do not require one to be logged in for, e.g. the home page, registration page, login page, and about us page.
- Guest Users can register for an account by providing a full name, SFSU email address, SFSU ID number, SFSU ID picture, and password.
  - The picture must be of an image format. Supported formats are: JPEG, PNG, WebP, GIF, and AVIF. The picture must be at most 5 MB in size.

**Unapproved User:** A person that registered for an account and has not yet had their account approved by a moderator or admin.

- Unapproved Users have the same privileges as Guest Users, meaning they can only see the pages that do not require one to be logged in for.
- Unapproved Users cannot login until their account has been approved by a moderator or admin.
- Unapproved Users have the same attributes as any other user stored in the user table in the database: a first name, last name, email, SFSU ID number, SFSU ID picture, profile picture, role, and join date.
  - For unapproved users, role = 0.

**Approved User:** A person that registered for an account and has had their account approved by a moderator or admin. All logged in users are approved users, since unapproved users cannot login.

- Approved Users have access to almost every page and feature in our application, except for moderation tools and group-exclusive features. They can create forum threads and posts and post marketplace listings, for example.
- Approved Users can log in to their account by providing their SFSU ID number and password.
- Approved Users have the same attributes as any other user stored in the user table in the database: a first name, last name, email, SFSU ID number, SFSU ID picture, profile picture, role, and join date.
  - For approved users, role = 1.

**Moderator / Mod:** An approved user that has moderation powers in Gatormmunity.

- Moderators have more privileges than Approved Users, and have access to moderation tools, including the ability to approve/reject Unapproved Users, and ban Unapproved and Approved Users from Gatormmunity via the UI.

- The role and its associated privileges are determined by the role attribute stored in the database for each user. To be able to access the moderation tools in the UI, a user needs to have the correct role attribute value in the database. The back end will check the user id of the user to ensure that they are of the correct role before executing any moderation actions.
- Moderators are appointed and unappointed by Server Administrators using either the Gatormmunity website or through directly modifying a user's role in the database.
- No users will be able to determine their role upon registering like they could in the Vertical Prototype.
- Moderators have the same attributes as any other user stored in the user table in the database: a first name, last name, email, SFSU ID number, SFSU ID picture, profile picture, role, and join date.
  - For moderators, role = 2.

**Administrator / Admin:** An approved user who has access to Gatormmunity's server, database, and GitHub repository.

- Administrators have more privileges than Moderators, and have access to administrative tools, including the ability to appoint moderators and ban them.
- Similar to moderators, the back end will check if the user performing the administrative actions is of the correct role before executing any administrative actions.
- Administrators are appointed by the developers (the team).
- Administrators have the same attributes as any other user stored in the user table in the database: a first name, last name, email, SFSU ID number, SFSU ID picture, profile picture, role, and join date.
  - For administrators, role = 3.

**Group Member:** An approved user who is a member of a group. Group Members are stored in the Group User table, an associative table between Group and User.

- Group Members have the same privileges as Approved Users, and have access to group-exclusive features such as creating forum threads in their group's forum or sending messages in their group's chat.
- Approved Users become Group Members when they join a group via an invite from another Group Member.
- Group Members are differentiated from the other Group User entities by means of their role attribute in the Group User table. For group members, role = 1.

**Group Moderator / Group Mod:** An approved user who is a moderator of a group. Group Moderators are stored in the Group User table, also.

- Group Moderators have more privileges than Group Members, and have access to group moderation tools, including the ability to kick group members from the group via the UI.
- Group Moderators are appointed and unappointed by Group Administrators in the UI.
- Group Moderators are differentiated from the other Group User entities by means of their role attribute in the Group User table. For group moderators, role = 2.

**Group Administrator / Group Admin:** An approved user who is an administrator of a group. Group Administrators are stored in the Group User table, also.

- Group Administrators have more privileges than Group Moderators, and have access to group administrative tools, including the ability to delete their group and appoint/unappoint Group Moderators via the UI.
- Group Administrators are differentiated from the other Group User entities by means of their role attribute in the Group User table. For group administrators, role = 3.

#### *User Interface Terms:*

**Navigation Bar / Navbar:** The navigation bar will be at the top of every page and will contain buttons that link to different pages within our application and a search bar.

- Only logged in users can see these buttons in the navigation bar. Users who are not logged in can only see the logo, buttons that link to the login or registration page, and the search bar.
- The navbar no longer queries the database as it did in the Horizontal Prototype. When a user uses the search bar in the navbar, the navbar redirects the user to the search page with the provided search terms as parameters in the URL. The search page then performs the search by fetching from the back end.
- The navbar displays the profile picture of the user if they are logged in. The profile picture's URL is retrieved from the back end which the client then uses to display the image.
- The navbar shows an additional link to the Administration page which is visible and accessible only to moderators and administrators.

**Dashboard:** The page that approved users will see after logging in, similar to a home page for only logged in users. The dashboard page is also accessible via a dropdown from the profile picture in the navbar if the user is logged in.

- The dashboard will show the user's profile picture, name, the newest forum threads in the Gatormmunity forum, and the newest marketplace listings. It is intended to catch the user up on what is happening right now in Gatormmunity and the threads/listings displayed may catch the user's eye.
- This page is only visible to logged in users. The code does this by checking the back end if the user is logged in before rendering the content in the page.

#### *Gatormmunity Forum:*

**Gatormmunity Forum / Forum:** A forum where all approved users can start their own forum threads and make forum posts in existing threads. The Gatormmunity Forums page will show a list of threads that are of the category the user specified. The threads are retrieved from the database, and the filtering will be done on the server's side.

- Only logged in users may see this page.

**Forum Category:** Threads belong to categories which are intended to help approved users find threads that they are interested in. Approved users can specify which category of threads they would like to see on the Gatormmunity Forums page. By default, no category filter is specified.

- Example categories: General, Social, Questions

**Forum Thread / Thread:** A collection of posts. Threads have a title which is determined by the person starting the thread. Threads may belong to a group, and if they are, they will only be visible in that group's forum. Forum threads are comparable to discussion topics on iLearn, which other students can reply to.

- Forum threads can be clicked on, which will lead to the View Thread page, which shows the posts other approved users have made in reply to the thread.

**Forum Post / Post:** A message that approved users can post in a thread. Forum posts are comparable to the replies in a discussion topic on iLearn, including the post that started the discussion topic. Every forum post must have content and is associated with a thread and a user (the author) by means of a thread id and user id.

- The first post that starts a thread may also be referred to as the "original post". The original post is automatically created when a user creates a thread, since the create thread form asks for the body of the first post as well as the thread's title.
- Only the original (first) post of a thread may contain an image. All other posts in a thread will not be able to have images.

**Post Attachment:** Approved users can attach an image to the first post of the thread when creating a thread. No other post in a thread may contain an image. The image's filename on the server will be randomized in order to avoid name clashes, but the filename the user gave their file will be saved in the database and displayed next to the image in the post.

- The image must be of an image format. Supported formats are: JPEG, PNG, WebP, GIF, and AVIF.
- The image must be at most 5 MB in size.

**Pin:** A pinned forum thread will always appear first when displaying the list of threads. This is not a priority 1 item.

**Bookmark:** Approved users can bookmark forum threads, which saves the thread into the user's bookmarks. Bookmarks exist to help the user easily find threads that they want to go back to in the future. This is not a priority 1 item.

## *Gatormmunity Marketplace:*

**Gatormmunity Marketplace / Marketplace:** A page within the application where approved users can buy and sell goods and services. An individual good/service being sold is called a listing.

- Only logged in users may see this page.
- Approved users may filter what they see in the marketplace page by inputting a category filter and max price filter. The category filter, when applied, shows only listings that match the category specified, while the max price filter only shows listings that do not exceed the price entered. Both filters may be used at the same time.
- The listings shown on this page are retrieved from the Listing table in the database.

**Marketplace Buyer / Buyer:** An approved user who is buying something from Gatormmunity's marketplace. There is nothing special about a buyer compared to an approved user, it is just terminology that refers to the person making the purchase.

**Marketplace Seller / Seller:** An approved user who is selling something on Gatormmunity's marketplace. The listing that the seller makes will show the seller's name and email, which the buyer may use to contact them with.

**Marketplace Listing / Listing:** An item or service a seller is trying to sell on the marketplace. It must have a photo of the item being sold, a description, a title, a price, and a category. The seller's contact information (email and direct message option) will be automatically included in the listing.

- The listing will not need to be approved before being listed, but approved users can report listings and moderators can delete listings that break the rules.
- The photo must be of an image format. Supported formats are: JPEG, PNG, WebP, GIF, and AVIF. The image must be at most 5 MB in size.

## *Community Features:*

**Gator Chat:** A chat room for all approved users of Gatormmunity. Approved users can send messages and receive messages from other approved users in the chat room. No images can be attached to the messages.

- The chat room is accessible from the Chat button in the navbar, and is only accessible to logged in, approved users. Every message must contain some text in its body.

**Direct Message / DM:** A private method of communication between two approved users. No images can be attached to the messages.

- An approved user's direct messages are accessible from the Inbox button in the navbar, and an approved user must be logged in to see their direct messages. Every message must contain some text in its body and every message is associated with a pair of users: the sender and recipient. The pair of users is known as a "conversation" in the database.

**User Groups / Groups:** Approved users can form their own groups which come with exclusive features such as a group-exclusive chat and forum.

- Members of a group can have 3 roles: Group Member, Group Moderator, or Group Administrator.
- Groups must have a picture that is of an accepted image format. Supported formats are: JPEG, PNG, WebP, GIF, and AVIF. The group picture must be at most 5 MB in size.
- Groups can have a description and announcement, which are displayed on the group's home page. It serves to tell new group members about the group's purpose and rules, as well as show a message the group admin would like all of its members to see on the home page.

**Group Chat:** A chat room for all members of a group. All group members can send messages and receive messages from other group members in the group chat room. No images can be attached to these messages.

- The group's chat is accessible in the navbar, via the Chat button. Only logged in users who are members of the group can see a group's chat and send messages in it.
- Each message must have content, and each message is associated with a sender (a user) via their user id.



## **2. Functional Requirements V3**

### **Priority 1:**

1. All Users
  - 1.1. All users shall be able to contact the developers via the Contact Us page.
  - 1.2. All users shall be able to view the home page.
  - 1.3. All users shall be able to view the registration page.
  - 1.4. All users shall be able to view the login page.
  - 1.5. All users shall be able to view the about page to learn about Gatormmunity.
2. Guest User
  - 2.1. A guest user shall be able to view the registration page.
  - 2.2. A guest user shall be able to view the login page.
  - 2.3. A guest user shall be able to register for an account.
3. Approved User
  - 3.1. An approved user shall be able to log in to their account.
  - 3.2. An approved user shall be able to reset their password.
  - 3.3. An approved user shall be able to report other users via the Contact Us page.
  - 3.4. An approved user shall be able to create a forum thread.
  - 3.5. An approved user shall be able to assign their forum thread to a category.
  - 3.6. An approved user shall be able to create a forum post.
  - 3.7. An approved user shall be able to attach an image when creating a thread. The image will be displayed in the first post of the thread.
  - 3.8. An approved user shall have a profile page.
  - 3.9. An approved user's profile page shall show their details, e.g. their full name.
  - 3.10. An approved user's profile page shall show their recent activities, e.g. their recently created listings or threads.
  - 3.11. An approved user shall be able to view a user's profile page.
  - 3.12. An approved user shall have a profile picture.
  - 3.13. An approved user shall be able to change their profile picture.
  - 3.14. An approved user shall be able to create a user group.
  - 3.15. An approved user shall be able to join a user group after being invited to it.
  - 3.16. An approved user shall be able to send direct messages to other users.
  - 3.17. An approved user shall be able to receive direct messages from other approved users.
  - 3.18. An approved user shall be able to send messages in Gator Chat.
  - 3.19. An approved user shall be able to see marketplace listings in the marketplace.
  - 3.20. An approved user shall be able to select marketplace listings in the marketplace.
  - 3.21. An approved user shall be able to report marketplace listings via the Contact Us page.
  - 3.22. An approved user shall be able to buy items from the marketplace.
  - 3.23. An approved user shall be able to sell items on the marketplace by creating a listing.
  - 3.24. An approved user who is selling an item shall be able to assign their listing to a category.

- 3.25. An approved user shall be able to upload a picture of an item they are selling.
  - 3.26. An approved user shall be able to delete their own listings from the marketplace.
  - 3.27. An approved user shall be able to search for users.
  - 3.28. An approved user shall be able to search for marketplace listings.
  - 3.29. An approved user shall be able to search for forum threads.
  - 3.30. An approved user shall be able to apply filters to their user search results.
  - 3.31. An approved user shall be able to apply filters to their marketplace search results.
  - 3.32. An approved user shall be able to apply filters to their forum thread search results.
- 4. Moderator
    - 4.1. A moderator shall be able to approve unapproved users.
    - 4.2. A moderator shall be able to reject unapproved users.
    - 4.3. A moderator shall be able to ban unapproved and approved users from Gatormmunity.
    - 4.4. A moderator shall be able to delete forum threads.
    - 4.5. A moderator shall be able to delete forum posts.
    - 4.6. A moderator shall be able to delete listings in the marketplace.
- 5. Administrator
    - 5.1. An administrator shall be able to appoint moderators.
    - 5.2. An administrator shall be able to unappoint moderators.
    - 5.3. An administrator shall be able to ban moderators from Gatormmunity by first unappointing the moderator, then banning them.
    - 5.4. An administrator shall be able to change a user's password, if the user is not an administrator.
- 6. Group Member
    - 6.1. A group member shall be able to invite other users to their group.
    - 6.2. A group member shall be able to leave their group.
    - 6.3. A group member shall be able to create forum threads in their group's forum.
    - 6.4. A group member shall be able to create forum posts in their group's forum.
    - 6.5. A group member shall be able to send messages in their group's chat.
- 7. Group Moderator
    - 7.1. A group moderator shall be able to kick group members from their group.
    - 7.2. A group moderator shall be able to delete forum threads in their group's forum.
    - 7.3. A group moderator shall be able to delete forum posts in their group's forum.
- 8. Group Administrator
    - 8.1. A group administrator shall be able to delete their group.
    - 8.2. A group administrator shall be able to appoint group moderators.
    - 8.3. A group administrator shall be able to unappoint group moderators.
    - 8.4. A group administrator shall be able to kick group moderators from the group by first unappointing the moderator, then kicking them.

- 8.5. A group administrator shall be able to edit the announcement on their group's home page.

## **Priority 2:**

9. Approved User
  - 9.1. An approved user shall be able to delete their account.
  - 9.2. An approved user shall be able to change their password.
  - 9.3. An approved user shall be able to attach images to their chat messages.
  - 9.4. An approved user shall be able to sort forum threads.
  - 9.5. An approved user shall be able to report forum posts to a moderator.
  - 9.6. An approved user shall be able to block other users.
  - 9.7. An approved user who is selling an item shall be able to list their accepted payment methods.
  - 9.8. An approved user who is selling an item shall be able to list their possible delivery methods.
  - 9.9. An approved user who is selling an item shall be able to list their preferred contact methods.
  - 9.10. An approved user shall be able to edit the details of an item they are selling.
10. Moderator
  - 10.1. A moderator shall be able to delete messages in Gator Chat.
11. Group Moderator
  - 11.1. A group moderator shall be able to delete messages in their group's chat.
12. Group Administrator
  - 12.1. A group administrator shall be able to edit their group's description.

## **Priority 3:**

13. All Users
  - 13.1. All users shall be able to donate money to the developers via PayPal. PayPal has a donate button that prompts the user to specify how much they want to donate, and that donation shall go to the developers.
  - 13.2. All users shall be able to donate money to the developers via Venmo. The developers have a Venmo username that the user can direct their Venmo donation to.
14. Approved User
  - 14.1. An approved user shall be able to compare different marketplace listings against each other.
  - 14.2. An approved user shall be able to add items to a wishlist.
  - 14.3. An approved user shall be able to bookmark forum threads.

- 14.4. An approved user shall be able to like forum posts.
- 14.5. An approved user shall be able to leave feedback about the seller they purchased an item from.
- 15. Moderator
  - 15.1. A moderator shall be able to pin forum threads.
- 16. Administrator
  - 16.1. An administrator shall be able to create new categories in the forum.
  - 16.2. An administrator shall be able to delete categories in the forum.
- 17. Group Moderator
  - 17.1. A group moderator shall be able to pin forum threads in their group's forum.
- 18. Group Administrator
  - 18.1. A group administrator shall be able to resign their position as group administrator and give the position to another member of the group.
  - 18.2. A group administrator shall be able to create new categories in their group's forum.
  - 18.3. A group administrator shall be able to delete categories in their group's forum.

### **3. Wireframes Based on Our Mockups/Storyboards V2**

#### **Link to Figma Wireframe:**

<https://www.figma.com/file/DIbMW3CeBzCwxkem2SSRU6/M3V2?node-id=0%3A1&t=zcUI59QqIlyu5MI1-1>

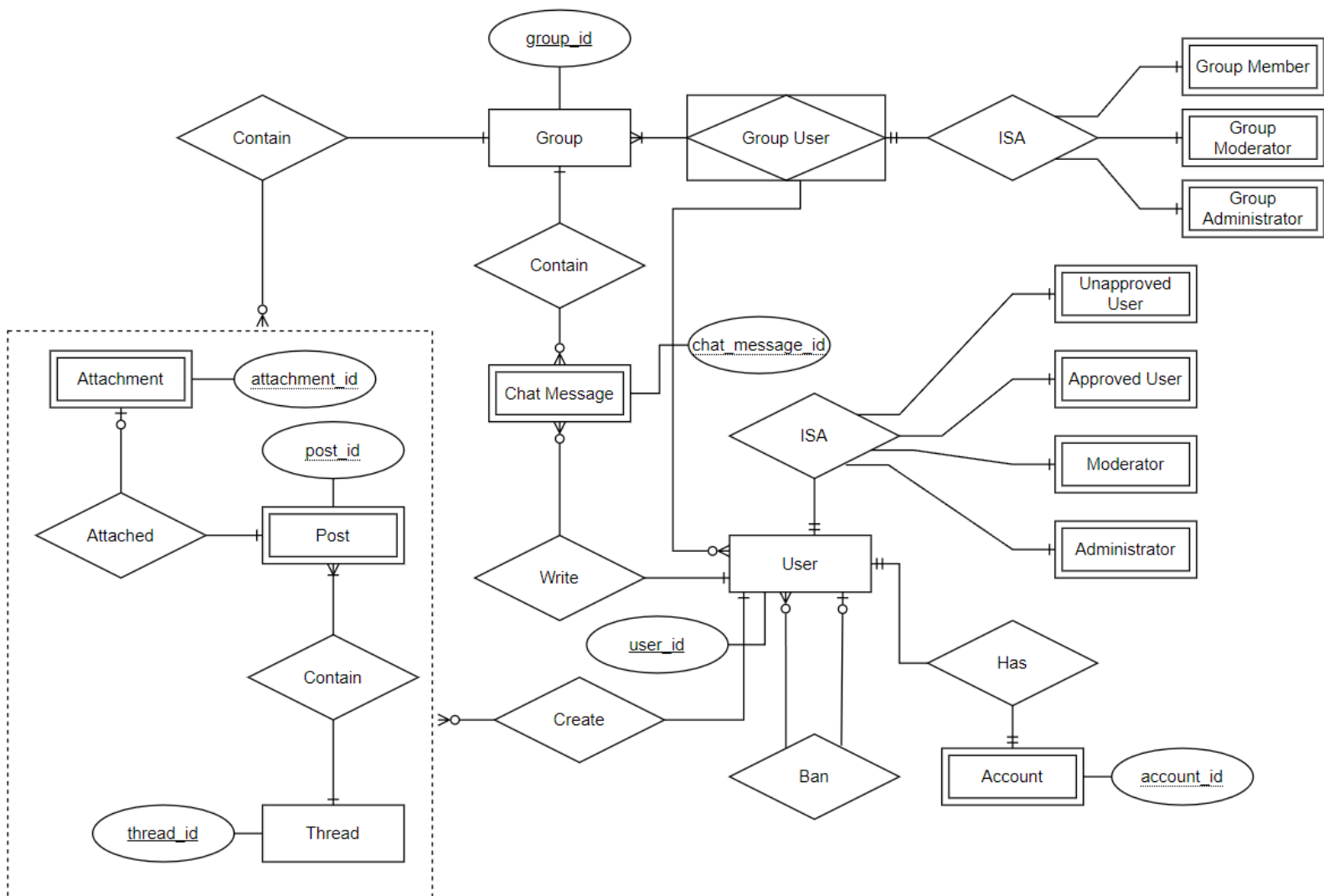
After clicking on the link, press the play button on the top right of the screen to demo our wireframe.

The wireframe page contains all of our pages and their variants (e.g. modals) in our application. Some components are stored in the wireframe page because prototyping does not appear to work when two frames are on different pages.

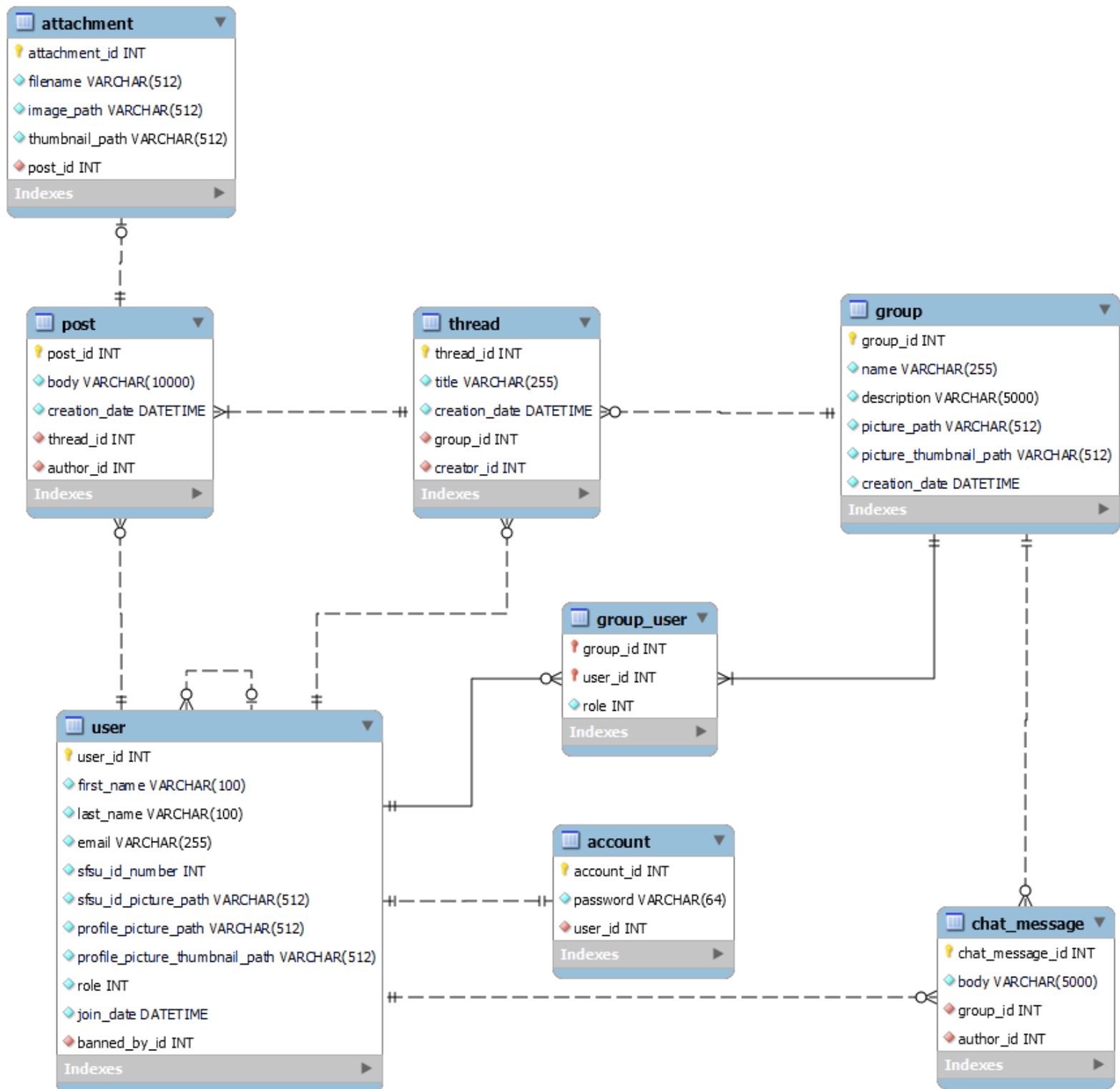
The static assets page is for components that do not use prototyping and therefore can be on their own page.

## 4. High Level Database Architecture and Organization V2

ERD from M2V2:

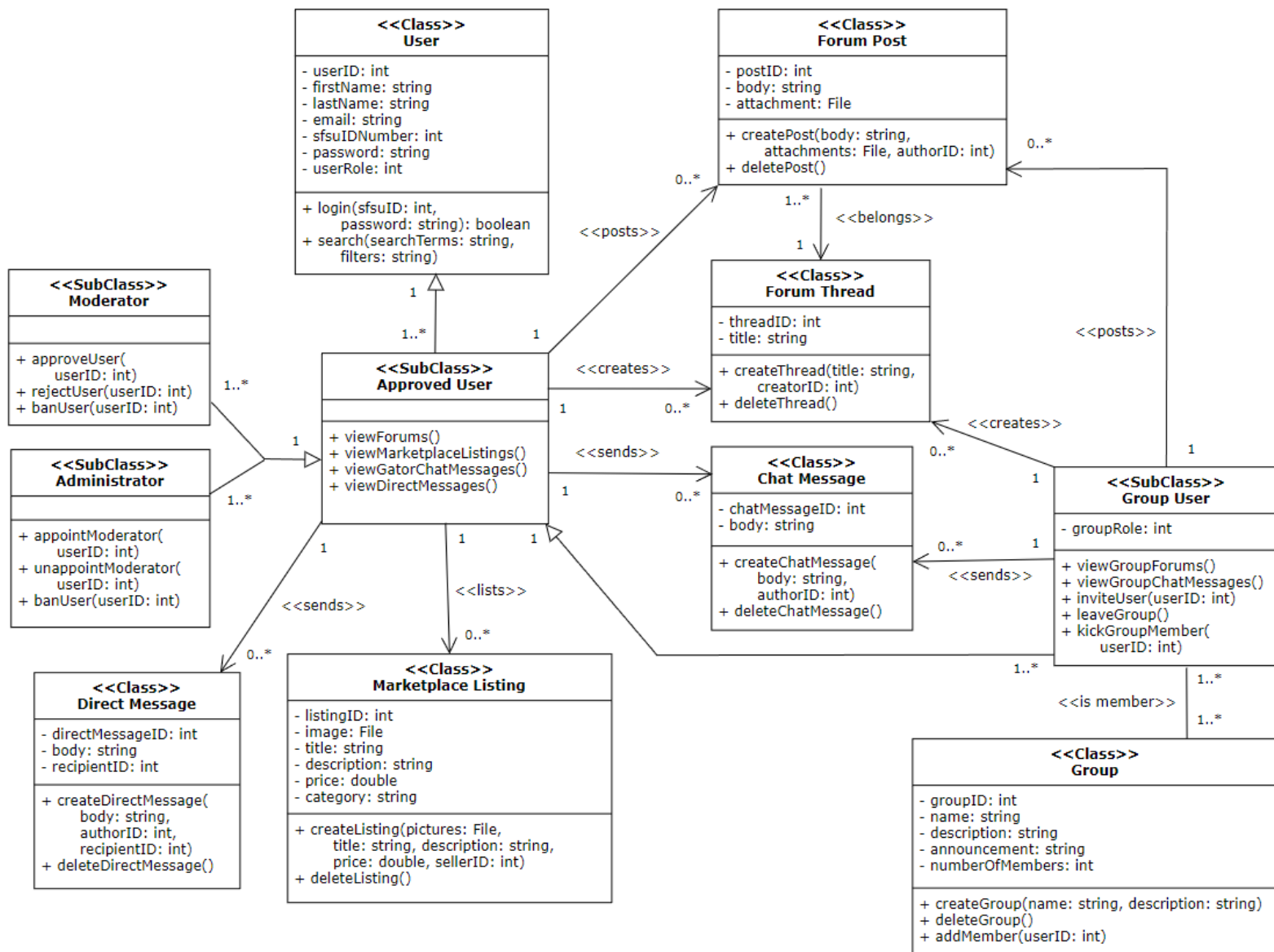


## EER Model Based on the M2V2 ERD:



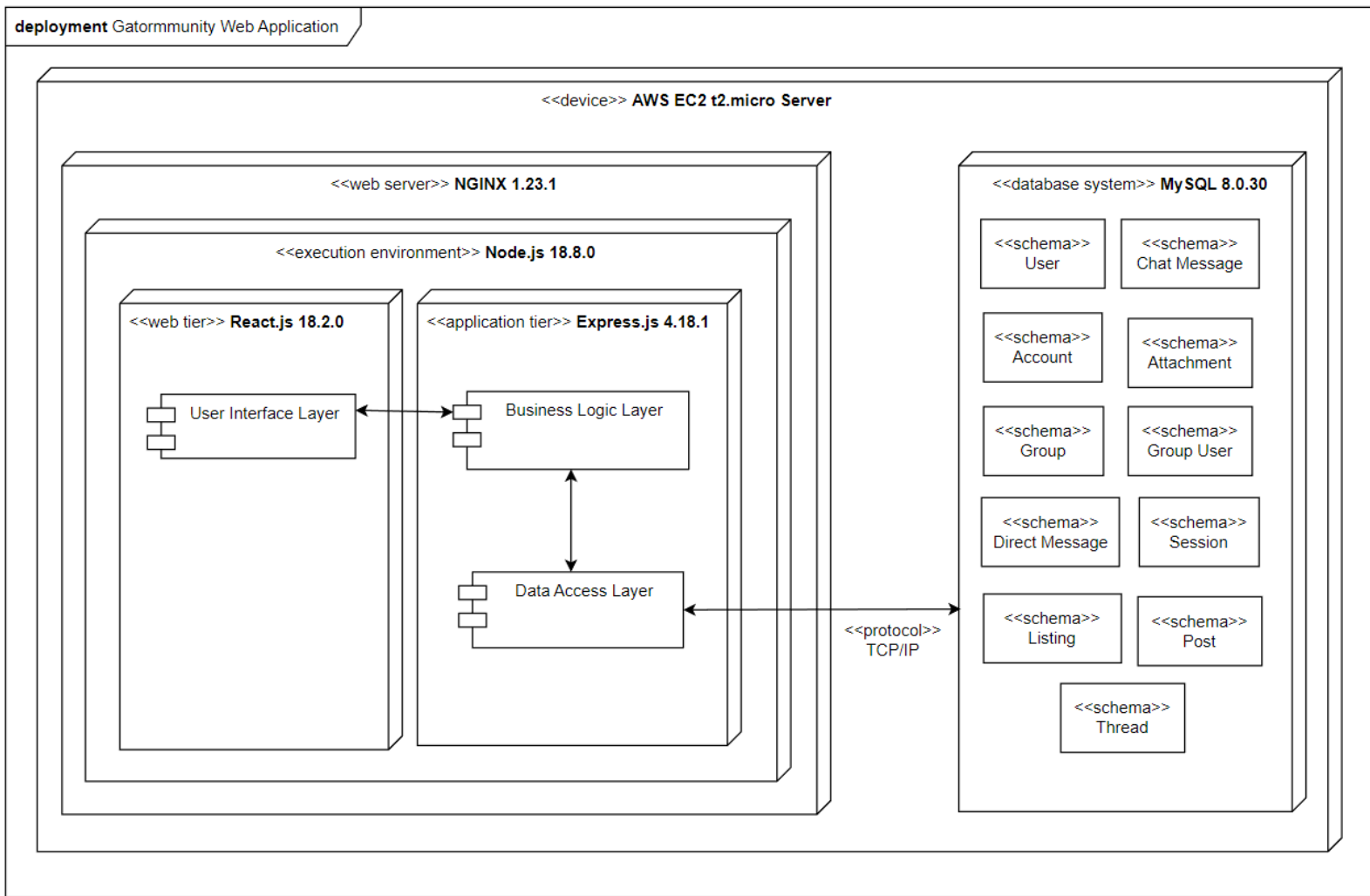
## 5. High Level Diagrams V2

UML Diagram:

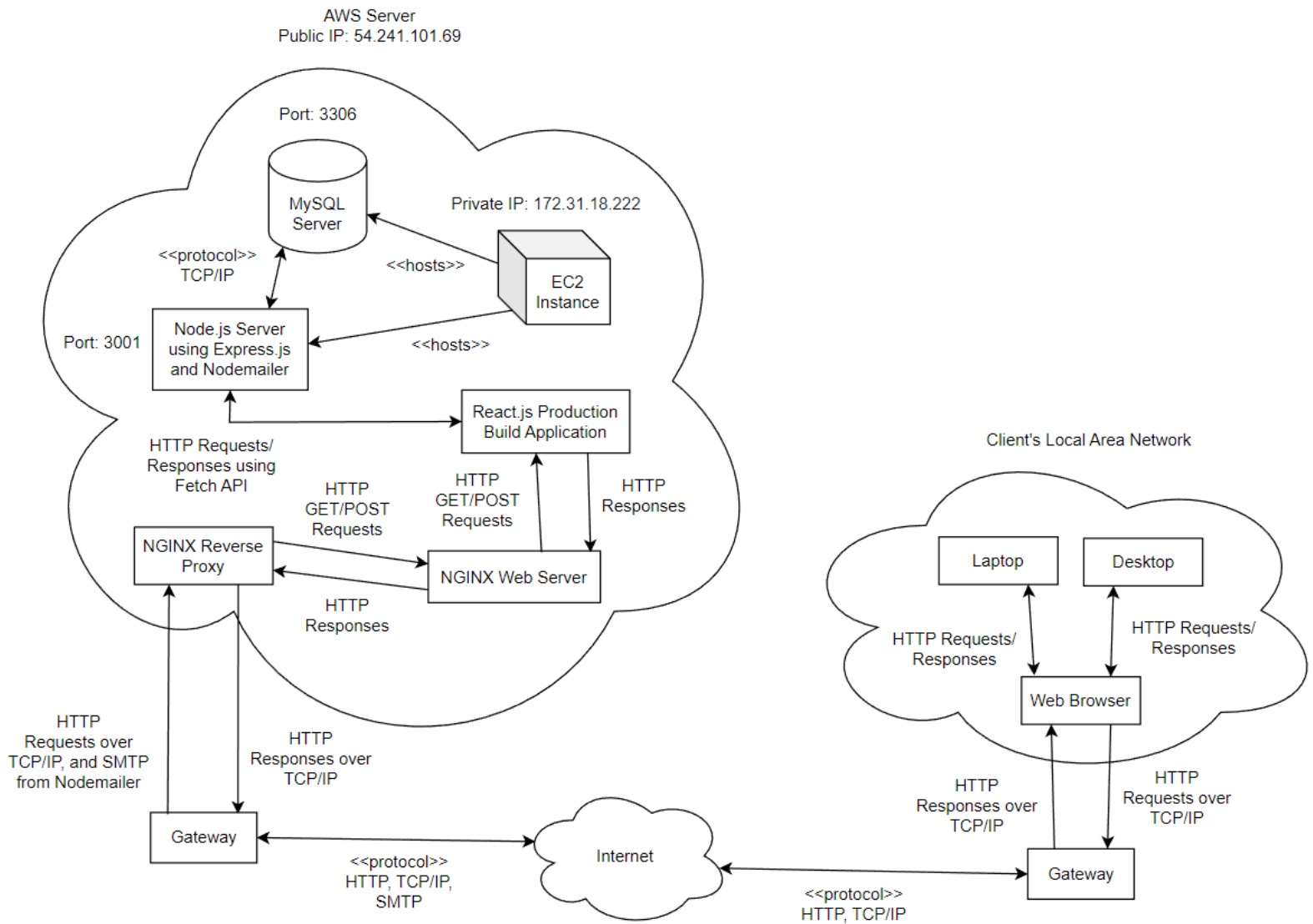




## Deployment Diagram:



## Network Diagram:



## **6. List of Contributions in This Milestone**

### **Anthony Zhang:**

- Active participant in the meetings and team Discord server
- Discussed how to apply the feedback from M2V1 and the Vertical Prototype
- Applied the feedback and edited M2V2, then brought the changes from M2V2 into M3V1 for the Data Definitions, ERD, UML diagram, deployment diagram, and network diagram
- Helped reprioritize our functional requirements
- Created the final Figma frames for the pages: Home, Registration, Login, Dashboard, User Profile, Chat, Inbox, Search, Marketplace, User's Groups, Group Home, Group Members, Create Group, Create Listing, View Listing, Group Forums, Gatorcommunity Forums, Group Create Thread, Create Thread, View Thread, Contact Us, Help, Answer
- Created most of the Figma components and created the prototyping links between the Figma frames
- Created the EER Model
- Created the pages: Terms of Service, Privacy Policy, Help, Answer, Group Home, Group Forums, Group Create Thread, View Thread, Search, User Profile, Create Group, View Listing
- Helped create the pages: Contact Us, Create Listing, Create Thread
- Created the modals: Change Profile Picture, Group Invite, Group Change Announcement, Forgot Password
- Implemented the back end for the Change Profile Picture feature
- Helped create the mock/hardcoded data

### **Marwan Alnounou:**

- Active participant in the meetings and team Discord server
- Helped reprioritize our functional requirements
- Set up the front end for SW development by copying over our vertical prototype's front end folder into the horizontal prototype folder
- Created the pages: Login, Registration
- Helped create the Search page
- Styled the pages: Terms of Service, Privacy Policy, Home, Contact Us
- Styled the Navbar and Footer

### **Mohamed Sharif:**

- Active participant in the meetings and team Discord server
- Discussed how to apply the feedback from M2V1 and the Vertical Prototype
- Helped reprioritize our functional requirements
- Set up the back end for SW development by copying over our vertical prototype's back end folder into the horizontal prototype folder
- Refactored our back end code by splitting our routes file into a controller file and a route file. This was done to follow the MVC model more closely.

- Helped create the pages: Contact Us
- Tried to create the Gatormmunity Forums page
- Implemented the back end for the pages: Contact Us, Registration

#### **Jose Lopez:**

- Active participant in the meetings and team Discord server
- Discussed how to apply the feedback from M2V1 and the Vertical Prototype
- Helped reprioritize our functional requirements
- Created the initial Figma frames for the pages: Login, Registration, User Profile, Create Post, Gatormmunity Forums, Inbox. They were later simplified by Anthony to make the pages easier to implement.
- Helped create the pages: Create Listing, Create Thread
- Tried to create the Inbox page

#### **Florian Cartozo:**

- Helped reprioritize our functional requirements
- Set up the shared Figma file and taught the team how to use components and Figma's prototyping feature
- Created the Figma components: Navbar, Footer
- Created the final Figma frames for the pages: About Us, About Me, Privacy Policy, Terms of Service, Page Not Found
- Created the pages: About Us, About Me, Dashboard, Marketplace, Gatormmunity Forums, Inbox, Chat, Page Not Found, User's Groups, Group Members
- Helped create the mock/hardcoded data

#### **Contribution Scores:**

Anthony Zhang: 10

Marwan Alnounou: 5

Mohamed Sharif: 5

Jose Lopez: 5

Florian Cartozo: 10