D2- Sequence/Activity/Class/State Diagrams/Mockups October 22 23:59)

1. Sequence Diagrams

1.1. Scenario 1: Getting an Item

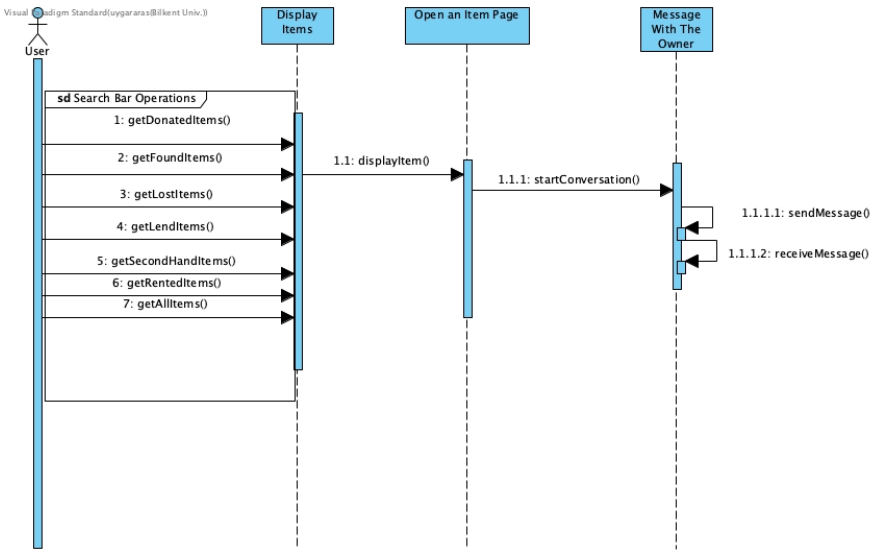

Fig. 1: Sequence Diagram to Demonstrate How Users Get Items

When a user enters the application and searches for anything using the search bar, one of the methods in the first sequence is being used. Then if a user clicks a specific item from the items page, the page it is being opened, then the rest of the process is decided by the user. If user likes the product as shown user can start a conversation with the owner, he/she can send and receive messages in this message with the owner screen.

1.2. Scenario 2: Posting an Item

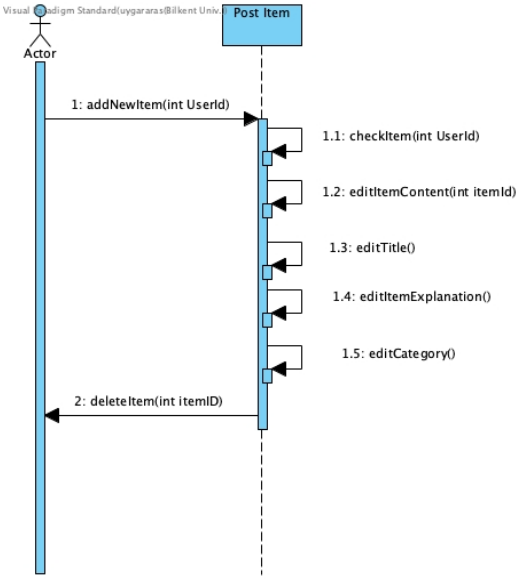

Fig. 2: Sequence Diagram to Demonstrate How Users Post Items

This diagram is a simple but comprehensive one it shows how an item can be listed on the application and how an item can be interacted with in multiple ways which are checkItem for checking if the item still exists, editItem, editTitle, editItemExplanation, and editCategory also there is a deleteItem function which is for removing a listing from the application.

1.3. Scenario 3: Actions That the User Can Perform from His / Her Profile

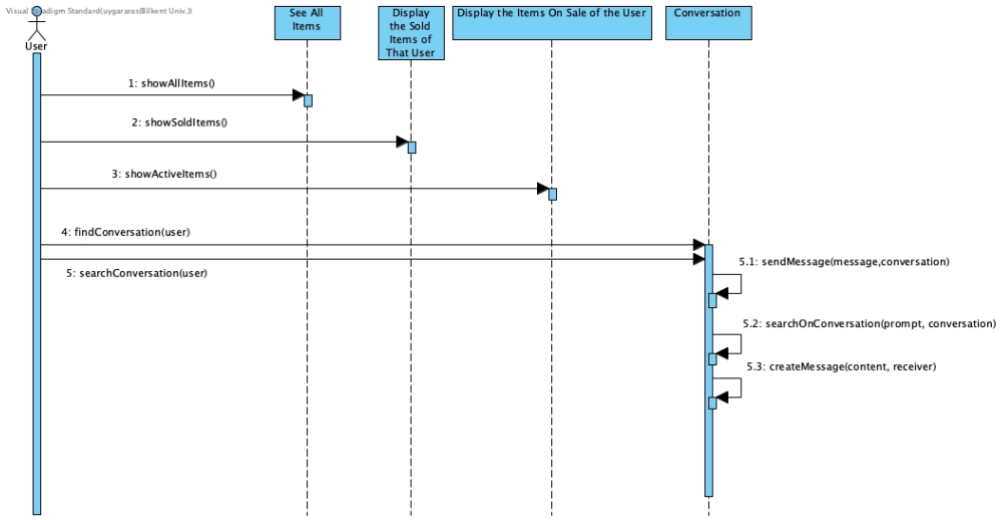

Fig. 3: Sequence Diagram to Demonstrate How Users Send and Search for Messages, Display Sold or Current Items from User Profile Page

This is the sequence diagram of the user profile settings screen. A user can show all the items that he/she listed from the beginning, display the sold items, and display the items that he/she is currently listing in the application also there is a conversations part of the application where every user has a list of previous chat and in the diagram, it is shown that user can interact with these conservations in multiple ways.

2. Activity Diagrams

2.1. Activity Diagram to Demonstrate Authentication Process

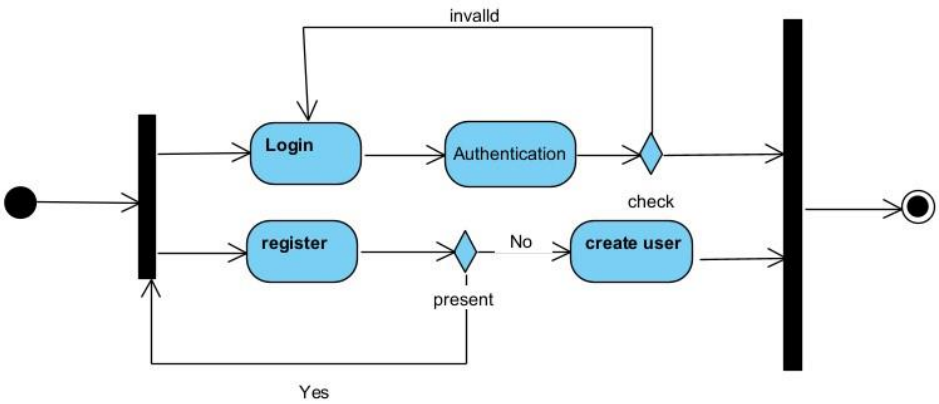

Fig. 4: Activity Diagram That Shows the Authentication Process

The activity diagram shows how a client enters Campus Connect. The first decision is whether the user wants to "Sign In." If they choose to sign in, the system requires the user password and the username. If the correct credentials are provided, the user finishes the authentication process. If not, the process offers them the option to "Register" if they wish to do so with their chosen password and Bilkent identity number. This way, a new user is created and added to the system. After either signing in or registering the authentication process concludes.

2.2. Activity Diagram to Demonstrate Exchange Process

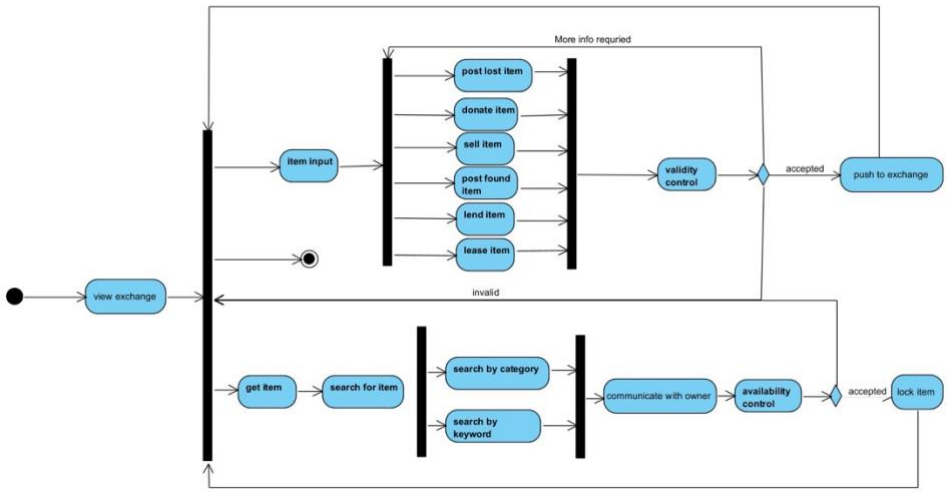

Fig. 5: Activity Diagram That Shows the Exchange Process

In this activity diagram, imagine yourself stepping into the bustling digital marketplace known as Exchange. After entering the exchange, as shown in the activity diagram one has two options for exploring existing items: searching for items by category or using specific keywords. Once the user discovers an item that captures their interest, it's time to engage with the seller. This part of the journey is akin to striking up a conversation with a merchant at a traditional marketplace. You inquire about the product, negotiate terms, and ensure it's the right fit for your needs. This is all virtual thanks to Campus Connect. Now comes a critical juncture in the story: the validation of the item. Both you, as the prospective buyer, and the seller must agree that the item is as described and authentic. It's the digital equivalent of a handshake deal that seals the transaction, locking the item for your purchase.

But the exchange isn't just about taking out items; it's a virtual Bilkent marketplace where you can contribute. You have a range of options: you can post lost items, donate your belongings, sell items, share found items, lend out items, or even lease items to others. Think of this as setting up your own stall in the marketplace, each representing a unique offering, be it a service or a product. However, your journey as a contributor doesn't end with posting. Before your listed item goes live in the marketplace, it undergoes a validity control process. Once your posted item passes the validity control, it's like watching your stall open for business. Your offering is available for all to see, and the marketplace is richer for your contribution. In this activity diagram, it has been shown how invaluable Bilkent users can explore, interact, trade, and share, all while maintaining trust and transparency in the process. Each user's

journey contributes to the ever-evolving story of this online Bilkent-only and Bilkent-specific virtual bazaar.

2.3. Activity Diagram to Demonstrate In-Profile Actions

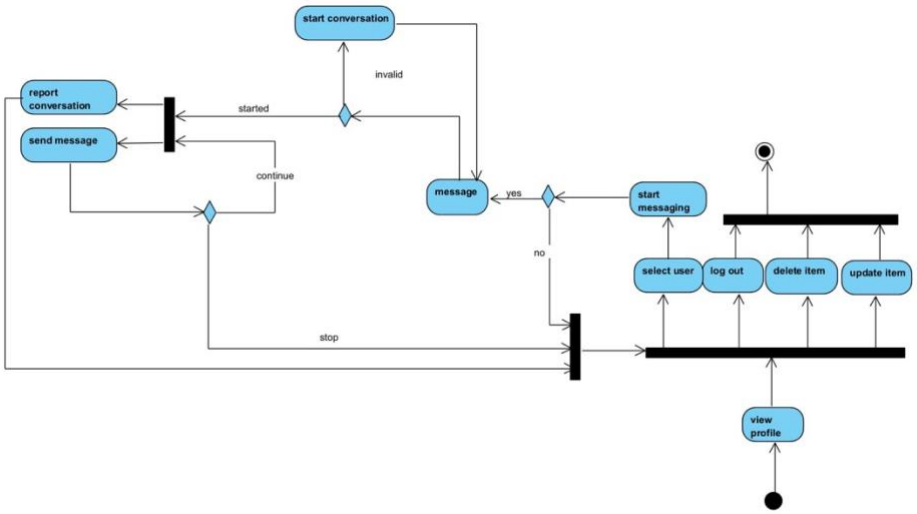

Fig. 6: Activity Diagram That Shows Actions Which Users Can Perform from Their Profiles

This activity diagram, it has been showing how a user profile page within Campus Connect performs. This page is not merely a static backdrop; it's a dynamic space filled with messaging features and inventory management tools. As you explore this digital realm, you encounter a multitude of options. On the profile page, the user can either manage their inventory or message another user by selecting and searching them.

The user can start their journey from the profile page, which serves as your central hub for most of the user-specific interactions. From there, you face various choices. If the client is ready to conclude their session, the "Sign Out" option acts as their digital exit. Choosing "Test with Other Users" is akin to opening a door to engage with fellow platform users, fostering connections and communication. Alternatively, if the client comes across a conversation that needs attention, "Report Conversation" serves as their lifeline to seek help in addressing issues. In this way, the user can request the banning of the other user if they have malicious behavior.

Furthermore, should users need to declutter their digital space by removing content from their posted items, "Delete Item" acts as their virtual broom. On the other hand, "Update Item" enables the user to fine-tune and refresh the designated item’s content. The client’s journey within the profile page concludes when they have accomplished the action(s) they have selected. As it has been shown in the activity diagram the profile page, in essence, becomes a dynamic gateway to a range of interactions and tasks, with each choice offering a different facet of Campus Connect’s online experience. Users can securely sign out from the platform via their special and unique profile page securely.

3. Class Diagram

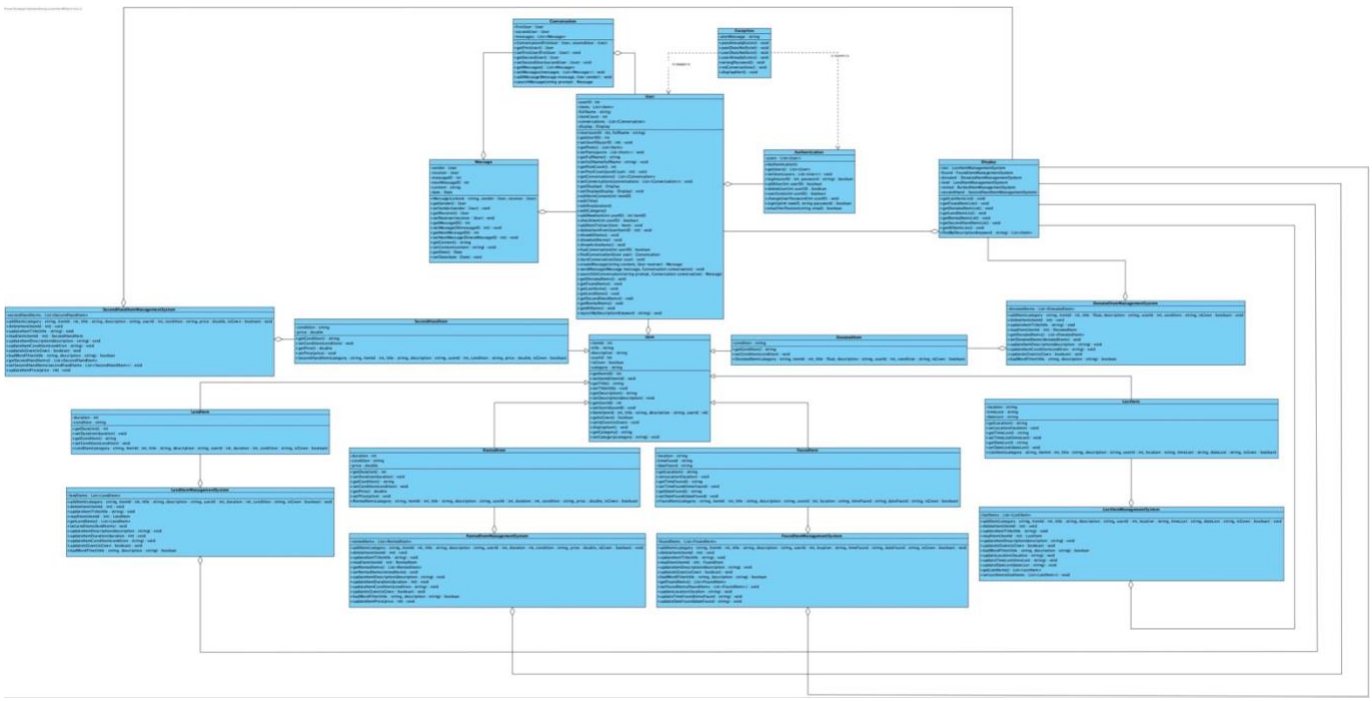

Fig. 7: Class Diagram of Campus Connect

This is the class diagram of Campus Connect that shows the inheritance and other relations of required classes to implement the application. Most processes are to be handled in multiple classes with shown operations and attributes. For example, the Display class uses Item class to show the unsold items in different categories and it is used by the User class to be called when the user wants to view items of a specific category. Classes and their relations with each other are shown by arrows along with their attributes and operations in detail. Parameters and return types of operations are also indicated for each class.

4. State Diagrams

4.1. State Diagram to Demonstrate Login Process

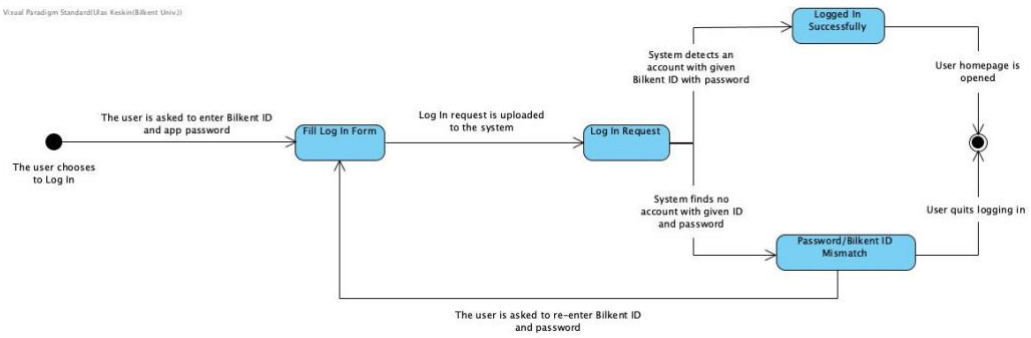

Fig. 8: State Diagram of Login Process

As demonstrated, the state diagram above contains information about the login process. The diagram is dependent on the fill login form state which connects to the login request state, establishing the connection between the user interface and database to check if any account is found containing the given information in the user table. If there is a match, the user logs in to their account successfully and is directed to the homepage. If the system fails to find a matching user with the information provided, a password/ID mismatch state is established where the user is directed back to the login form state to fill in the information again until a match is found. The latter situation would be the user quitting the login process while in the loop of entering valid login information, which would end the state diagram.

4.2. State Diagram to Demonstrate Sign-Up Process

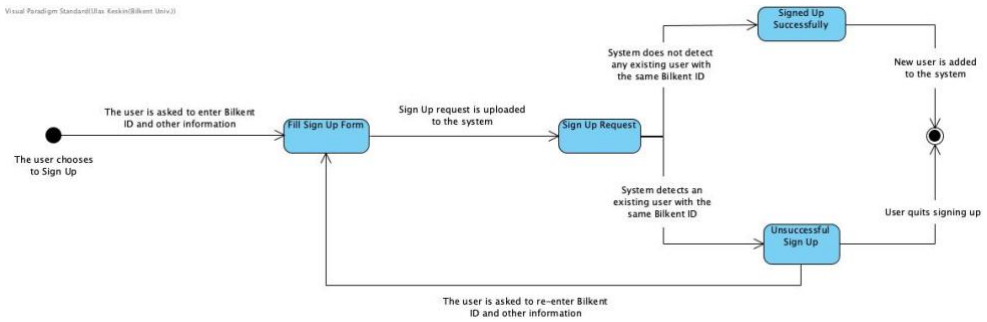

Fig. 9: State Diagram of the Sign-Up Process

This is the state diagram of the Sign-Up process, as the user chooses to sign up after opening the application, they are to fill out a sign-up form and enter their name, Bilkent ID, and password of choice. Then they make a Sign-Up Request to the system. If the system does not detect an existing account with the same ID, the user signs up successfully. Otherwise, they are directed to fill out the form again with another Bilkent ID or they can quit signing up.

4.3. State Diagram to Demonstrate the Process of Posting an Item to the System

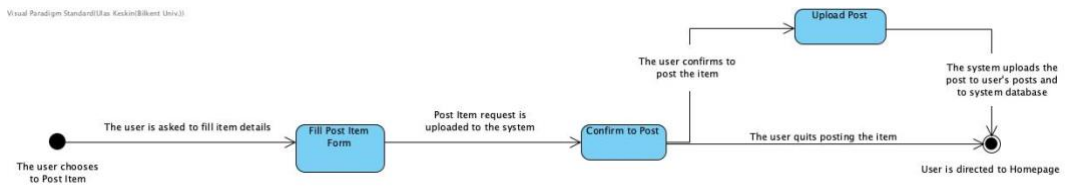

Fig. 10: State Diagram for Posting an Item

This state diagram provides information about the possible states in the situation of posting an ad to the system. The user is directed to the fill post item form state once the process begins, where detailed descriptions and qualifications are entered by the user to filter the desired post item and place it in the correct classification. The next state is established after the form is filled where the user is asked to verify confirmation about posting the item, the two-factor system is to prevent users from mis-clicking the post button, and an unfilled form is submitted. The next stage is uploading the post to the system after the user confirms the form

is filled. This state is the last step before uploading the information to the database, and an alternative option is available to exit the diagram, where the user quits posting the item and is directed to the homepage.

4.4. State Diagram to Demonstrate the Process of Searching for and Getting an Item from the System

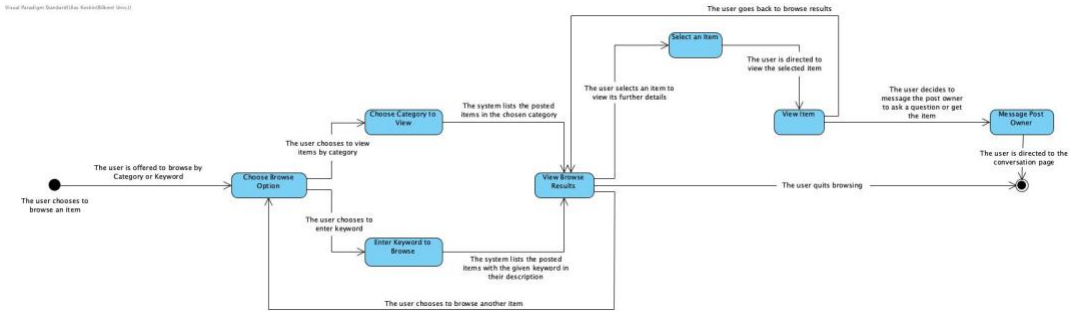

Fig. 11: State Diagram for Searching and Getting an Item

This is the state diagram for browsing and getting an item. When the user clicks to the search buttons on the Homepage, they are to choose whether to search for a keyword or view a specific item category of choice. They are directed to entering the keyword if they choose to do so, or to choosing the category among 6 categories of items. Then the system lists all the searching results for users to view. After viewing the results, the user can quit browsing and go back to the homepage or select a specific item to view in detail. If they select such an item, they view its photos and other information in further detail. After viewing an item, the user can go back to view their searching results or can message the item post owner to get the item or to ask questions and quit the state.

5. Mockup

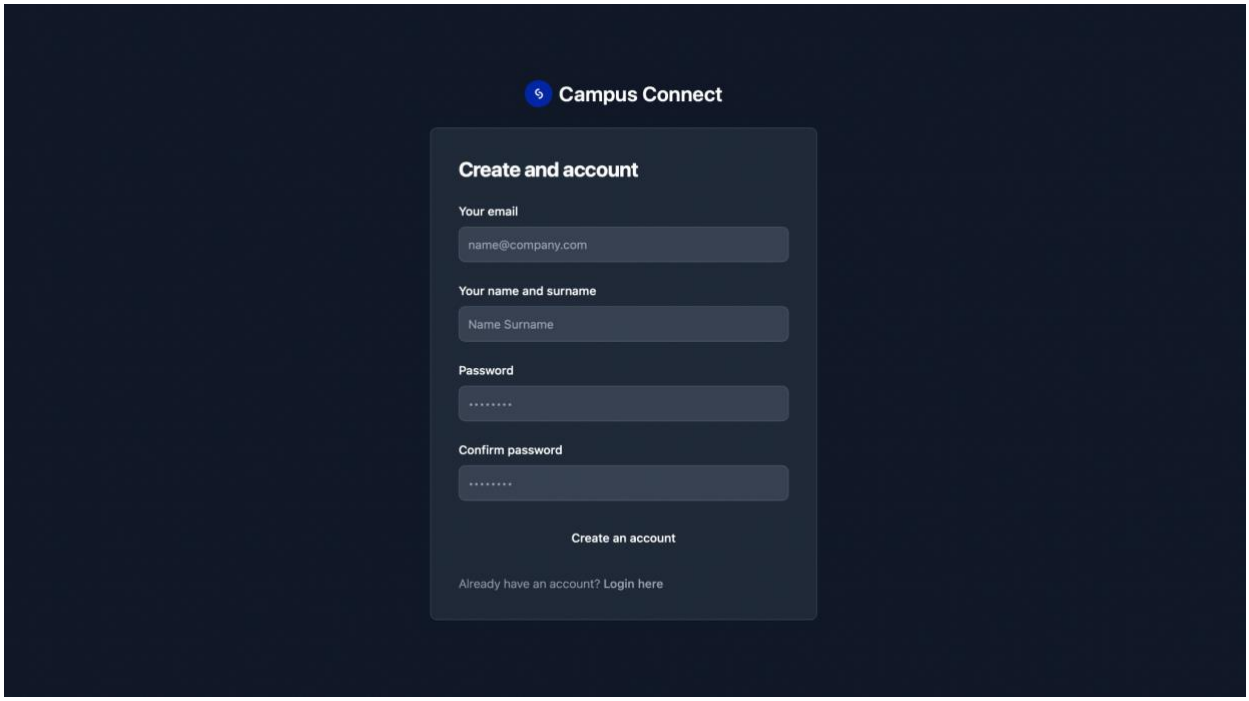

Fig. 12: Sign Up Page Including Sign Up Form

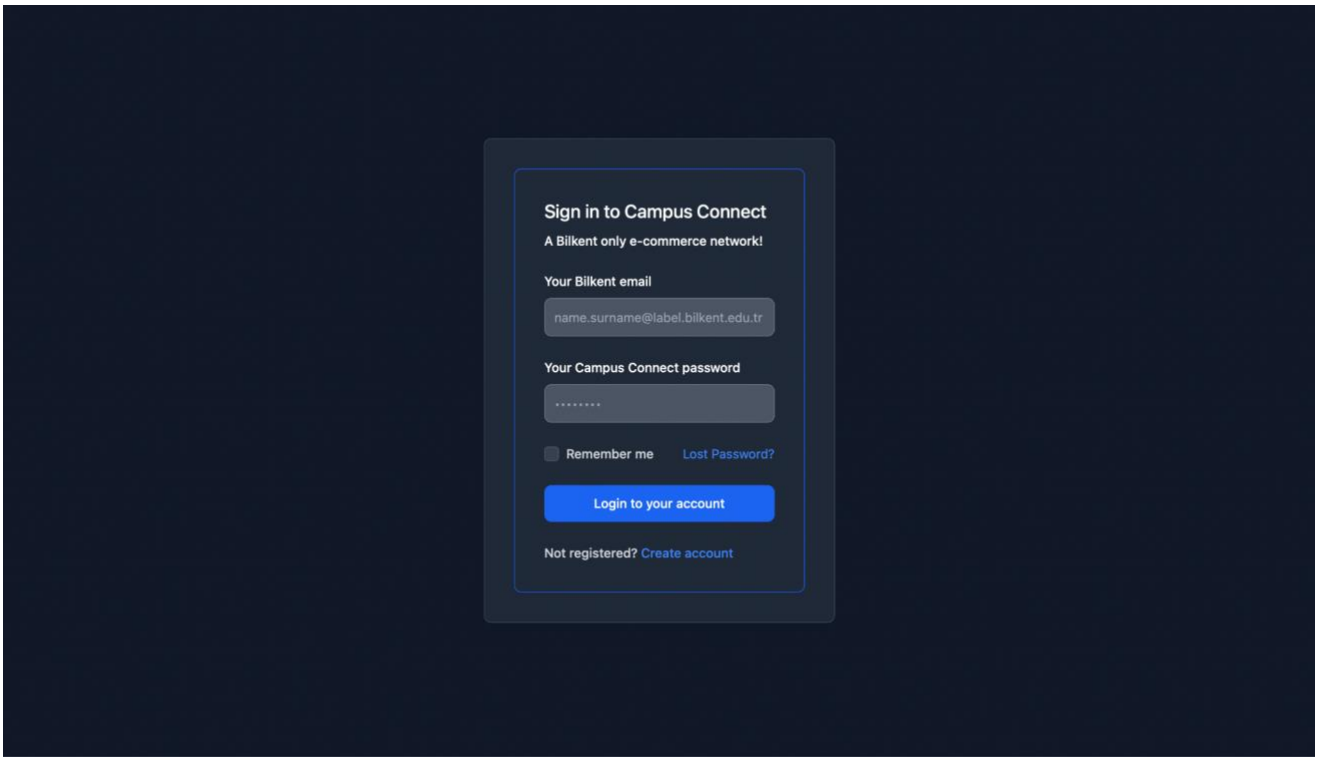

Fig. 13: Login Page Including Login Form

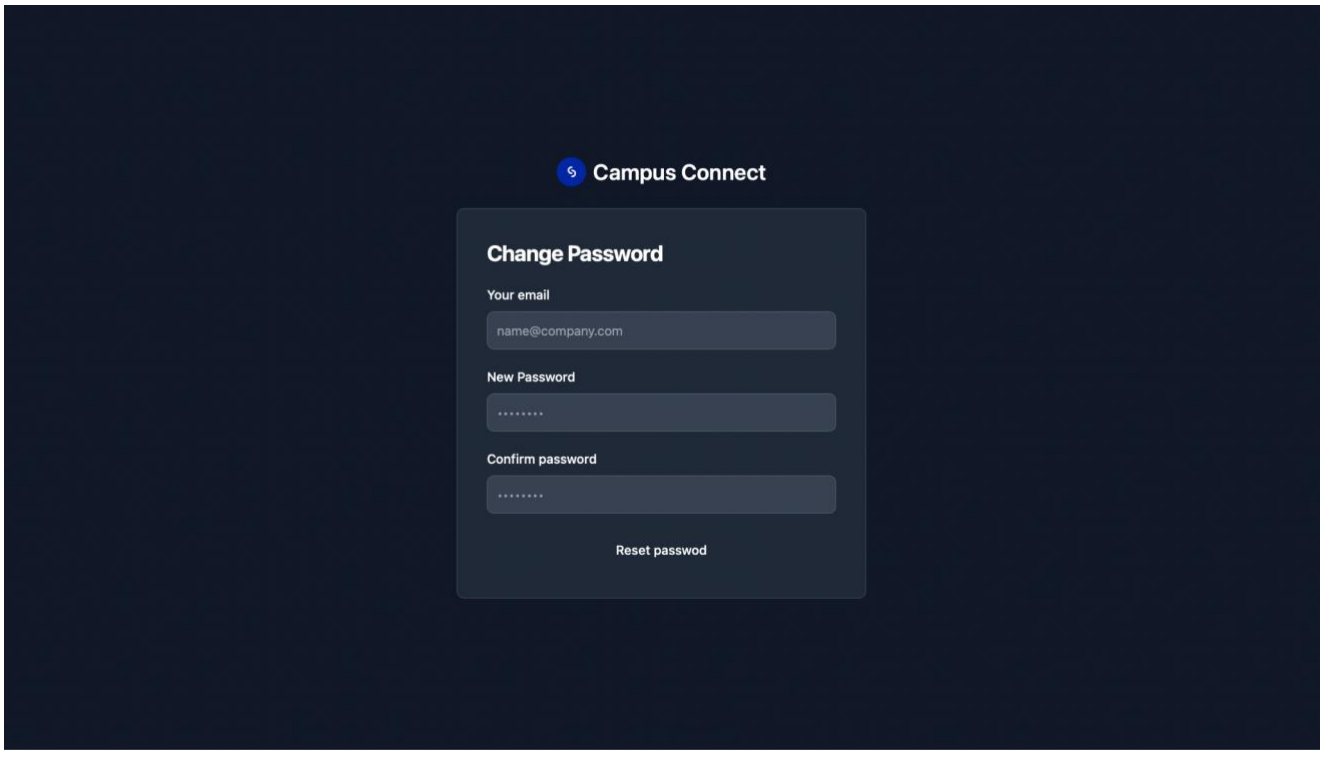

Fig. 14: Change Password Page Including Change Password Form

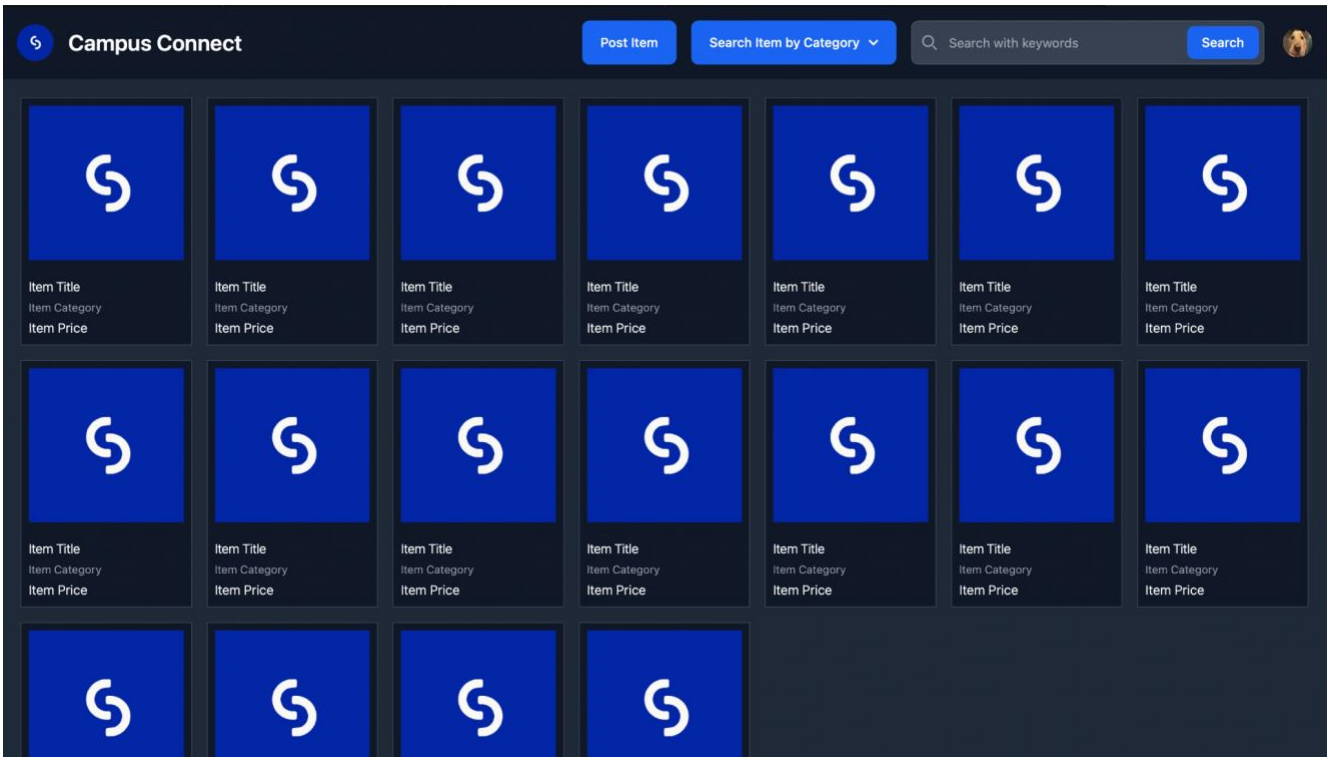

Fig. 15: Home Page Including Navbar and Latest Posts

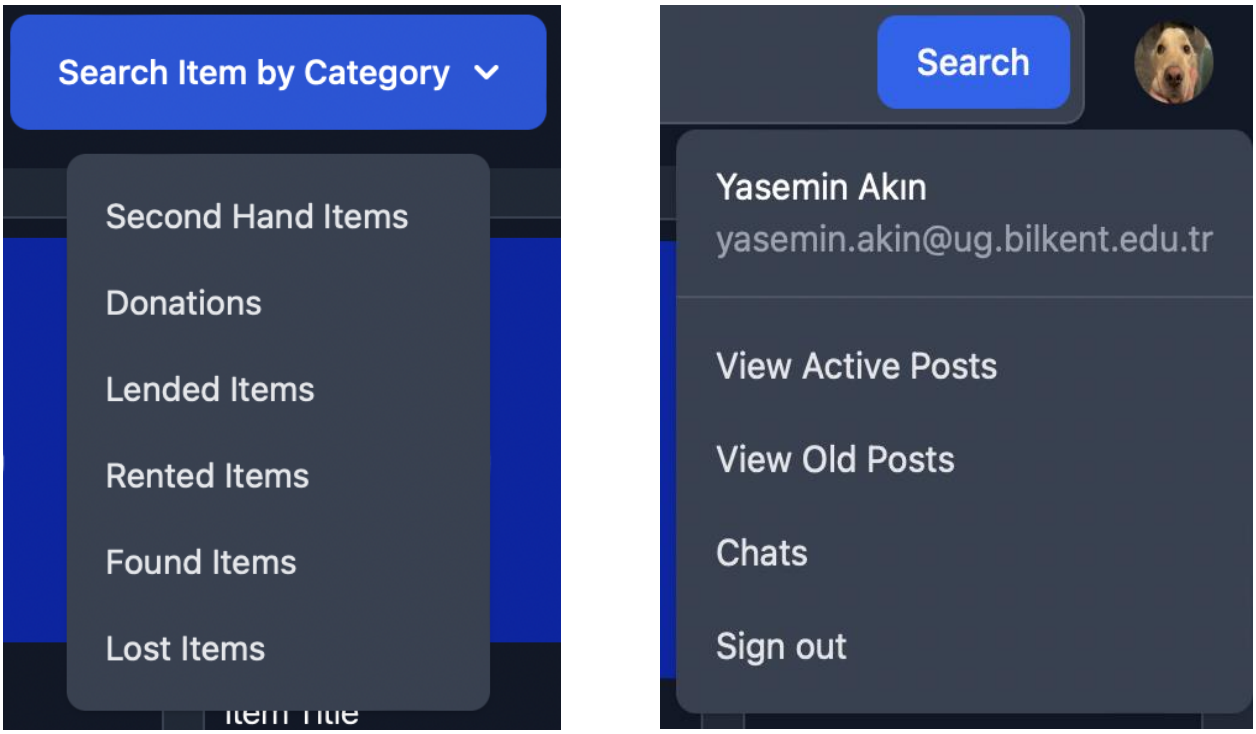

Fig. 16: Categories Dropdown Menu from Navbar, Category Anchors Lead Users to Category's Page and User Profile Dropdown Menu

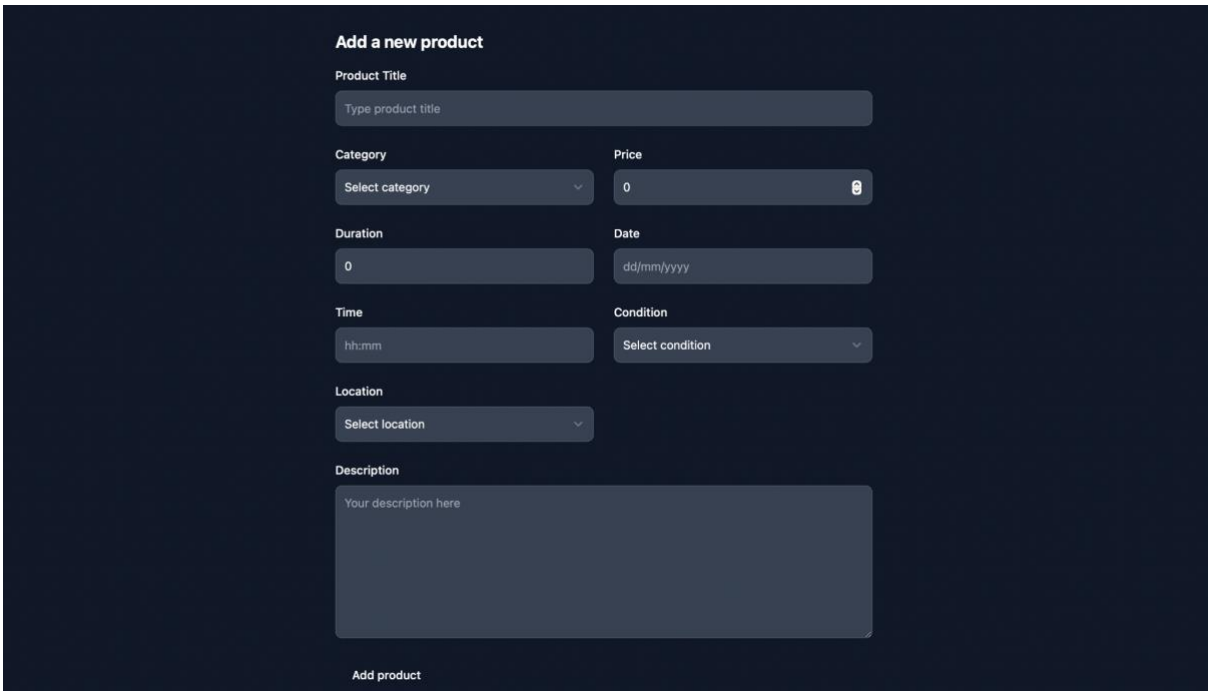

Fig. 17: Post Item Page Including Post Item Form

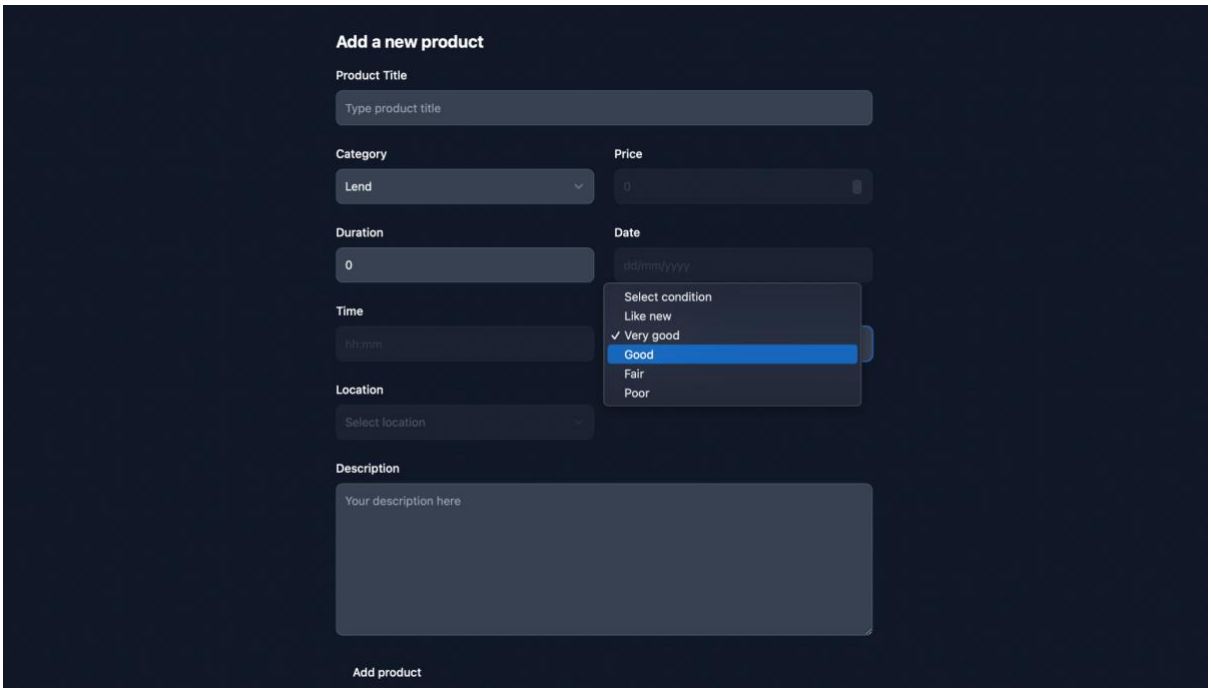

Fig. 18: Post Item Page Including Conditions Dropdown Menu Demonstrated (Also Demonstrates How Unrelated Form Fields Are Disabled According to Chosen Category)

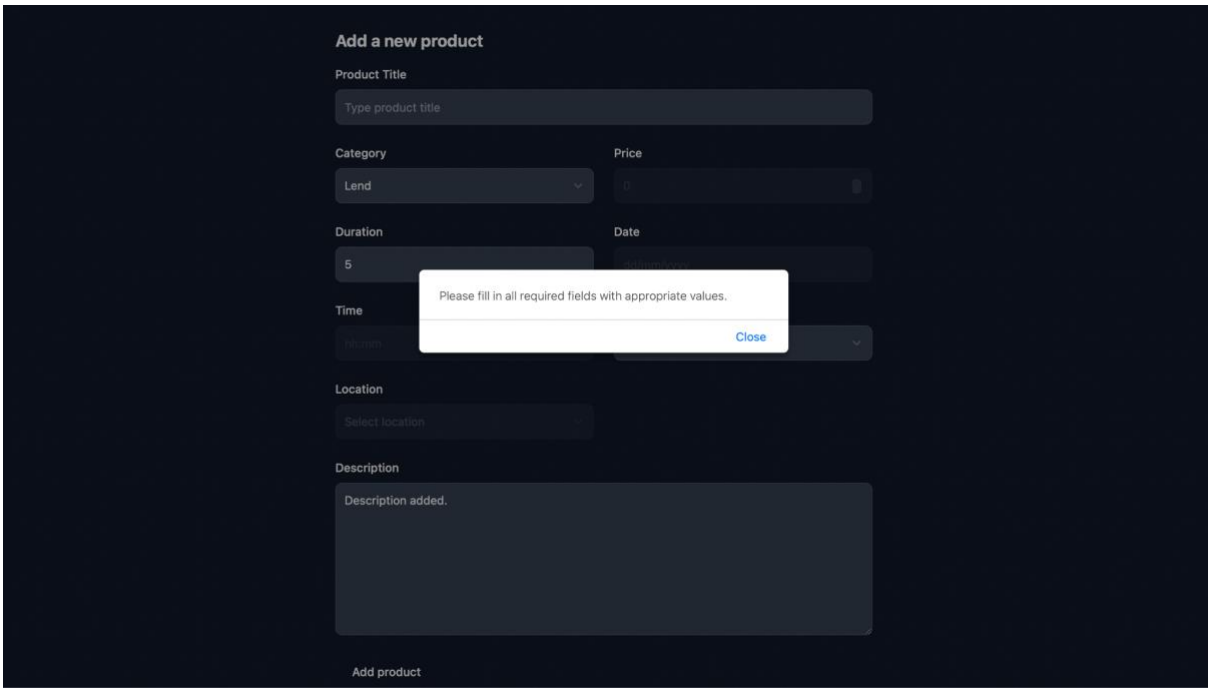

Fig. 19: Post Item Page Wrong or Incomplete Post Item Submission Alert

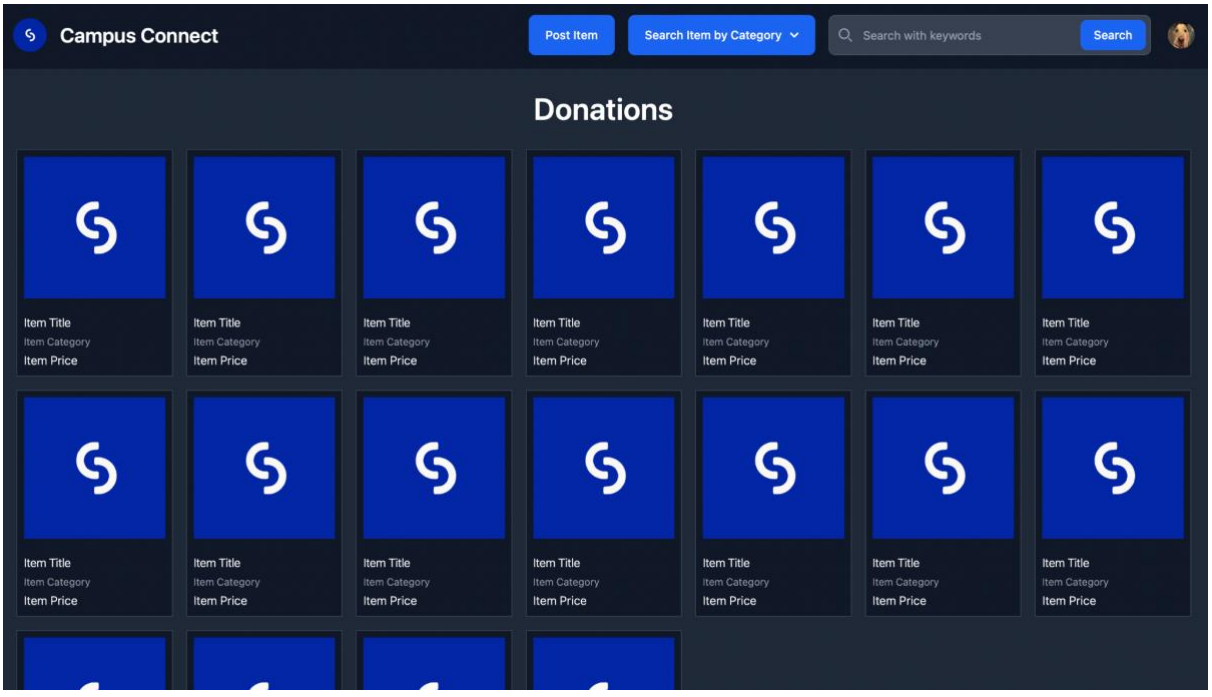

Fig. 20: Donations Category's Page

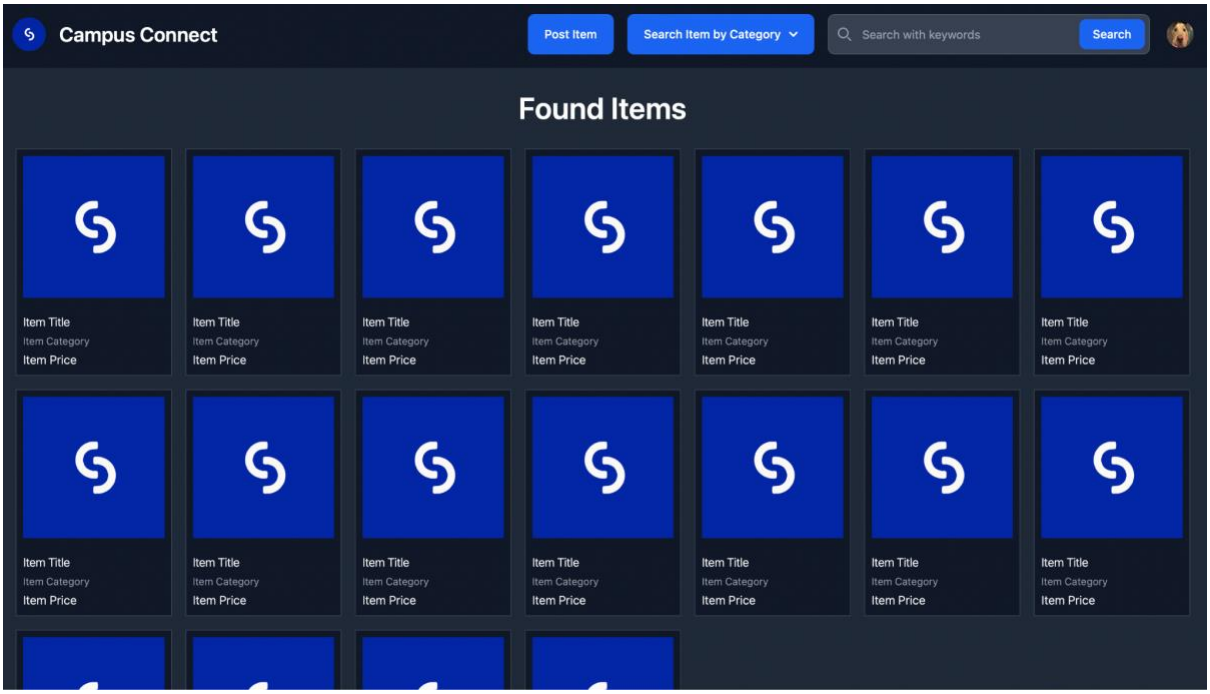

Fig. 21: Found Items Category's Page