

1. Activity Diagrams

1.1 Activity Diagram for Donations

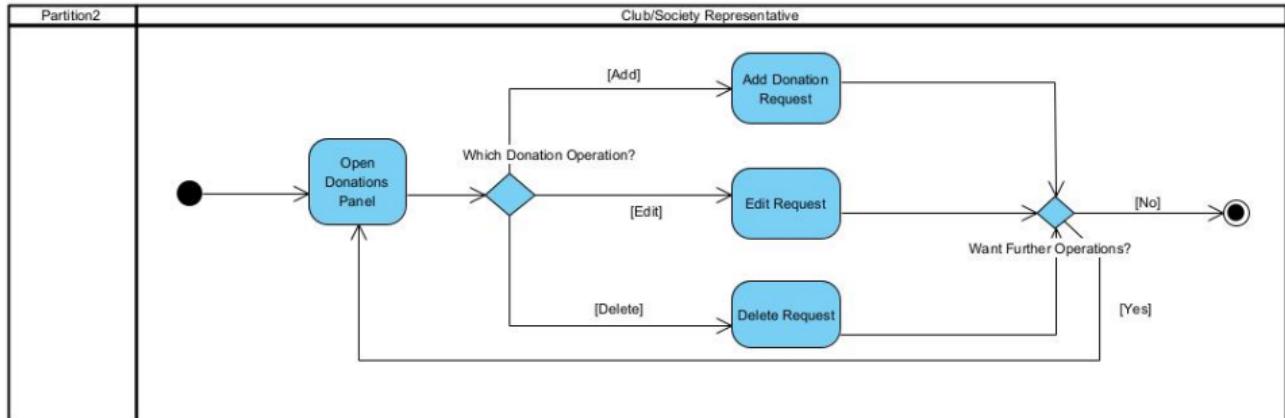


Figure 1: UML Activity Diagram for Donations

The Club/Society Representative plays a pivotal role in managing donation requests. Their responsibilities encompass the ability to not only create new donation requests but also to edit existing ones, allowing for updates and improvements as needed. Moreover, they have the authority to delete donation requests that are no longer relevant or require modification.

1.2 Activity Diagram for Renting and Borrowing

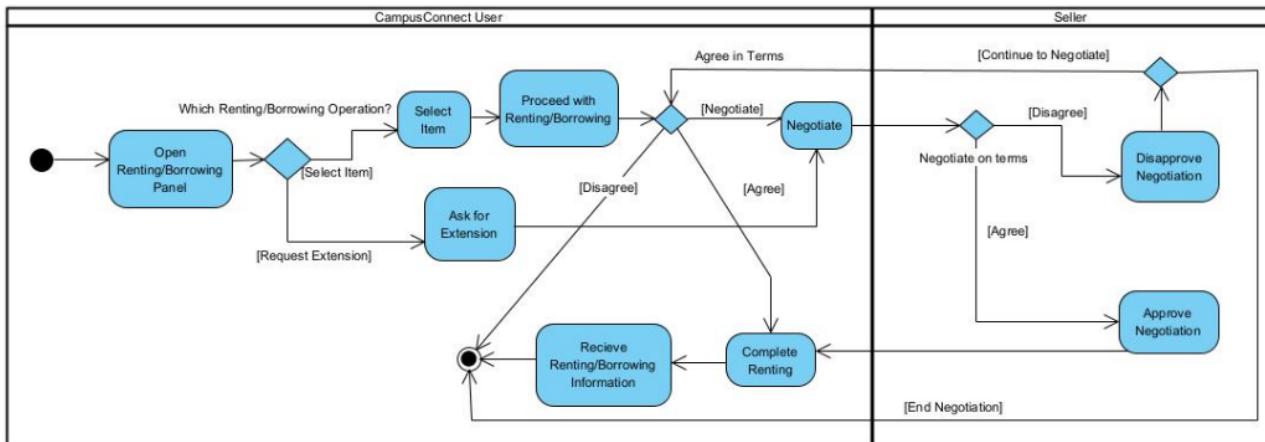


Figure 2: UML Activity Diagram for Renting and Borrowing

A CampusConnect user can choose to either request an extension for the item they've rented/borrowed or select a new item to rent/borrow. To rent/borrow a new item, they can agree to the terms provided by the seller to complete the process by receiving the necessary information or initiate negotiations if they disagree with the terms. To ask for an extension, they can propose new terms, and if the seller disagrees with the extension terms, they can initiate negotiations.

1.3 Activity Diagram for Second-Hand Sales

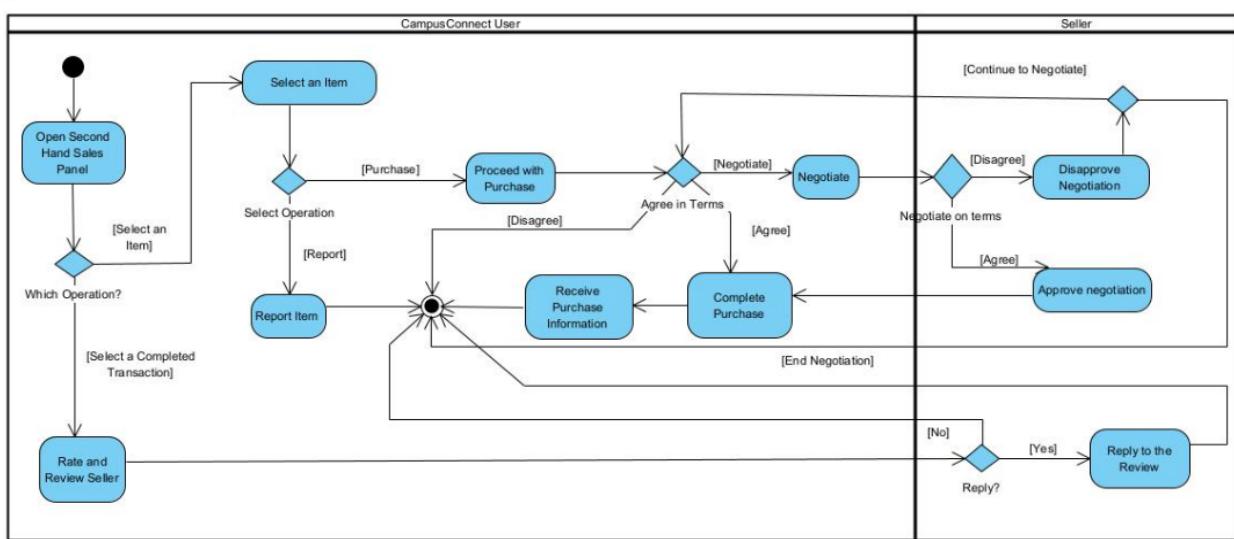


Figure 3.1: UML Activity Diagram for Second-Hand Sales

CampusConnect users have two primary options: selecting an item or a completed transaction. In the case of completed transactions, users can rate the seller using a scale and provide a written review. Sellers, in turn, have the option to respond to these reviews. When choosing an item, users can decide to either report it or proceed with the purchase. In the purchase process, users have the choice to agree to the seller's terms, thereby gaining access to the necessary transaction details for a seamless experience. Conversely, they can opt to disagree with the terms or engage in negotiation with the seller, fostering open communication to reach a mutually acceptable agreement.

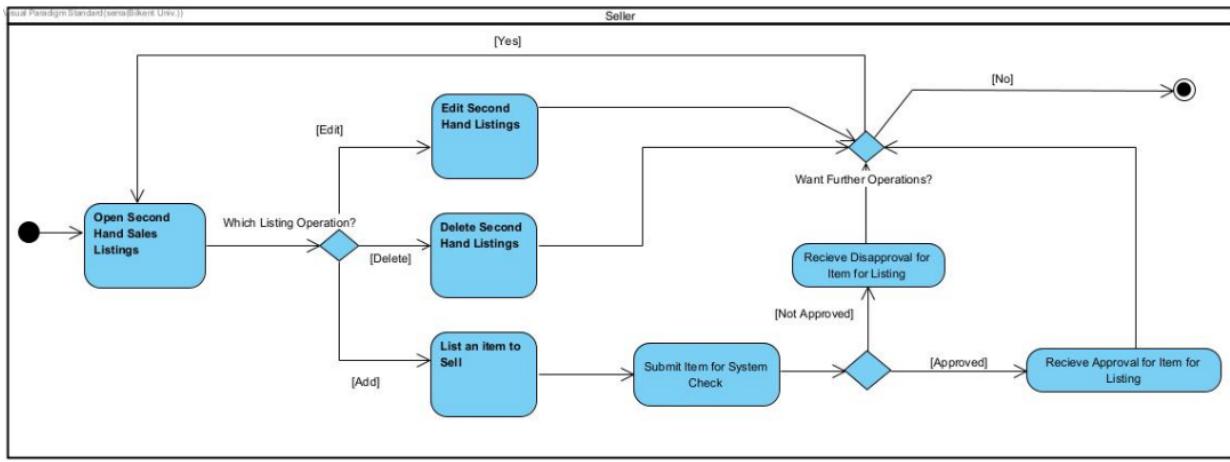


Figure 3.2: UML Activity Diagram for Second-Hand Sales

CampusConnect User has the ability to actively manage their listings, which includes the capacity to edit and update existing listings to reflect changes or enhancements. Furthermore, they possess the authority to remove listings that are no longer applicable or necessitate removal from the platform. Additionally, CampusConnect Users have the power to create entirely new listings to showcase items they wish to sell. Upon the submission of a request to list a new item, the CampusConnect User can anticipate a prompt response from the system, as they will receive either approval, signifying that their item can be listed, or disapproval, indicating that their submission does not meet the system's listing criteria.

1.4 Activity Diagram for Lost & Found

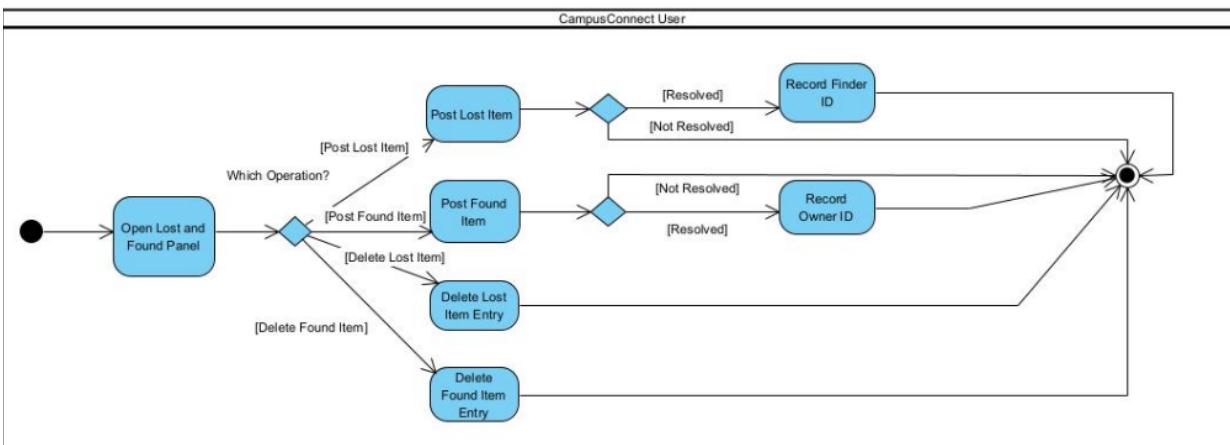


Figure 4: UML Activity Diagram for Lost & Found

In CampusConnect, users have the ability to perform several key actions related to lost and found items. They can post a lost item entry to report items they have misplaced, as well as post a found item entry to report items they have discovered. Additionally, users can delete any previously posted lost item entries or found item entries if they are no longer relevant. Importantly, if a posted lost or found item entry is resolved, users are required to record the identification of the founder (for lost items) or the owner (for found items).

2. State Machine Diagrams

2.1 State Machine Diagram for User Registration and Login

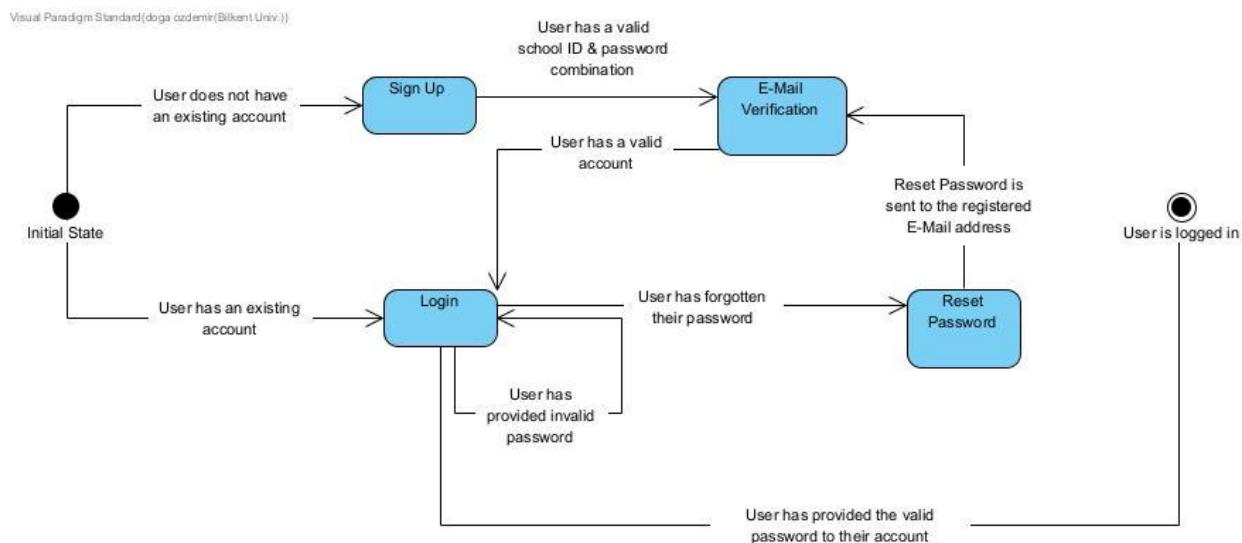


Figure 5: UML State Machine Diagram for User Registration and Login

The first state machine diagram of the project demonstrates how users either log in or sign up to the website. If the user does not have an existing account, they provide their school ID and the password predetermined by the school. After a verification code is sent to their registered email to the school system, they can successfully log in to the website. If the user already has an account, they can log in easily with their ID and password. If the user happens to forget their password, they can easily reset it with an additional email verification step and login.

2.2 State Machine Diagram for Second-Hand Sales

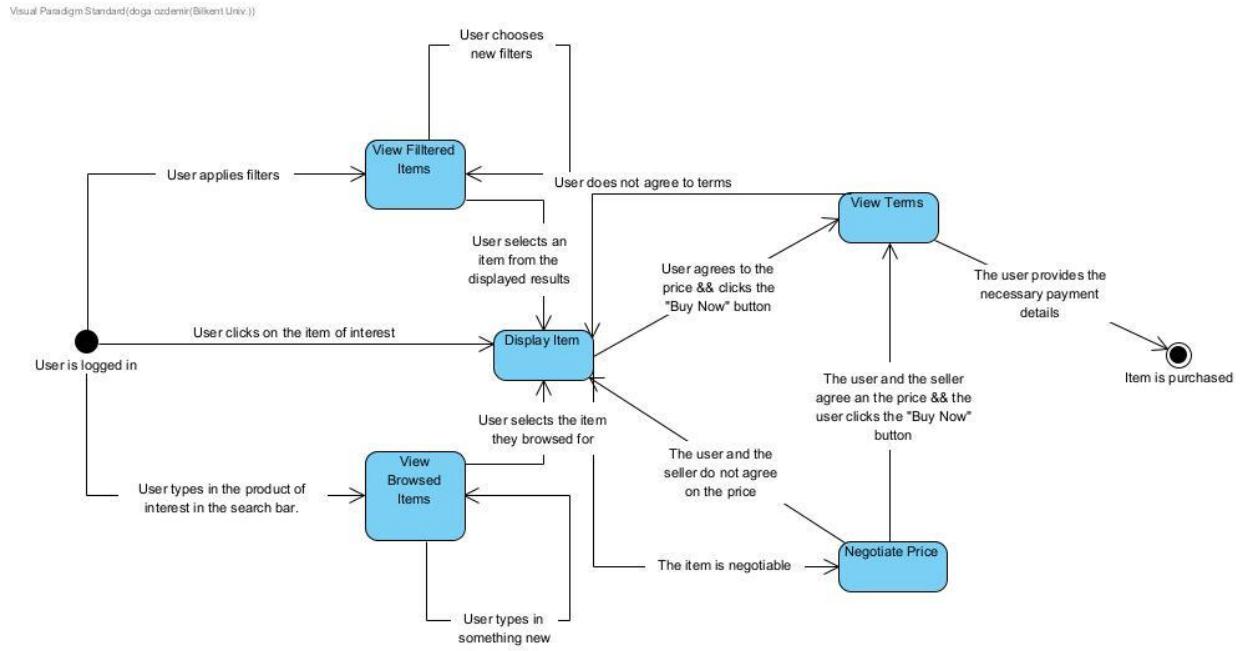


Figure 6: UML State Machine Diagram for Second-Hand Sales

If the user is logged in, the user can display an item after they click on the item of interest on the second-hand sales page, browse for a specific item, or apply some filters according to their needs. After finding an item of interest, the user can purchase the item by agreeing to the terms and providing the necessary payment details. If the item is listed as negotiable, the user can negotiate the price before the purchase. If the seller and the user do not agree on the price or the user does not agree to terms, the user is returned to the display page.

2.3 State Machine Diagram for Resolving Lost/Found Situations

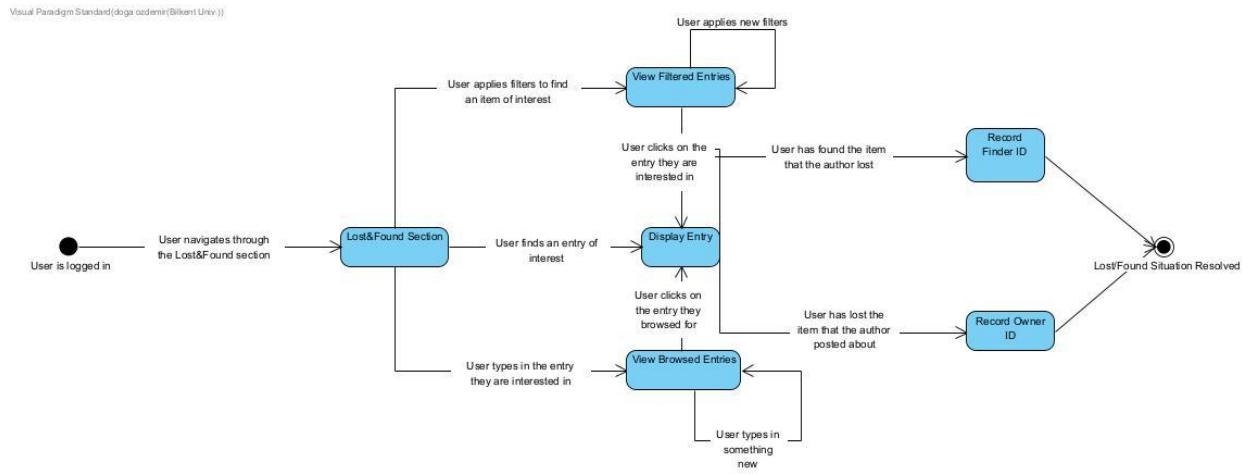


Figure 7: UML State Machine Diagram for Resolving Lost/Found Situations

Once the user is logged in, they can navigate through the panel to reach the “Lost & Found” section. Similar to the “Second-hand Sales” section, the user can browse or apply filters to either find an item they lost or find an entry about an item they found. They can display the entry of their interest to initiate a conversation with the author of the entry. If the user has found an item that they see the entry of, the finder’s ID is recorded to the system. If the entry is about a found item and the owner reaches out to the author, the owner’s ID is recorded before the item is returned. After the related ID is recorded in the system, the lost/found situation is resolved.

2.4 State Machine Diagram for Renting and Borrowing

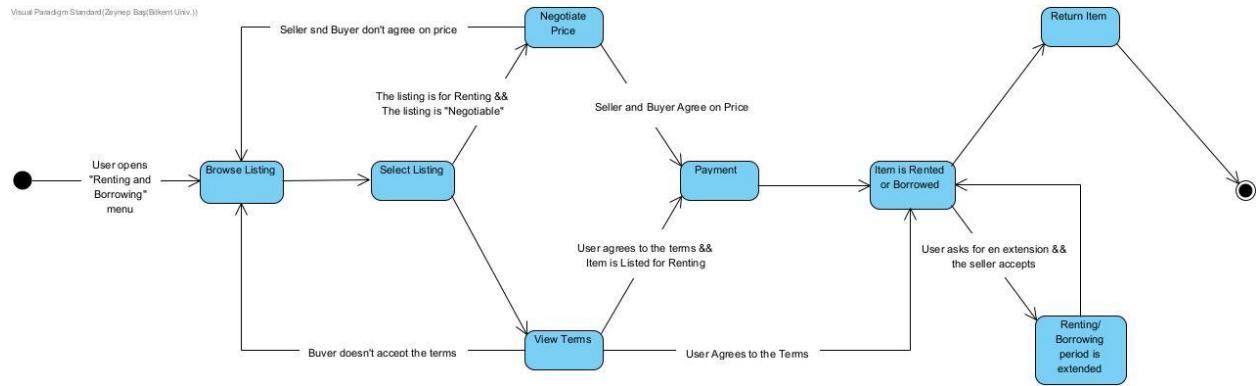


Figure 8: UML State Machine Diagram for Renting and Borrowing

In this state machine diagram, the user opens the “Borrowing and Renting” menu first. Here they browse the listings and can click on a listing to select. If the listing is for renting and is listed as “Negotiable”, they can negotiate the price with the seller. Otherwise, they view the terms of the listing. If an agreement is reached, and payment is completed for a rent listing, the user will have borrowed or rented the item. Afterward, they can either return the item before the due date or they can ask for an extension from the seller. If the seller accepts the extension request the due date is pushed forward 14 days. The process is complete when the user rents or borrows an item and returns it or cancels the process without making a purchase.

2.5 State Machine Diagram for Donations

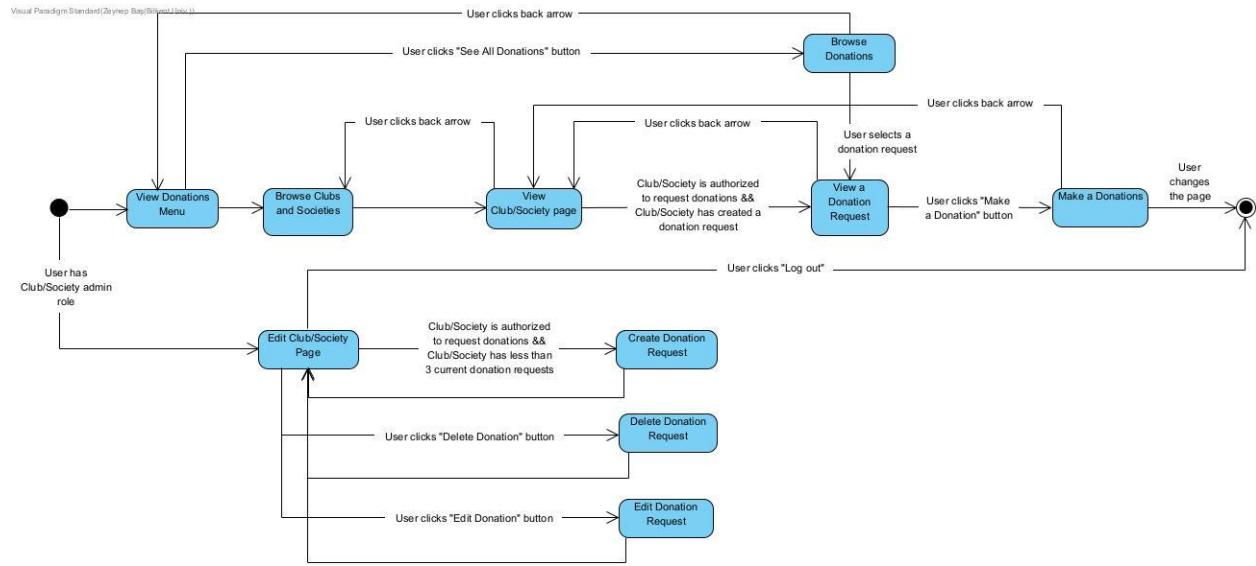


Figure 9: UML State Machine Diagram for Donations

In this state machine diagram first, the user has to be logged in either as a Club or Society admin or from their personal account. If the user is authorized as a Club or Society admin they are able to edit the Club or Society profile. In the editing stage, they can choose to either create a donation, delete an existing donation, or edit an existing donation request. In order for the admin to create a new donation request, the Club or Society must have less than 3 already posted donation requests. If the user is logged in from their personal account they first view the Donations menu. From here they can either browse a club or society or click on the “See All Donations” button. They can view the club or society page they select, click on one of the donations posted, and choose to make a donation. While on any of these states, clicking the back arrow will take the user back to the previous state.

3. Sequence Diagrams

3.1 Sequence Diagram for Second-Hand Sales

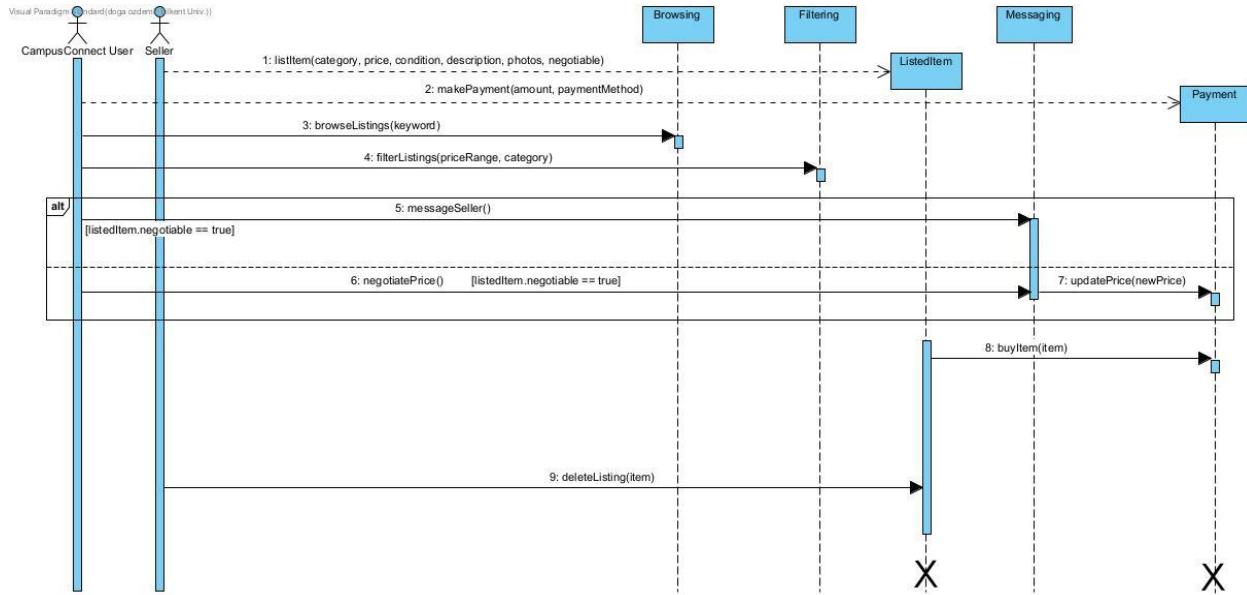


Figure 10: Sequence Diagram for Second-Hand Sales

CampusConnect Users can find a listed item by either filtering or browsing an item. If the item of interest is negotiable, they can negotiate the price by messaging the seller. If there is an agreed price, the price of the item is updated. When the user buys the item, the listing is deleted from the system.

3.2 Sequence Diagram for Lost & Found Items

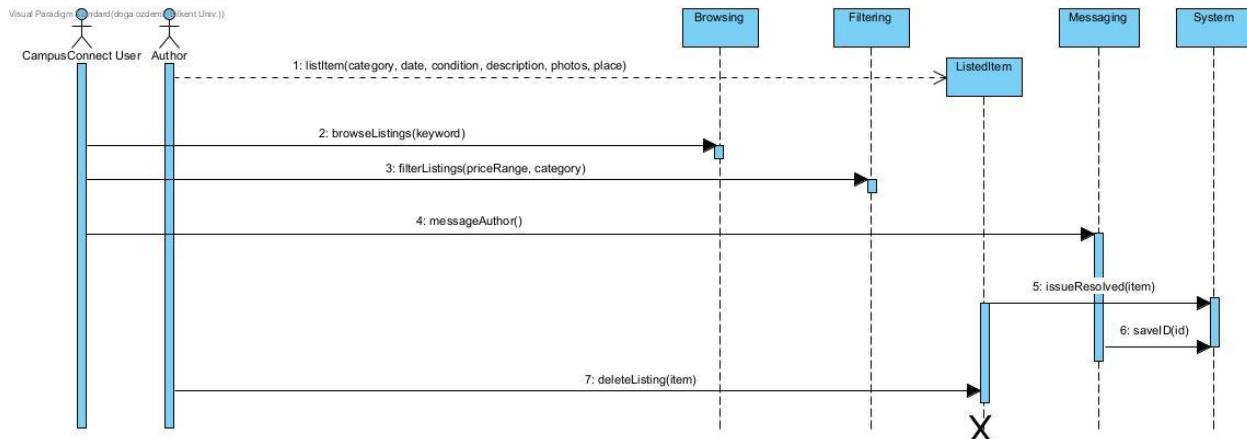


Figure 11: Sequence Diagram for Lost & Found Items

CampusConnect Users can interact with a lost/found item listing by messaging the author. If they resolve the issue, the ID of the CampusConnect User is saved to the system and the entry is removed.

3.3 Sequence Diagram for Renting and Borrowing

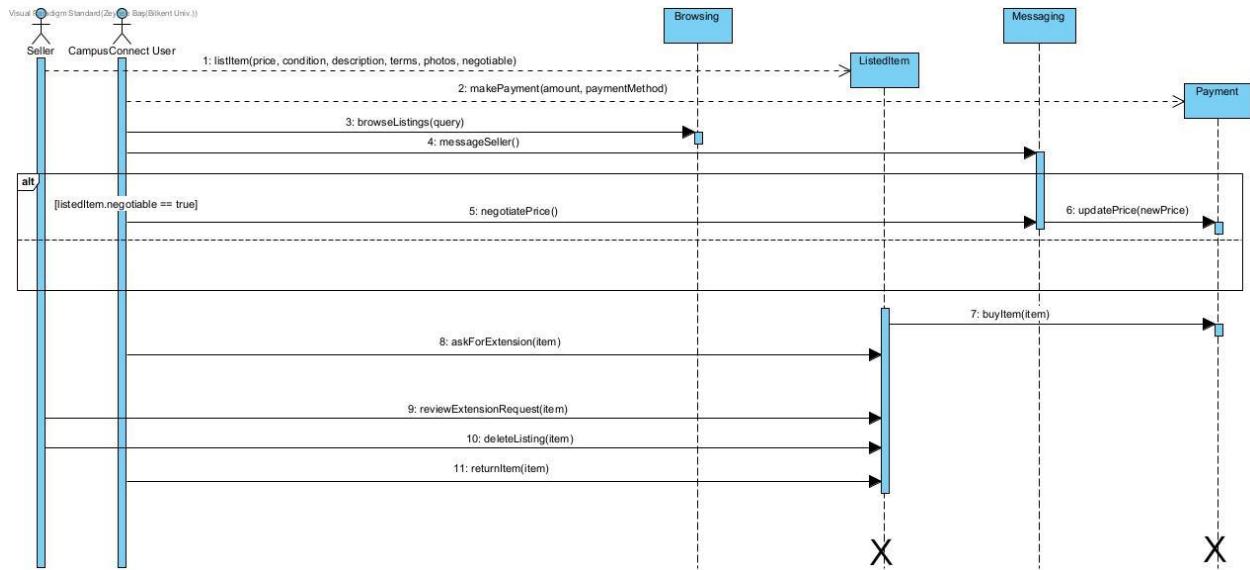


Figure 12: Sequence Diagram for Renting and Borrowing

Seller creates a listing for an item that becomes visible on browsing or on their profile. They can later choose to delete their listing. CampusConnect users can browse renting/borrowing listings and select an item. They can negotiate the price of an item by messaging the seller only if the item is listed as negotiable, and rent an item by initiating the payment process. They can also ask for an extension of the renting or borrowing period. The seller receives the extension request and accepts or declines. CampusConnect user returns the item.

3.4 Sequence Diagram for Donations

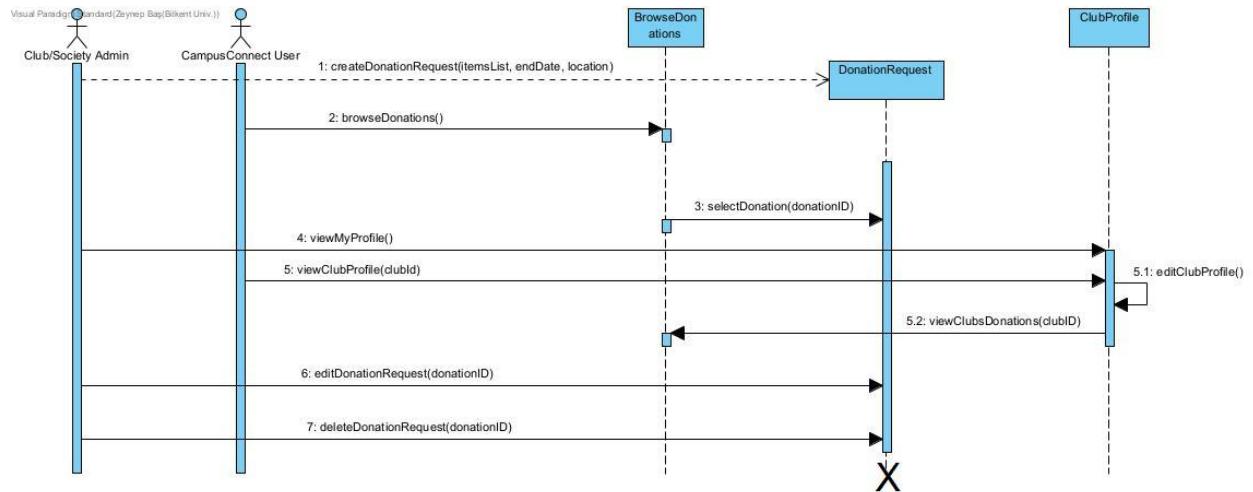


Figure 13: Sequence Diagram for Donations

Club/Society Admin creates a donation request for their club with the list of the needed items, the end date of the request, and the location where students can leave their donations. They can later edit or delete this request. CampusConnect User browses donations and selects a donation. Both parties can view the club's profile page and Club Admin can edit the profile page.

4. Object and Class Model

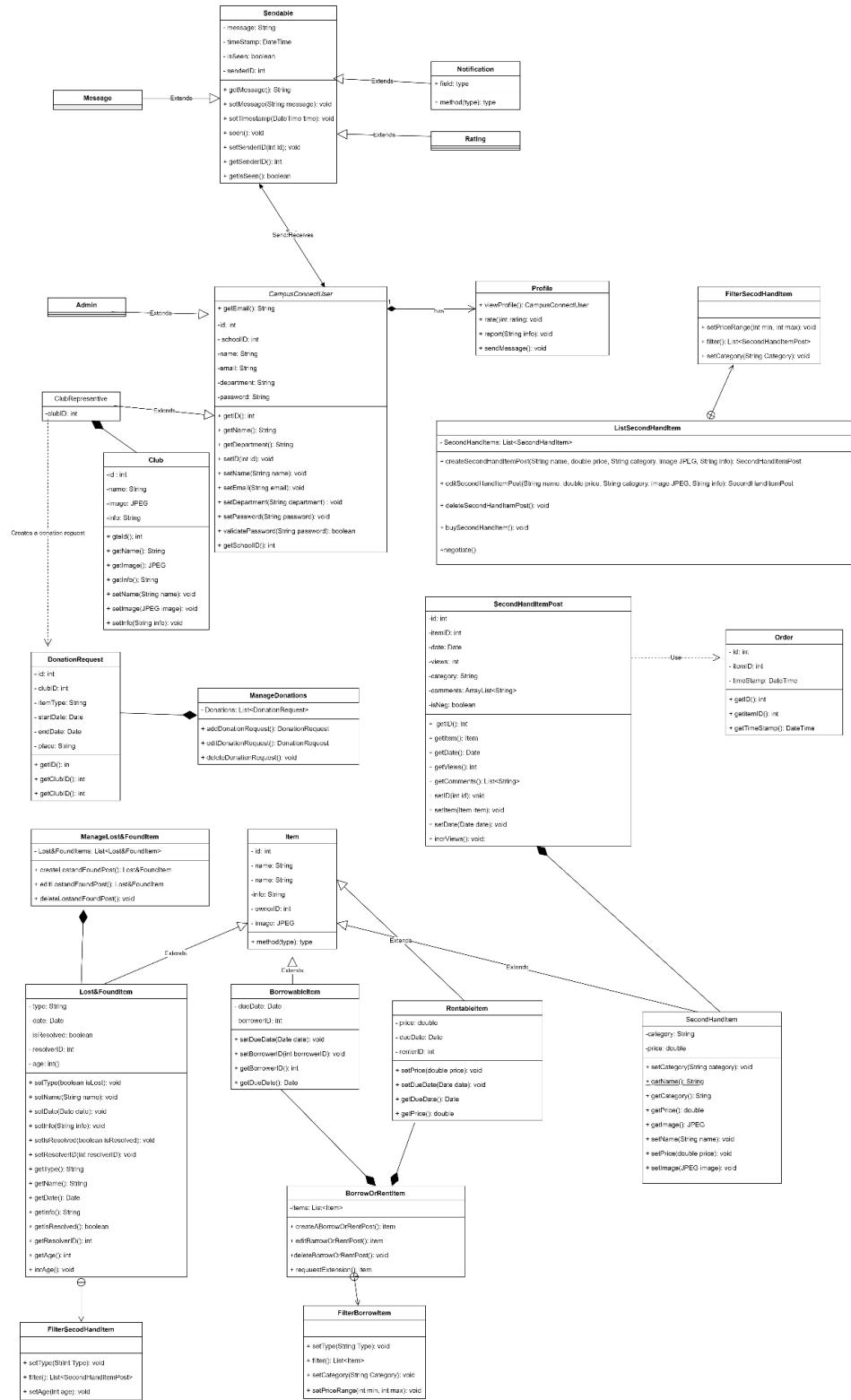


Figure 14: UML Class Diagram of CampusConnect

5. User Interface



Figure 15: Login Page

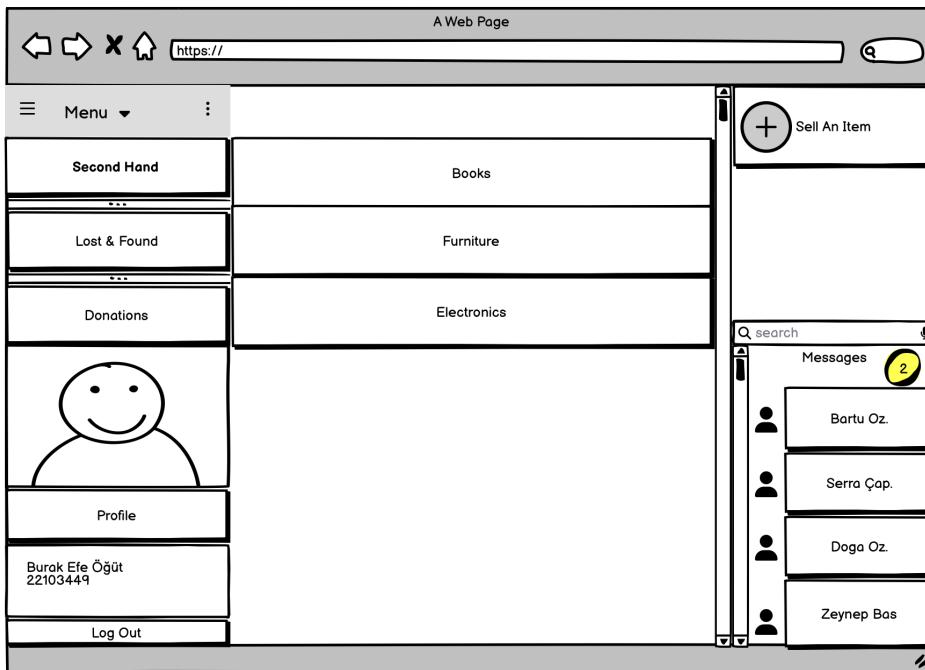


Figure 16: Category Selection of Second-Hand Items

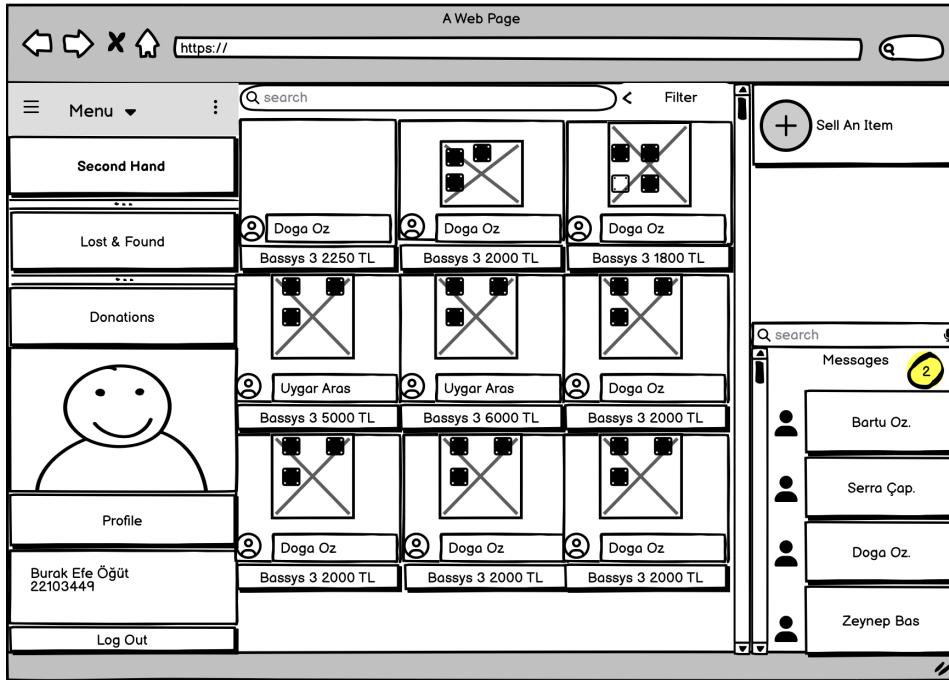


Figure 17: Second-Hand Item Listing

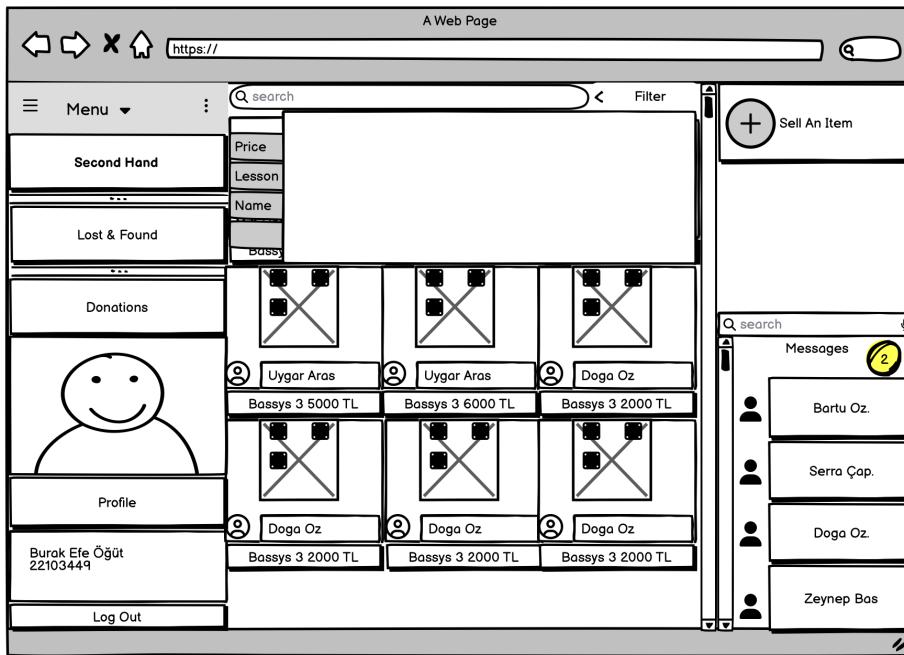


Figure 18: Second-Hand Item Filtering

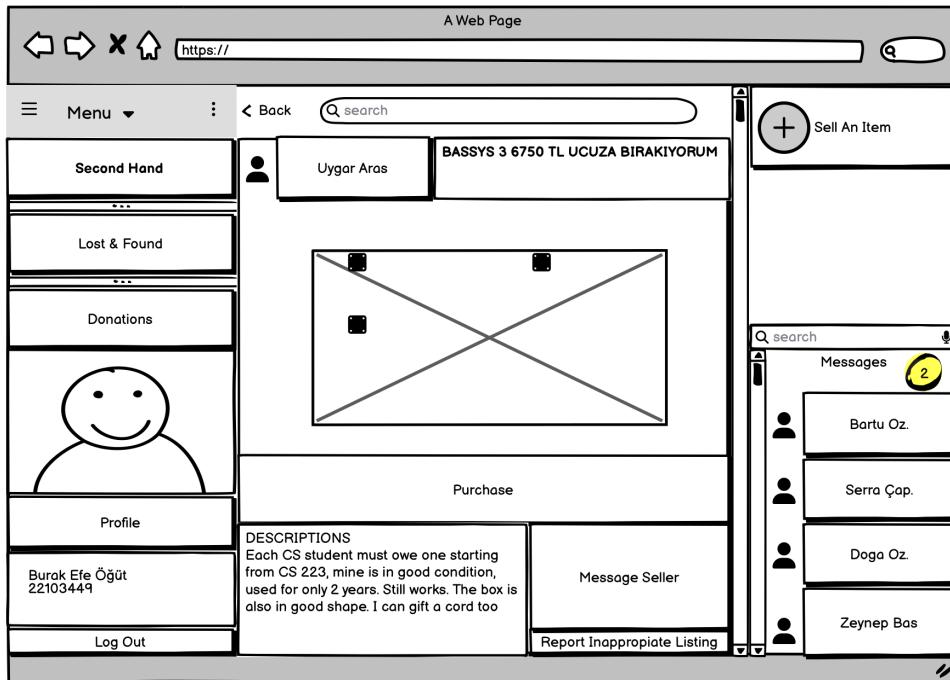


Figure 19: Viewing a Second-Hand Item Entry

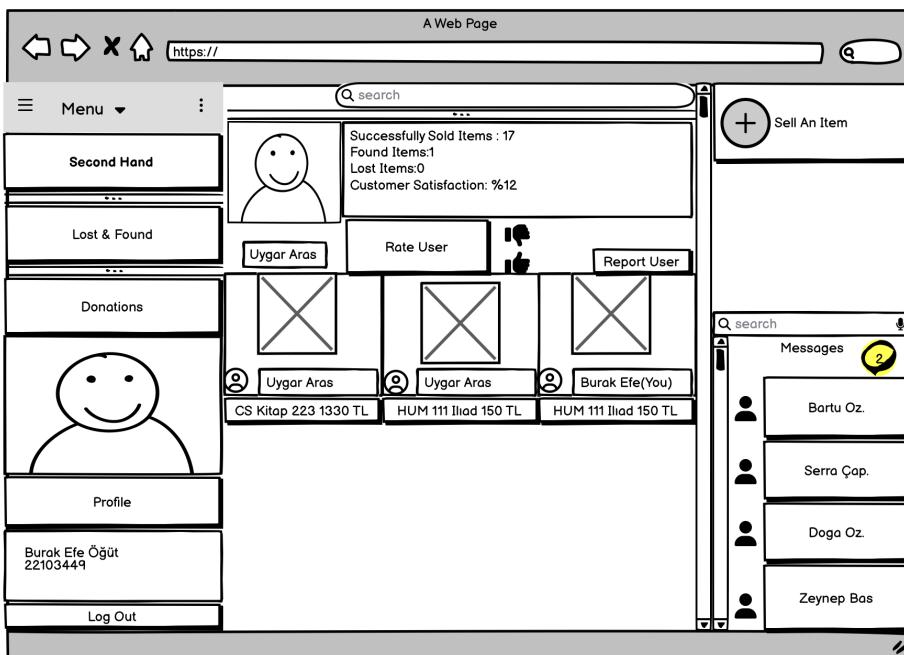


Figure 20: Reporting A User

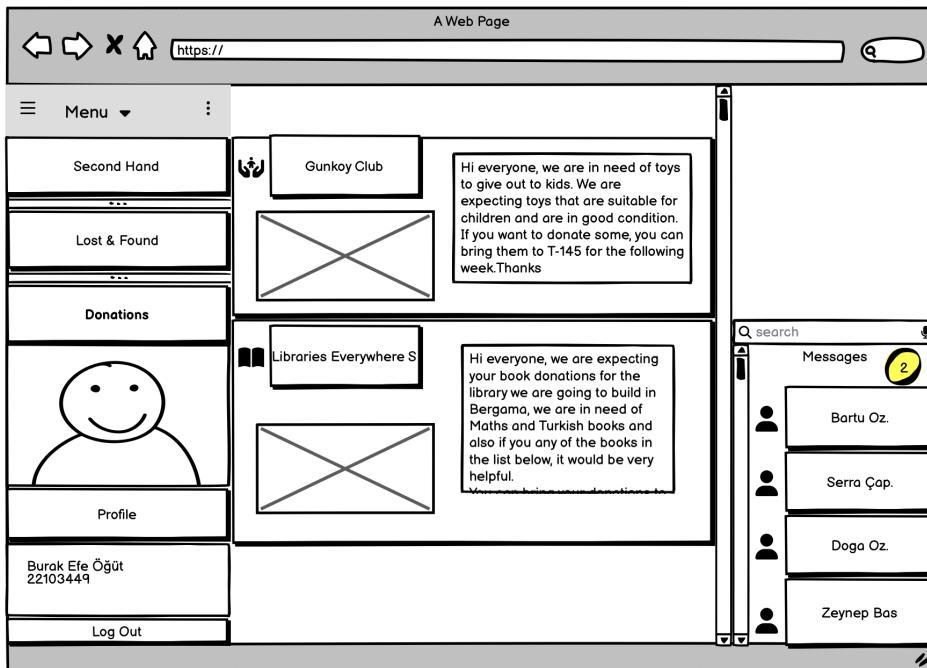


Figure 21: Donations Page

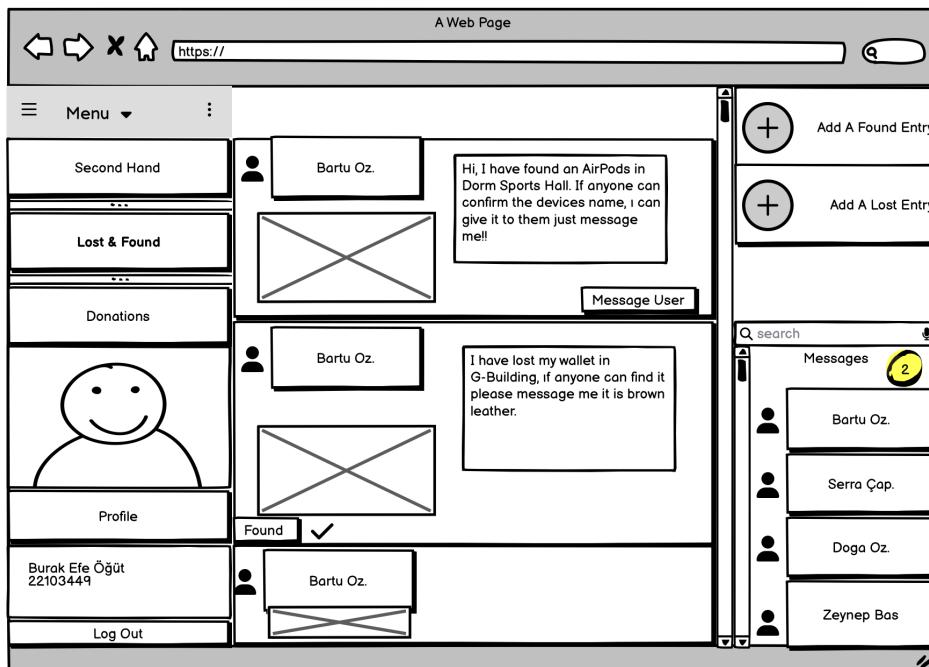


Figure 22: Lost & Found Page

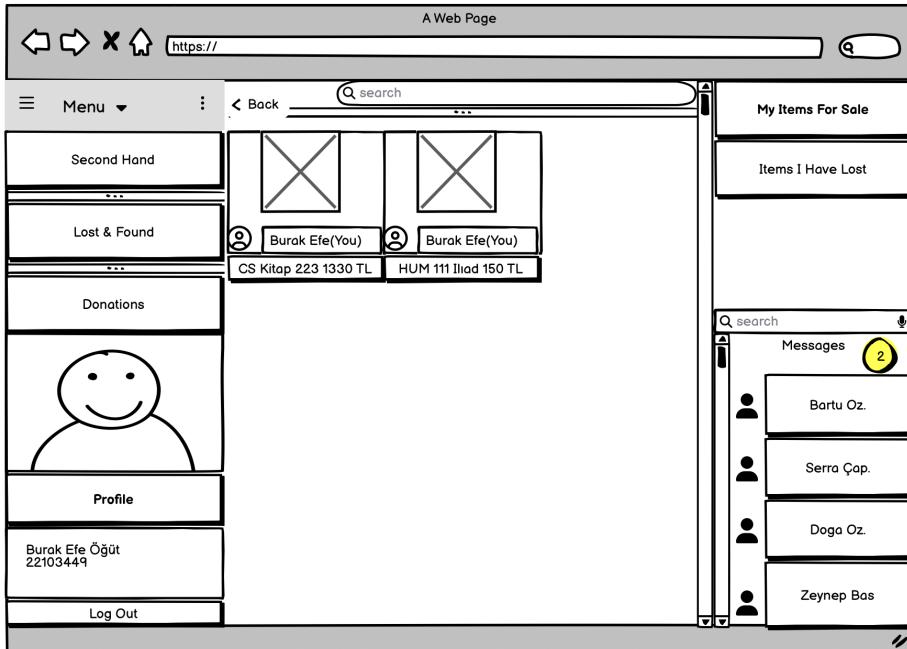


Figure 23: My Profile Page

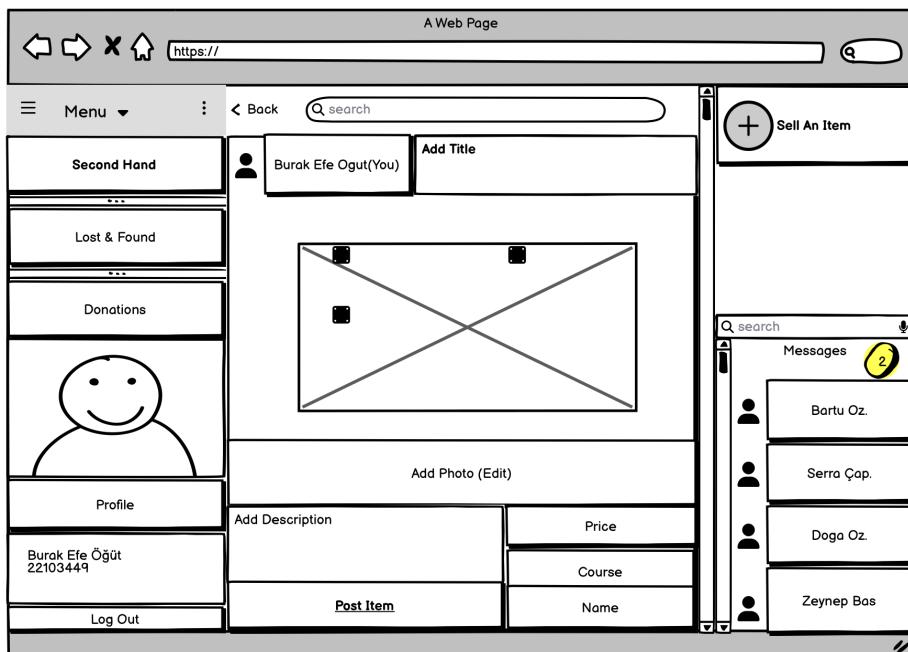


Figure 24: Listing an Item for Sale