# CS 319 Campus Connect

Betül Doğrul 22003559

Melisa İrem Akel 22003923

Serhat Yılmaz 22002537

Onur Tanınmış 22003312

Gülbera Tekin 22003354

Süleyman Yağız Başaran 22103782

1. Introduction	3
2. Proposed System	3
2.1 Non-functional Requirements	3
2.1.1 Safety	3
2.1.2 Usability	4
2.1.3 Performance	4
2.1.4 Maintainability	4
2.1.5 Environment Requirements	4
2.1.6 Badge and Reward System	4
2.1.7 Contact Support	4
2.2 Tech Stack	5
2.3 System Models	6
2.3.1 Use Case Model	6
2.3.2 Use Case Textual Descriptions (Functional Requirements)	9

## 1. Introduction

We wanted to design an application that supports communication between students at Bilkent University. Although communication has been provided through social media accounts associated with our university until now, this communication could be more consistent and regular. With this application, we aim to establish a platform that creates a safe space for only Bilkent members where they can connect. CampusConnect will be a platform where students can buy second-hand items and borrow and locate lost items. They can also donate their items to other students. Besides increasing the bonds between the students, CampusConnect will be a safer platform for Bilkent students since it is an application for the university, and people will register via their university ID.

Moreover, to promote the people for their good deeds inside CampusConnect will reward the users with badges. The products on the website will respond to Bilkent students' needs, so it is tailored for them. Having elaborative information about the item is essential, so communication is critical for the CampusConnect. Students can send direct messages to each other inside the platform, so there will be no need to use Bilkent mail. There is a part called "FreeZone". In this part, students will be able to communicate similarly to Instagram; however, it will be a safer place since there will be no one outside of Bilkent, and all people will be registered with their ID. It will reduce the risk of cyberbullying. It will also decrease the need for another platform. Bilkent students will continue to stay on the platform since they can chat with their friends(direct messages), and they will be able to see a feed from all Bilkenters. If they need something related to the university, CampusConnect will be the platform. Our project has the following features and pages:

- Login/Create Account Page
- Profile Page
- Second-Hand Page
- Donation Page
- Borrowing Page
- Lost & Found Page
- Freezone Page
- LiveChat part

## 2. Proposed System

## 2.1 Non-functional Requirements

## **2.1.1 Safety**

To protect user identifications, only the admins will see the IDs of the users. Therefore, all the users are using a username instead of their IDs. Non-Bilkenters cannot create an account in the system to prevent cyberbullying. Also, an encryption

system will be used so that the users can use CampusConnect safely. When a Bilkent ID is lost, the loser will enter their ID number into a specified field, and if anyone has already informed the app that they have found that specific ID, they will be matched and the loser will get their ID back instantly. The difference from any other loss is that when a Bilkent ID is lost, no one will see it or be notified due to privacy reasons as it will be a fully anonymous process. If anything other than an ID card is lost, the regarding post will be shared in a feed for lost items; if anything is found other than an ID card, the regarding post will be shared in a feed for found items.

## 2.1.2 Usability

The user interface is user-friendly because it appeals to the users. The design is made to be appealing as well as functional. The interface is designed to be clear for ease of use.

#### 2.1.3 Performance

The feed shown to the users may be a huge problem since we constantly access the database. Therefore, to maintain the speed and database connection, we plan to retrieve data from the database in small chunks.

## 2.1.4 Maintainability

The system is designed to be further updated and modified regarding features such as LiveChat and Freezone. Also, new features can be added to the system, all to provide maintainability of the application.

## 2.1.5 Environment Requirements

The system is designed for every device with an internet connection. The technologies in our tech stack have been chosen considering their compatibility.

## 2.1.6 Badge and Reward System

The badge and reward system motivates users to engage in positive behaviors, such as donating an item on the platform.

## 2.1.7 Contact Support

Our system also provides a support feature where the users can get help from the admins on various topics.

#### 2.2 Tech Stack

Backend: Spring Boot

Since we are all familiar with Java programming language and Spring Boot simplifies the development of Java applications by providing defaults for code and annotation configurations, we decided to use Spring Boot for the backend in our project.

Frontend: React

React follows a component-based architecture, making it modular and reusable. This can lead to easier maintenance and scalability of our frontend code. That's why we chose React for the front end of our project.

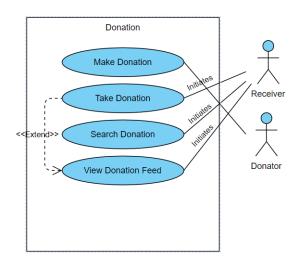
Database: PostgreSQL

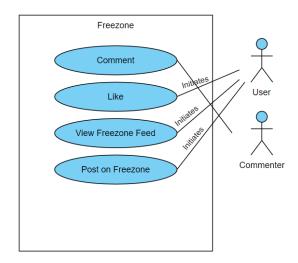
PostgreSQL is designed to handle large amounts of data and concurrent transactions. It provides features like partitioning and indexing, contributing to better performance as your data grows. These features of PostgreSQL led us to choose it as our database.

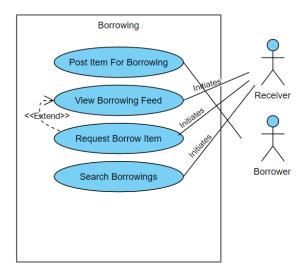
We have yet to decide which tech stack will be used for live chat.

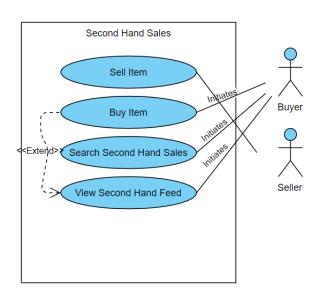
# 2.3 System Models

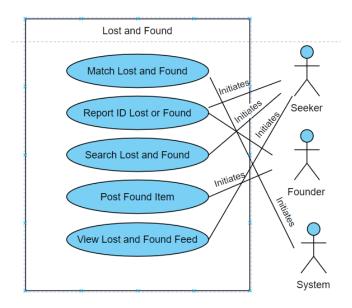
## 2.3.1 Use Case Model

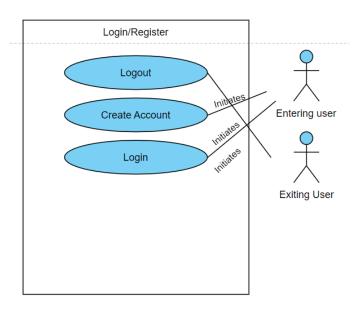


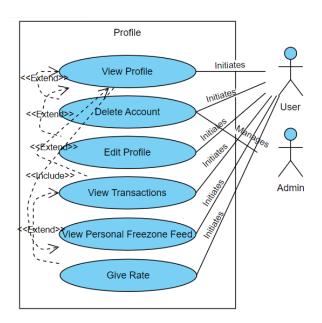


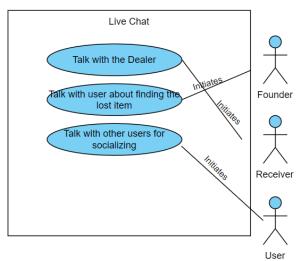


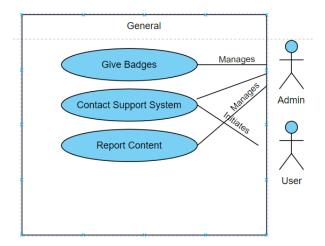












## 2.3.2 Use Case Textual Descriptions (Functional Requirements)

Use Case: Post Donation Item

Primary Actors: Recipient User, Donator User

Goals: Donating an item to another user.

Preconditions: Users should already have an account

Post-conditions/Exit condition<sup>1</sup>: User posted a donation item on the Donation feed

**Main Success Scenario for Donator** 

- 1. Completing item details for posting
- 2. Posting a donation item to the campus connect
- 3. Getting messages by recipient user in live chat
- 4. Getting notified from the system that another user took the item

#### **Alternatives**

1a. Missing essential details about the item, user will be warned by system

1a.1<sup>2</sup>. Warning is closed by the user and user returned to "Home" page

2a. Network error: The item couldn't be posted to the database, and an error message will be sent to user

2a.1. Message is closed by the user and user returned to "Home" page

3-4a. Not getting any notification from the recipient user

3-4a.1. Donation cannot happen until the recipient user reports the problem and the problem is solved

Use Case: Receiving donation item

**Primary Actors**: Recipient User, donator user **Goals**: Taking a donation item from the donator

#### **Preconditions:**

User should be logged in

- User should not be the donator of the same item.
- There should be donation items available in the feed

**Post-conditions/Exit condition:** Recipient user received the donation item, the item is deleted from the donation feed

#### **Main Success Scenario For Recipients:**

- 1. Searching items in the donation feed
- 2. Searching donation items in the search bar
- 3. Finding the item that they want
- 4. Talking with the donor by live chat
- 5. Requesting the donation item
- 6. Getting a success message for receiving an item.

#### **Alternatives:**

1a. Network error. Seeing a network error page.

1a.1. Page is closed by the user and user returned to Donation page

<sup>&</sup>lt;sup>1</sup> These will be the exit conditions if everything goes as planned

<sup>&</sup>lt;sup>2</sup> AB.x. parts will indicate exit conditions for alternative parts (A = 1,2,3..., B = a,b,c...)

- 2a. Not able to find the required item.
- 2a.1. Page is closed by the user and user returned to Donation page
- 2b. Network error. Not able to see any item.
- 2b.1. User returned to "Home" page
- 4a. The donor can block the user.
- 4a.1. Sale will not happen, user returned to Donation page
- 5a. Network error. Getting an error message from the system.
- 5a.1. Message is closed by the user and user returned to "Home" page

Use Case: Posting on FreeZone Primary Actors: Users, Software Goals:

- A user can post an image or video with or without a paragraph. Also, users can post only a paragraph
- The software wants to load the post user created to the feed for others to see.

**Preconditions:** User already has an account

**Post-conditions/Exit condition:** User posted a post on the Freezone feed **Main Success Scenario:** 

- 1. User decides to share a post
- 2. System gets the information of the post (what is written, any existing documents)
- 3. Connection is established
- 4. Software shares the user's post to the feed
- 5. System intercepts responses from the site and updates user profile

#### **Alternatives:**

- 2a. System gives error message, asks for the new suggestion, gives the option to cancel
- 2a.1. Message is closed by the user and user returned to "Home" page 3a. Web failure.
- 3a.1. System reports failure to the user and backs up to the previous step. User exits or tries again
- 5a. The website does not return needed info
- 5a.1. User reported the issue and user returned to "Home" page

**Use Case:** Reading on FreeZone **Primary Actors:** Users, Software

Goals:

- Users can wander the feed and check what people have shared/posted.
- The software wants to show the feed to user

Preconditions: User already has an account

Post-conditions/Exit condition: User closed the Freezone feed

- 1. User decides to spend some time on the feed and look up posts
- 2. System gets the information of the feed

- 3. Connection is established
- 4. User can choose to look at specific posts
- 5. System receives the information from post
- 6. Connection is established
- 7. User can like or comment on the post
- 8. System intercepts responses from the site and updates post

2a,5a. System gives error message, asks for the new suggestion, gives the option to cancel

2a,5a.1. Message is closed by the user and user returned to "Home" page

3a,6a. Web failure.

3a,6a.1. System reports failure to user, backs up to the previous step.

3a,6a.2. User exits or tries again

8a. The website does not return needed info

8a.1. User reported the issue and user returned to "Home" page

**Use Case:** Borrowing **Primary Actors:** User

Goals:

User: wants to open the borrowing page
 Preconditions: User already has an account

Post-conditions/Exit condition: System provides user with the borrowing page

**Main Success Scenario:** 

- 1. User selects the Borrow button
- 2. System opens the Borrow page

#### Alternatives:

2a. Database connection error.

2a.1. System reports failure to the user and backs up to the previous step.

2a.2. User exits or tries again

**Use Case:** Post Item for Borrowing **Primary Actors:** User, Admin

Goals:

User: wants to post an item for borrowing

• Admin: wants lender and item information

**Preconditions:** User already has an account

**Post-conditions/Exit condition:** User posted an item to be borrowed on borrowing page

- 1. User decides an item to lend.
- 2. User selects the post item button.
- 3. System opens a page where the user can upload a photo of the item to be borrowed, enter keywords, and write a description.
- 4. User fills in the blanks on the opened page.

- 5. User presses the post button.
- 6. The post appears in the borrowing feed.

- 4a. User wants to cancel the operation.
- 4a.1. User clicks the cancel button on the opened page.
- 5a. Connection error.
- 5a.1. User is returned to the previous page and needs to create a post again.

**Use Case:** Request Borrow Item **Primary Actors:** User, Admin

Goals:

User: wants to request to borrow an item

• Admin: wants requester and item information

Preconditions: User already has an account

**Post-conditions/Exit condition:** User borrows the item, the item that was borrowed is deleted from the borrowing page

#### **Main Success Scenario:**

- 1. User decides an item to borrow.
- 2. User selects the request item button
- 3. System opens a page where the user can choose or search for an item to borrow (feed page).
- 4. User clicks an item.
- 5. User clicks the "borrow the item" button.
- 6. System pops the page and opens the feed page.

#### Alternatives:

- 4a. User wants to cancel the operation.
- 4a.1. User clicks the cancel button on the opened page.
- 5a. Connection err.
- 5a.1. User is returned to the previous page and needs to click an item to borrow.

**Use Case:** Search Borrowings

**Primary Actors:** User

Goals:

User: wants to search for a specific item
 Preconditions: User already has an account

**Post-conditions/Exit condition:** User searches and finds the item they were searching for

- 1. User clicks the search bar.
- 2. User writes the keyword that they want to find.
- 3. User presses the search button or presses the enter key.
- 4. System searches the keyword in the existing borrow posts.
- 5. System finds matches with the keywords in posts.
- 6. System shows the matches in the feed of the Borrow page.

7. User finds the specific item that they are searching for by scrolling through the feed.

#### **Alternatives**

- 4a. Connection error
- 4a.1. User is returned to the previous page.
- 5a. The searched keyword cannot be found in the posts.
- 5a.1. The user will be warned, "The item cannot be found!".
- 6a. Connection error. Database connection may not be stable.
- 6a.1. User will be warned of a connection error and will be returned to the previous page.
- 7a. User cannot find the item.
- 7a.1. User will exit the system and try again later.

Use Case: View Borrowing Feed

Primary Actors: User

Goals:

User: wants to view borrowing feed
 Preconditions: User already has an account

Post-conditions/Exit condition: User views the borrowing feed

**Main Success Scenario:** 

- 1. User opens the Borrow page
- 2. The system shows the borrow feed on the current page.

#### Alternatives:

2a. Database connection error.

2a.1. The system warns the user that it cannot retrieve data from the database at that moment.

Use Case: Second-Hand Sales

Primary Actors: User

Goals:

User: wants to sell a second-hand itemUser: wants to buy a second-hand item

**Precondition:** User already has an account

Post-conditions/Exit condition: User opens the second-hand sales page

**Main Success Scenario:** 

- 1. User selects the Second-Hand Sales button
- 2. The system opens the page that shows the operations that the user can do, which are "View Second-Hand Feed (to select an item to buy)" and "Sell Item".

#### Alternatives:

2a. Database connection error.

- 2a.1. System reports failure to the user and backs up to the previous step.
- 2a.2. User exits or tries again

Use Case: View Second-Hand Feed

Primary Actors: User

Goals:

• User: wants to see which items are on sale for second-hand sales

**Precondition:** User already has an account

Post-conditions/Exit condition: User views second-hand sales feed

**Main Success Scenario:** 

- 1. User selects the "View Second-Hand Sales" button
- 2. The system shows the feed, i.e., the items on sale

#### Alternatives:

2a. Database connection error.

2a.1. The system warns the user that it cannot retrieve data from the database at that moment.

Use Case: Buy Item Primary Actors: User

Goals:

• User: wants to buy a specific second-hand item

**Precondition:** User already has an account

Post-conditions/Exit condition: User buys the second-hand item

#### **Main Success Scenario:**

- 1. User selects the "Buy Item" button
- 2. User will be asked if they will proceed with a chat with the seller to negotiate the price or ask questions about the product, time, and place to meet if they agree on everything
- 3. If they are sure to do so, they will be directed to a chat with the seller

#### Alternatives:

- 2a. User wants to cancel the operation.
- 2a.1. User clicks the cancel button on the opened page.
- 3a. The item has already been sold.
- 3a.1. User will be warned that the item has been sold, and user will be returned to the previous page.

Use Case: Search Second-Hand Sales

Primary Actors: User

Goals:

• User: wants to search for a specific second-hand item for purchase

**Precondition:** User already has an account

**Post-conditions/Exit condition:** User searches and finds the item they were searching for

- 1. User clicks the search bar.
- 2. User writes the keyword that they want to find.
- 3. User presses the search button or presses the enter key.

- 4. System searches the keyword in the existing items posts on sale.
- 5. System finds matches with the keywords in posts.
- 6. System shows the matches in the feed of the Second-Hand Sales page.
- 7. User finds the specific item that they are searching for by scrolling through the feed.

- 4a. Connection err.
- 4a.1. User is returned to the previous page and needs to search again.
- 5a. The searched keyword cannot be found in the posts.
- 5a.1. The user will be warned, "The item cannot be found!".
- 6a. Connection error. Database connection may not be stable.
- 6a.1. User will be warned of a connection error and will be returned to the previous page.
- 7a. User cannot find the item.
- 7a.1. User will exit the system and try again later.

Use Case: Sell Item
Primary Actors: User

Goals:

User: wants to sell their second-hand item

Precondition: User already has an account, user has a second-hand item to sell

Post-conditions/Exit condition: User sells their second-hand item

#### **Main Success Scenario:**

- 1. User selects the "Sell Item" button
- 2. The system opens a screen to get the information of the item the user wants to sell, i.e., photo, price, age, and any additional information they want to give
- 3. After they provide the information, they will select "Complete" and complete the posting process

#### Alternative:

- 2a. Database connection error.
- 2a.1. System reports failure to the user and backs up to the previous step.
- 2a.2. User exits or tries again

Use Case: Lost & Found Primary Actor: User

Goals:

User: wants to see the lost items

**Precondition:** The user already has an account

Post-conditions/Exit condition: User opens the lost & found page

Main Success Scenario:

- 1. User selects the Lost & Found button
- 2. System opens the Lost & Found page.

#### **Alternatives:**

2a. Database connection failure.

- 2a.1. Sys reports failure to the user and backs up to the previous step.
- 2a.2. User exits or tries again

Use Case: View Lost & Found Feed

**Primary Actor:** User

Goals:

User: wants to see the lost and found items **Precondition:** The user already has an account

Post-conditions/Exit condition: User views lost & found feed

Main Success Scenario:

1. User selects the Lost & Found button

2. System opens the Lost & Found page with the Lost & Found feed.

#### Alternatives:

2a. Database connection failure.

2a.1. Sys reports failure to the user and backs up to the previous step.

2a.2. User exits or tries again

Use Case: Post Found Item

**Primary Actor:** User

Goals:

User: wants to post an item they found **Precondition:** The user already has an account

Post-conditions/Exit condition: User posts the item they found

#### **Main Success Scenario:**

- 1. User finds an item that does not belong to them.
- 2. User selects the "post found item" button.
- 3. System opens a page where the user can upload a photo of the found item, enter keywords for the item, write where they found the item, and write an explanation.
- 4. User fills in the blanks on the opened page.
- 5. User presses the post button.
- 6. The post appears in the lost and found feed.

#### Alternatives:

4a. User wants to cancel the operation.

4a.1. User clicks the cancel button on the opened page.

5a. Connection err.

5a.1. User is returned to the previous page and needs to create a post again.

Use Case: Search Lost & Found

Primary Actor: User

Goals:

User: wants to search for a specific item

Precondition: The user already has an account

Post-conditions/Exit condition: User searches and finds the item they were

searching for

#### **Main Success Scenario:**

- 1. User clicks the search bar.
- 2. User writes the keyword that they want to find.
- 3. User presses the search button or presses the enter key.
- 4. System searches the keyword in the existing lost and found posts.
- 5. System finds matches with the keywords in posts.
- 6. System shows the matches in the Lost & Found page feed.
- 7. User finds the specific item that they are searching for by scrolling through the feed.

#### Alternatives:

4a. Connection err.

- 4a.1. User is returned to the previous page and needs to search again.
- 5a. The searched keyword cannot be found in the posts.
- 5a.1. The user will be warned, "The item cannot be found!".
- 6a. Connection error. Database connection may not be stable.
- 6a.1. User will be warned of a connection error and will be returned to the previous page.
- 7a. User cannot find the item.
- 7a.1. User will exit the system and try again later.

Use Case: Report ID Lost or Found

Primary Actor: User

Goals:

User: wants to report when they find an ID card or lost their ID card.

**Precondition:** The user already has an account

**Post-conditions/Exit condition:** User reports the ID card they found or posts that they lost their ID

- 1. User clicks the "Report ID Lost or Found" button.
- 2. The button opens two options: "ID Lost" and "ID Found"
- 3. User clicks the ID Found button.
  - a. User clicks the ID Lost button.
  - b. System automatically enters the ID and the person's name into the lost ID list.
  - c. When the ID is found, the system will notify the user with a notification.
- 4. System opens a page for the user to enter the lost ID information, such as the ID number, the person's name, and the department.
- 5. User enters the needed information.
- 6. User clicks the continue button.
- 7. The system sends a notification to the user with the same ID number to indicate that another person finds their ID.

- 5a. User does not enter all the required information.
- 5a.1. User is warned that they haven't entered all the needed information.
- 6a. User cancels the operation.
- 6a.1. User presses the cancel button to cancel the operation.
- 7a. No user exists with the same ID number.
- 7a.1. The system will not notify anyone.

**Use Case:** Match Lost and Found **Primary Actor:** System & User

Goals:

System: Matches a lost ID when another user finds it.

**Precondition:** The user does not have an account

Post-conditions/Exit condition: User is matched with their ID

#### **Main Success Scenario:**

- 1. The user enters a found ID into the system.
- 2. System realizes the same ID is in the lost IDs.
- 3. System notifies user that their ID is found.
- 4. System lets the user know which user reported the ID as found.
- 5. The users are open to chat from the LiveChat part of the program.

#### **Alternatives:**

- 2a. The ID is not found in the lost IDs.
- 2a.1. The system will still notify the user that one person finds their ID.
- 3a. System error. System does not notify the user.
- 3a.1. The system will match when the ID is entered as lost.

**Use Case:** Create Account

Primary Actor: User

Goals:

User: wants to create an account in the system.

#### **Preconditions:**

- 1. The user does not have an account.
- 2. User is a Bilkent member.

Post-conditions/Exit condition: User's account is created.

#### **Main Success Scenario:**

- 1. User opens the landing page of the CampusConnect.
- 2. User presses the Create Account button.
- 3. System opens a page for the user to enter their name, surname, Bilkent email, BilkentID number, username, and password.
- 4. User enters the needed information in the provided areas.
- 5. User clicks the continue button.
- 6. The system creates the account.
- 7. User is directed to the login page.

#### Alternatives:

- 3a. User wants to cancel the account creation.
- 3a.1. User presses the cancel button.
- 4a. User does not provide all the needed information.
- 4a.1. User is warned with a message and directed to the same page to add the information.

Use Case: Login
Primary Actor: User

Goals:

User: wants to log in to the system.

#### Precondition:

- 1. The user has an account.
- 2. The user is logged in to the system.

Post-conditions/Exit condition: User logs in to the system.

#### **Main Success Scenario:**

- 1. User clicks the login button on the landing page.
- 2. System opens a page where the user needs to enter their username and password.
- 3. The user enters the required correct information.
- 4. System enters the main page of the CampusConnect.

#### Alternatives:

- 3a. The user enters the wrong information.
- 3a.1. User is warned that the username or the password is wrong.
- 3b. The user forgets their password.
- 3b.1. User clicks the forget password button, and an email with the user's new password is sent to their Bilkent mail.

Use Case: Logout Primary Actor: User

Goals:

User: wants to log out of the system.

#### **Precondition:**

- 1. The user has an account.
- 2. The user is logged in to the system.

Post-conditions/Exit condition: User logs out of the system.

#### **Main Success Scenario:**

- 1. User opens the view profile page.
- 2. User selects the logout option from the sidebar.
- 3. The system logs out the user.
- 4. User is directed to the landing page.

**Use Case:** View Profile **Primary Actor:** User

Goals:

User: wants to view their profile.

Precondition: The user has an account.

Post-conditions/Exit condition: User views their profile.

#### **Main Success Scenario:**

- 1. The user selects the view profile button on the main page.
- 2. The system opens the user's profile page with the user's personal "Freezone" feed.
- 3. The user can see their badges and ratings here.
- 4. The user can open a slider with a delete account button, a view transaction button, and an edit profile button.
- 5. Users can delete their posts by clicking the cross icon on their posts.

#### **Alternatives:**

- 2a. Network error happens, and an error page is shown.
- 2a.1. Message is closed by the user and user returned to previous page
- 3a. Network error happens.
- 3a.1. Message is closed by the user and user returned to previous page
- 6a. The post couldn't be deleted after clicking the cross icon, user will be warned with an error page.
- 6a.1. Message is closed by the user and user returned to previous page

**Use Case:** Delete Account **Primary Actor:** Admin, User

Goals: User wants to delete their account.

#### **Precondition:**

- 1. The user has an account.
- 2. User is logged in.

Post-conditions/Exit condition: User deletes their account.

#### Main Success Scenario:

- 1. User clicks the delete account button.
- 2. A dialog that asks the user "Are you sure?" appeared.
- 3. User clicks "Yes", and is removed from the database.

#### Alternatives:

3a. Database error. The user is not removed from the system.

3a.1. Message is closed by the user and user returned to previous page

Use Case: Edit Profile Primary Actor: User

Goals: User wants to edit their profile

#### Precondition:

- 1. User has an account
- 2. User is logged in

Post-conditions/Exit condition: User edits their profile as they wish

#### Main Success Scenario:

1. User clicks to edit the profile.

2. Users can change their name and password but can't change their real name.

#### Alternatives:

2a. Database error. The change didn't happen.

2a.1. Message is closed by the user and user returned to previous page

**Use Case:** View Transactions

**Primary Actor:** User

Goals: User wants to view their transactions

#### **Precondition:**

- 1. User has an account
- 2. User is logged in

Post-conditions/Exit condition: User views their transactions.

#### Main Success Scenario:

- 1. User opens the view profile page.
- 2. User clicks to view transactions button.
- 3. The system connects to the database and takes the transaction items from the database.
- 4. The system shows the transactions as a feed to the user.

#### **Alternatives:**

3a. Database connection error. The user is warned with a warning message.

3a.1. Warning is closed by the user and user returned to previous page

**Use Case:** Give Rate **Primary Actor:** User

Goals: User wants to give a rate to another user

#### Precondition:

- 1. User has an account
- 2. User is logged in
- 3. User has borrowed/bought an item from the user that they want to rate

**Post-conditions/Exit condition:** User gives rate to the user they want to rate **Main Success Scenario:** 

- 1. User opens the view transactions page.
- 2. User finds the transaction information between the user and the user who wanted to be rated.
- 3. The user clicks on the transaction post.
- 4. The system asks whether the user wants to rate.
- 5. User selects the I want to rate option.
- 6. User can rate the seller or the donor from 1 to 10.

#### Alternatives:

- 2a. User cannot find the transaction information.
- 2a.1. The system couldn't retrieve the information well. Nothing is done.
- 2a.2. The user may remember the wrong transaction.
- 5a. User wants to cancel the operation.
- 5a.1. User selects the cancel button.

Use Case: View Personal Freezone Feed

**Primary Actor:** User

Goals: User wants to see their Freezone feed

**Precondition:** 

1. User has an account

2. User is logged in

Post-conditions/Exit condition: User views their Freezone feed

**Main Success Scenario:** 

1. User opens the view profile page.

2. The system shows the Freezone feed of the user on the current page.

#### **Alternatives:**

2a. Database connection error.

2a.1. The system warns the user that it cannot retrieve data from the database at that moment.

2a.2. Message is closed by the user and user returned to previous page

Use Case: Talk with the Dealer

**Primary Actors:** Customer User, Dealer user **Goals:** Talking with the user who sells items

Preconditions: Users should already have an account

Post-conditions/Exit condition: Customer User talks with the Dealer User

#### **Main Success Scenario:**

1. User selects the LiveChat button

- 2. System opens the LiveChat section
- 3. User sends a message to another user
- 4. The user on the other side delivers the message

#### **Alternatives:**

3a. A network error happened.

3a.1. Message is closed by the user and user returned to previous page

6a. Connection error. Database connection may not be stable.

6a.1. User will be warned of a connection error and will be returned to the previous page.

Use Case: Talk with user about finding the lost item

**Primary Actors:** Found-Lost-Item User, Lost-An-Item User

Goals: Talking with the user who finds lost items.

**Preconditions:** Users should already have an account

Post-conditions/Exit condition: Two users talk with each other

- 1. User selects the LiveChat button
- 2. System opens the LiveChat section
- 3. User sends a message to another user
- 4. The user on the other side delivers the message

- 3a. Network error happened.
- 3a.1. Message is closed by the user and user returned to previous page
- 6a. Connection error. Database connection may not be stable.
- 6a.1. The User will be warned of a connection error and will be returned to the previous page.

Use Case: Talk with other users for socializing

Primary Actors: The Message sender user, The Message receiver user

Goals: Talking with the other user.

**Preconditions:** Users should already have an account **Post-conditions/Exit condition:** They talk with each other

Main Success Scenario:

- 1. User selects the LiveChat button
- 2. System opens the LiveChat section
- 3. User sends a message to another user
- 4. The user on the other side delivers the message

#### **Alternatives:**

3a. Network error happened.

- 3a.1. Message is closed by the user and user returned to previous page.
- 6a. Connection error. Database connection may not be stable.
- 6a.1. The User will be warned of a connection error and will be returned to the previous page.

Use Case: Give Badges

Primary Actor: System, Admin

**Goals:** System gives badges to the users with good behavior.

#### **Precondition:**

- 1. User has an account
- 2. User is logged in

Post-conditions/Exit condition: System gives badges to a user

#### **Specifications:**

The system will provide badges to a user for every 15 donations.

**Use Case:** Contact Support **Primary Actor:** Admin, User

Goals: User wants support from the admin

#### Precondition:

- 1. User has an account
- 2. User is logged in

**Post-conditions/Exit condition:** Admin reaches user and helps them with whatever **Main Success Scenario:** 

1. The user logs in.

- 2. User presses the contact support button.
- 3. The system opens a mail page that enables users to write emails to the admins.
- 4. User writes where and why they need the support.
- 5. User clicks the send button.
- 6. The admin is notified with the email.

4a. User decides to cancel the operation.

4a.1. User presses the cancel button.

6a. Web error. The mail couldn't be sent.

6a.1. User is warned with a message.

**Use Case:** Report Content **Primary Actor:** Admin

Goals: Admin wants to report content.

**Precondition:** User posts an inappropriate text or an image.

Post-conditions/Exit condition: Admin deletes the inappropriate content and

warns user accordingly

#### Main Success Scenario:

- 1. Admin sees an inappropriate word or image shared by one of the users.
- 2. Admin erases the content from the database.

#### Alternatives:

1a. Admin missed the inappropriate content.

1a.1. The system checks the keywords of posts and reports to the admin if there is any inappropriate content.