



**Bilkent University**

**Department of Computer Engineering**

CS 319 - Object-Oriented Software Engineering  
Fall 2023

# **Deliverable 1**

Use Case Diagram  
Non-Functional Requirements  
Tech Stack

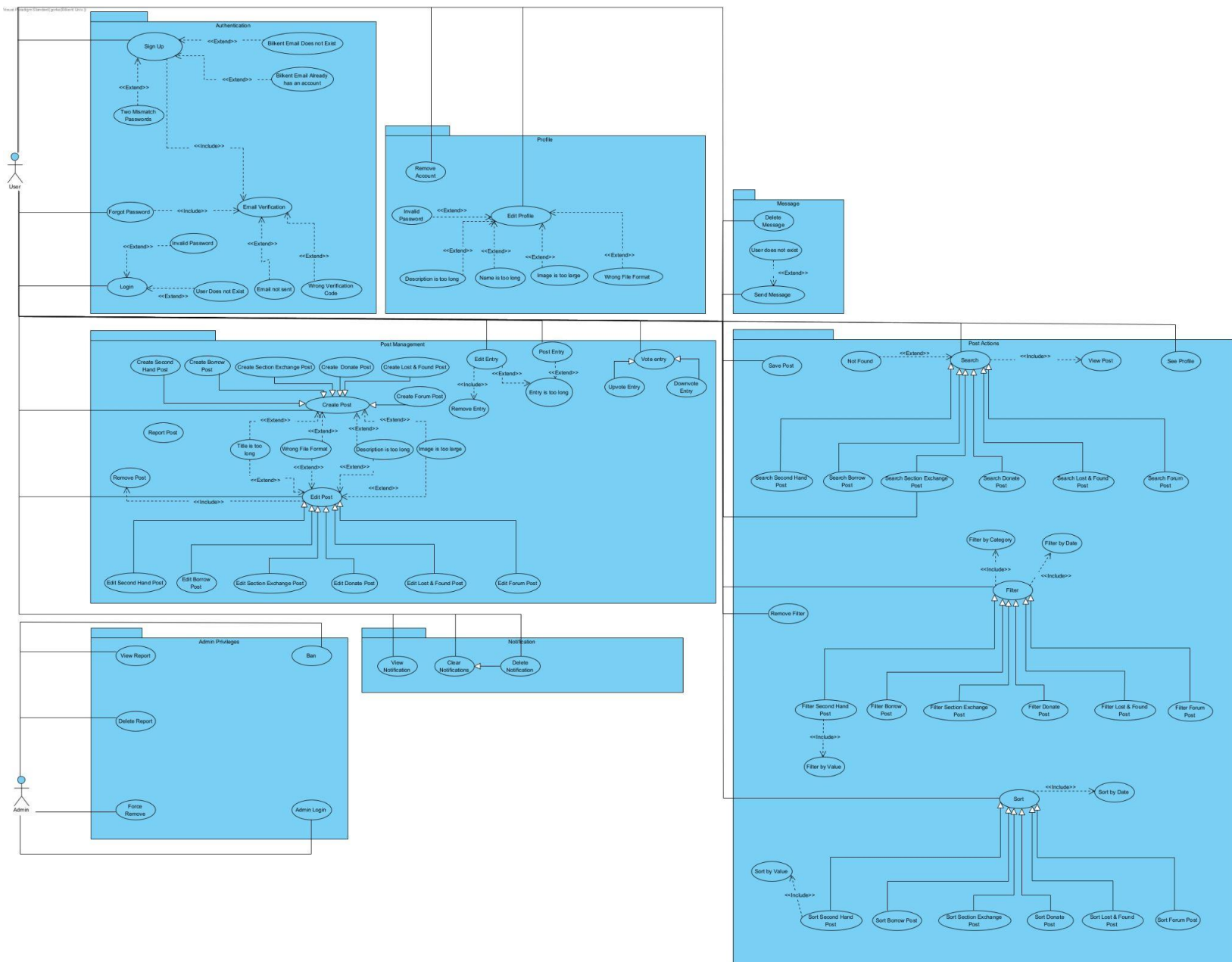
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# Use Case Diagram



# Use Case Diagram Explanations

## Authentication Package

1. **Name:** Login
2. **Participating Actor:** Actor
3. **Entry Condition:** Opening the app through a web browser
4. **Exit Condition:** Press the logout button on the profile page
5. **Flow of Events:**
  - 5.1. The participant actor fills in the credentials and presses the login button.
    - 5.1.1. The participant actor is prompted to re-enter his/her credentials due to an invalid password.
    - 5.1.2. The participant actor is prompted to re-enter his/her credentials due to the unrecognized username/email in the database.
1. **Name:** Sign Up
2. **Participating Actor:** User
3. **Entry Condition:** Clicking the sign-up button on the login page
4. **Exit Condition:** Clicking the back button
5. **Flow of Events:**
  - 5.1. The user opens up the sign up page
  - 5.2. Provides the required information (email, username, password, etc.)
  - 5.3. Clicks the sign up button
    - 5.3.1. If the user did not provide a Bilkent Email, an error message will be displayed.
    - 5.3.2. If the provided Bilkent Email has already an account, an error message will be displayed
    - 5.3.3. If two entered passwords mismatch, an error message will be displayed.
  - 5.4. Else, registration will be completed after email verification.
1. **Name:** Email Verification
2. **Participating Actor:** User
3. **Entry Condition:** Signing up or requesting a new password via forgot password page
4. **Exit Condition:** Clicking the back button
5. **Flow of Events:**
  - 5.1. The user either signs up or requests a new password
  - 5.2. The user receives an email containing a verification code

- 5.2.1. If the user didn't receive the email, he/she can request a resending of the email.
  - 5.3. The user enters the code into the related box on either sign up page or the forgot password page.
    - 5.3.1. If the entered code is wrong, an error message will be displayed.
  - 5.4. Verification will be completed after the user enters the correct code
- 
- 1. **Name:** Forgot Password
  - 2. **Participating Actor:** User
  - 3. **Entry Condition:** Clicking the forgot password button on the login page
  - 4. **Exit Condition:** Clicking the back button
  - 5. **Flow of Events:**
    - 5.1 The user opens up the forgot password page
    - 5.2 Enters his/her email address
    - 5.3 If there is an account with that email address, the user is redirected to the email verification page
    - 5.4 Upon completing the email verification, the user is redirected to the password reset page
    - 5.5 The user enters the new password and clicks the reset password button
    - 5.6 The user is redirected to the login page

## Profile Package

- 1. **Name:** Edit Profile
- 2. **Participating Actor:** User
- 3. **Entry Condition:** Clicking the edit profile button on profile page
- 4. **Exit Condition:** Clicking the done button on the edit profile page
- 5. **Flow of Events:**
  - 5.1. User enters the profile page
  - 5.2. User clicks edit profile button
  - 5.3. User enters the account password
    - 5.3.1. Invalid password
  - 5.4. User opens the edit page
  - 5.5. User enters the description
    - 5.5.1. If the description is too long, "Description is too long" message will be displayed.
  - 5.6. User enters the name
    - 5.6.1. If the name is too long, "Name is too long" message will be displayed.
  - 5.7. User selects profile picture from files

- 5.7.1. If the image is too large, “Image is too large” message will be displayed.
- 5.8. Wrong File Format
- 1. **Name:** Remove Account
- 2. **Participating Actor:** User
- 3. **Entry Condition:** Clicking the remove account button on profile page
- 4. **Exit Condition:** Clicking the I am sure button when prompted with the warning “Are you sure you want to remove your account?”
- 5. **Flow of Events:**
  - 5.1. User enters the profile page
  - 5.2. User clicks edit profile button
  - 5.3. User opens the edit page
  - 5.4. User clicks the remove account button
  - 5.5. User accepts the I am sure button when prompted with the warning “Are you sure you want to remove your account?”
  - 5.6. User is directed to the login page

## Message Package

- 1. **Name:** Send Message
- 2. **Participating Actor:** User, Admin
- 3. **Entry Condition:** The receiver of the message must exist
- 4. **Exit Condition:** Clicking send message button
- 5. **Flow of Events:**
  - 5.1. User selects the receiver of the message
    - 5.1.1. If the user does not exist, “User does not exist” message will be displayed.
  - 5.2. User writes the message content to given space
  - 5.3. User pushes send message button
- 1. **Name:** Delete Message
- 2. **Participating Actor:** User, Admin
- 3. **Entry Condition:** Message must be sent previously
- 4. **Exit Condition:** User deletes the message
- 5. **Flow of Events:**
  - 5.1. User opens message history
  - 5.2. User writes the message content to given space
  - 5.3. User pushes send message button.

1. **Name:** Create Post
2. **Participating Actor:** User
3. **Entry Condition:** Opening up related page
4. **Exit Condition:** Clicking the cancel button
5. **Flow of Events:**
  - 5.1. The User clicks the related page
  - 5.2. The User clicks the related pages create post button
  - 5.3. If the title is too long
    - 5.3.1. "Title is too long" error message is displayed
  - 5.4. Else if uploaded files are in a wrong file format
    - 5.4.1. "Wrong file format" error message is displayed
  - 5.5. Else if the description is too long
    - 5.5.1. "Description is too long" error message is displayed
  - 5.6. Else if images are too large
    - 5.6.1. "Images are too large" error message is displayed
  - 5.7. Else the User successfully creates the post

1. **Name:** Create Second Hand Post
2. **Participating Actor:** Inherited from create post use case
3. **Entry Condition:** Opening up second hand page
4. **Exit Condition:** Inherited from create post use case
5. **Flow of Events:**
  - 5.1. The User clicks the second hand page
  - 5.2. The User clicks the create second hand post button
  - 5.3. If the title is too long
    - 5.3.1. "Title is too long" error message is displayed
  - 5.4. Else if uploaded files are in a wrong file format
    - 5.4.1. "Wrong file format" error message is displayed
  - 5.5. Else if the description is too long
    - 5.5.1. "Description is too long" error message is displayed
  - 5.6. Else if images are too large
    - 5.6.1. "Images are too large" error message is displayed
  - 5.7. Else the User successfully creates the post

1. **Name:** Create Borrow Post
2. **Participating Actor:** Inherited from create post use case
3. **Entry Condition:** Opening up borrow page
4. **Exit Condition:** Inherited from create post use case
5. **Flow of Events:**
  - 5.1. The User clicks the borrow page
  - 5.2. The User clicks the create borrow post button

- 5.3. If title is too long
  - 5.3.1. "Title is too long" error message is displayed
- 5.4. Else if uploaded files are in a wrong file format
  - 5.4.1. "Wrong file format" error message is displayed
- 5.5. Else if the description is too long
  - 5.5.1. "Description is too long" error message is displayed
- 5.6. Else if images are too large
  - 5.6.1. "Images are too large" error message is displayed
- 5.7. Else the User successfully creates the post

1. **Name:** Create Section Exchange Post
2. **Participating Actor:** Inherited from create post use case
3. **Entry Condition:** Opening up section exchange page
4. **Exit Condition:** Inherited from create post use case
5. **Flow of Events:**
  - 5.1. The User clicks the section exchange page
  - 5.2. The User clicks the create section exchange Post button
  - 5.3. If the title is too long
    - 5.3.1. "Title is too long" error message is displayed
  - 5.4. Else if uploaded files are in a wrong file format
    - 5.4.1. "Wrong file format" error message is displayed
  - 5.5. Else if the description is too long
    - 5.5.1. "Description is too long" error message is displayed
  - 5.6. Else if images are too large
    - 5.6.1. "Images are too large" error message is displayed
  - 5.7. Else the User successfully creates the post

1. **Name:** Create Donate Post
2. **Participating Actor:** Inherited from create post use case
3. **Entry Condition:** Opening up donate page
4. **Exit Condition:** Inherited from create post use case
5. **Flow of Events:**
  - 5.1. The User clicks the donate page
  - 5.2. The User clicks the create donate post button
  - 5.3. If the title is too long
    - 5.3.1. "Title is too long" error message is displayed
  - 5.4. Else if uploaded files are in a wrong file format
    - 5.4.1. "Wrong file format" error message is displayed
  - 5.5. Else if the description is too long
    - 5.5.1. "Description is too long" error message is displayed



- 5.6. Else if images are too large
  - 5.6.1. “Images are too large” error message is displayed
- 5.7. Else the User successfully creates the post

1. **Name:** Create Lost and Found Post
2. **Participating Actor:** Inherited from create post use case
3. **Entry Condition:** Opening up lost and found page
4. **Exit Condition:** Inherited from create post use case
5. **Flow of Events:**
  - 5.1. The User clicks the lost and found page
  - 5.2. The User clicks the create lost and found post button
  - 5.3. If the title is too long
    - 5.3.1. “Title is too long” error message is displayed
  - 5.4. Else if uploaded files are in a wrong file format
    - 5.4.1. “Wrong file format” error message is displayed
  - 5.5. Else if the description is too long
    - 5.5.1. “Description is too long” error message is displayed
  - 5.6. Else if images are too large
    - 5.6.1. “Images are too large” error message is displayed
  - 5.7. Else the User successfully creates the post

1. **Name:** Create Forum Post
2. **Participating Actor:** Inherited from create post use case
3. **Entry Condition:** Opening up forum page
4. **Exit Condition:** Inherited from create post use case
5. **Flow of Events:**
  - 5.1. The User clicks the forum page
  - 5.2. The User clicks the create forum post button
  - 5.3. If title is too long
    - 5.3.1. “Title is too long” error message is displayed
  - 5.4. Else if uploaded files are in a wrong file format
    - 5.4.1. “Wrong file format” error message is displayed
  - 5.5. Else if the description is too long
    - 5.5.1. “Description is too long” error message is displayed
  - 5.6. Else if images are too large
    - 5.6.1. “Images are too large” error message is displayed
  - 5.7. Else the User successfully creates the post

1. **Name:** Edit Post
2. **Participating Actor:** User
3. **Entry Condition:** Opening up related page
4. **Exit Condition:** Clicking the cancel button
5. **Flow of Events:**
  - 5.1. The User clicks the related page
  - 5.2. The User clicks his/her post
  - 5.3. The User clicks the related pages edit post button
  - 5.4. If the title is too long
    - 5.4.1. "Title is too long" error message is displayed
  - 5.5. Else if uploaded files are in a wrong file format
    - 5.5.1. "Wrong file format" error message is displayed
  - 5.6. Else if the description is too long
    - 5.6.1. "Description is too long" error message is displayed
  - 5.7. Else if images are too large
    - 5.7.1. "Images are too large" error message is displayed
  - 5.8. Else the User successfully edits the post
6. **Quality Requirements:**

This use case includes the remove post use case if the user wants to remove his/her post from the system. remove post use case removes the post from the system.

1. **Name:** Edit Second-Hand Post
2. **Participating Actor:** Inherited from edit post use case
3. **Entry Condition:** Opening up second hand page
4. **Exit Condition:** Inherited from edit post use case
5. **Flow of Events:**
  - 5.1. The User clicks the second hand page
  - 5.2. The User clicks his/her post
  - 5.3. The User clicks the edit second hand post button
  - 5.4. If the title is too long
    - 5.4.1. "Title is too long" error message is displayed
  - 5.5. Else if uploaded files are in a wrong file format
    - 5.5.1. "Wrong file format" error message is displayed
  - 5.6. Else if the description is too long
    - 5.6.1. "Description is too long" error message is displayed
  - 5.7. Else if images are too large
    - 5.7.1. "Images are too large" error message is displayed
  - 5.8. Else the User successfully edits the post

1. **Name:** Edit Borrow Post
2. **Participating Actor:** Inherited from edit post use case
3. **Entry Condition:** Opening up borrow page
4. **Exit Condition:** Inherited from edit post use case
5. **Flow of Events:**
  - 5.1. The User clicks the borrow page
  - 5.2. The User clicks his/her post
  - 5.3. The User clicks the edit borrow post button
  - 5.4. If title is too long
    - 5.4.1. "Title is too long" error message is displayed
  - 5.5. Else if uploaded files are in a wrong file format
    - 5.5.1. "Wrong file format" error message is displayed
  - 5.6. Else if the description is too long
    - 5.6.1. "Description is too long" error message is displayed
  - 5.7. Else if images are too large
    - 5.7.1. "Images are too large" error message is displayed
  - 5.8. Else the User successfully edits the post

1. **Name:** Edit Section Exchange Post
2. **Participating Actor:** Inherited from edit post use case
3. **Entry Condition:** Opening up Section exchange page
4. **Exit Condition:** Inherited from edit post use case
5. **Flow of Events:**
  - 5.1. The User clicks the section exchange page
  - 5.2. The User clicks his/her post
  - 5.3. The User clicks the edit section exchange post button
  - 5.4. If the title is too long
    - 5.4.1. "Title is too long" error message is displayed
  - 5.5. Else if uploaded files are in a wrong file format
    - 5.5.1. "Wrong file format" error message is displayed
  - 5.6. Else if the description is too long
    - 5.6.1. "Description is too long" error message is displayed
  - 5.7. Else if images are too large
    - 5.7.1. "Images are too large" error message is displayed
  - 5.8. Else the User successfully edits the post

1. **Name:** Edit Donate Post
2. **Participating Actor:** Inherited from edit post use case
3. **Entry Condition:** Opening up donate page
4. **Exit Condition:** Inherited from edit post use case
5. **Flow of Events:**
  - 5.1. The User clicks the donate page
  - 5.2. The User clicks his/her post
  - 5.3. The User clicks the edit donate post button
  - 5.4. If title is too long
    - 5.4.1. "Title is too long" error message is displayed
  - 5.5. Else if uploaded files are in a wrong file format
    - 5.5.1. "Wrong file format" error message is displayed
  - 5.6. Else if the description is too long
    - 5.6.1. "Description is too long" error message is displayed
  - 5.7. Else if images are too large
    - 5.7.1. "Images are too large" error message is displayed
  - 5.8. Else the User successfully edits the post

1. **Name:** Edit Lost and Found Post
2. **Participating Actor:** Inherited from edit post use case
3. **Entry Condition:** Opening up lost and found page
4. **Exit Condition:** Inherited from edit post use case
5. **Flow of Events:**
  - 5.1. The User clicks the lost and found page
  - 5.2. The User clicks his/her post
  - 5.3. The User clicks the edit lost and found post button
  - 5.4. If the title is too long
    - 5.4.1. "Title is too long" error message is displayed
  - 5.5. Else if uploaded files are in a wrong file format
    - 5.5.1. "Wrong file format" error message is displayed
  - 5.6. Else if the description is too long
    - 5.6.1. "Description is too long" error message is displayed
  - 5.7. Else if images are too large
    - 5.7.1. "Images are too large" error message is displayed
  - 5.8. Else the User successfully edits the post

1. **Name:** Edit Forum Post
2. **Participating Actor:** Inherited from edit post use case
3. **Entry Condition:** Opening up forum page
4. **Exit Condition:** Inherited from edit post use case
5. **Flow of Events:**
  - 5.1. The User clicks the forum page
  - 5.2. The User clicks his/her post
  - 5.3. The User clicks the edit forum post button
  - 5.4. If the title is too long
    - 5.4.1. "Title is too long" error message is displayed
  - 5.5. Else if uploaded files are in a wrong file format
    - 5.5.1. "Wrong file format" error message is displayed
  - 5.6. Else if the description is too long
    - 5.6.1. "Description is too long" error message is displayed
  - 5.7. Else if images are too large
    - 5.7.1. "Images are too large" error message is displayed
  - 5.8. Else the User successfully edits the post

1. **Name:** Report Post
2. **Participating Actor:** User
3. **Entry Condition:** Clicking the report post button
4. **Exit Condition:** Clicking the cancel button
5. **Flow of Events:**
  - 5.1. The User opens up any tab
  - 5.2. The User clicks a post
  - 5.3. The User clicks the report post button
  - 5.4. The User successfully reports the post

1. **Name:** Vote Entry
2. **Participating Actor:** User
3. **Entry Condition:** Opening up a post on the forum page
4. **Exit Condition:** Clicking the cancel button
5. **Flow of Events:**
  - 5.1. The User clicks a post on the forum page
  - 5.2. The User clicks up/downvote entry
  - 5.3. The User successfully up/downvotes the post

1. **Name:** Upvote Entry
2. **Participating Actor:** Inherited from vote entry use case
3. **Entry Condition:** Opening up a post in the forum page
4. **Exit Condition:** Inherited from vote entry use case
5. **Flow of Events:**
  - 5.1. The User clicks a post on the forum page
  - 5.2. The User clicks upvote entry
  - 5.3. The User successfully upvotes the entry

1. **Name:** Downvote Entry
2. **Participating Actor:** Inherited from vote entry use case
3. **Entry Condition:** Opening up a post on the forum page
4. **Exit Condition:** Inherited from vote entry use case
5. **Flow of Events:**
  - 5.1. The User clicks a post on the forum page
  - 5.2. The User clicks downvote entry
  - 5.3. The User successfully downvotes the entry

1. **Name:** Post Entry
2. **Participating Actor:** User
3. **Entry Condition:** Opening up a post in the forum page
4. **Exit Condition:** Clicking the cancel button
5. **Flow of Events:**
  - 5.1. The User clicks a post in the forum page
  - 5.2. The User clicks post entry
  - 5.3. If the entry is too long
    - 5.3.1. "Entry is too long" error message is displayed
  - 5.4. Else the User successfully posts the entry

1. **Name:** Edit Entry
2. **Participating Actor:** User
3. **Entry Condition:** Opening up an entry on the forum page
4. **Exit Condition:** Clicking the cancel button
5. **Flow of Events:**
  - 5.1. The User clicks a post on the forum page
  - 5.2. The User clicks her/his entry
  - 5.3. The User clicks edit entry
  - 5.4. If the description is too long
    - 5.4.1. "Description is too long" error message is displayed
  - 5.5. Else the User successfully edits the entry

6. **Quality Requirements:**

This use case includes the remove entry use case if the user wants to remove his/her entry from the system. remove entry use case removes the entry from the system.

## Post Actions

1. **Name:** Search
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the search button
4. **Exit Condition:** Choosing a tab from the navigation bar or viewing a post
5. **Flow of Events:**
  - 5.1 User or admin clicks the search bar
  - 5.2 Types the thing he/she wants to find
  - 5.3 Clicks to search button
  - 5.4 Matching posts are fetched
    - 5.4.1 "Not Found" message is displayed if there are no matching results
  - 5.5 The participating actor can click the details button of a post to view it

1. **Name:** Search Second Hand Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the search button in the second-hand tab
4. **Exit Condition:** Choosing a tab from the navigation bar or viewing a post
5. **Flow of Events:**
  - 5.1 User or admin opens up the second hand tab
  - 5.2 Clicks the search bar
  - 5.3 Types the title of the second hand post he/she wants to find
  - 5.4 Clicks to search button
  - 5.5 Matching second-hand posts are fetched
    - 5.5.1 "Not Found" message is displayed if there are no matching results
  - 5.6 The participating actor can click the details button of a post to view it

1. **Name:** Search Borrow Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the search button in the borrow tab
4. **Exit Condition:** Choosing a tab from the navigation bar or viewing a post
5. **Flow of Events:**
  - 5.1 User or admin opens up the borrow tab
  - 5.2 Clicks the search bar
  - 5.3 Types the title of the borrow post he/she wants to find
  - 5.4 Clicks to search button

- 5.5 Matching borrow posts are fetched
  - 5.5.1 “Not Found” message is displayed if there are no matching results
- 5.6 The participating actor can click the details button of a post to view it

1. **Name:** Search Section Exchange Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the search button in the section exchange tab
4. **Exit Condition:** Choosing a tab from the navigation bar or viewing a post
5. **Flow of Events:**
  - 5.1 User or admin opens up the section exchange tab
  - 5.2 Clicks the search bar
  - 5.3 Types the title of the section exchange post he/she wants to find
  - 5.4 Clicks to search button
  - 5.5 Matching section exchange posts are fetched
    - 5.5.1 “Not Found” message is displayed if there are no matching results
  - 5.6 The participating actor can click the details button of a post to view it

1. **Name:** Search Donate Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the search button in the donate tab
4. **Exit Condition:** Choosing a tab from the navigation bar or viewing a post
5. **Flow of Events:**
  - 5.1 User or admin opens up the donate tab
  - 5.2 Clicks the search bar
  - 5.3 Types the title of the donate post he/she wants to find
  - 5.4 Clicks to search button
  - 5.5 Matching donate posts are fetched
    - 5.5.1 “Not Found” message is displayed if there are no matching results
  - 5.6 The participating actor can click the details button of a post to view it

1. **Name:** Search Lost and Found Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the search button in the lost and found tab
4. **Exit Condition:** Choosing a tab from the navigation bar or viewing a post
5. **Flow of Events:**
  - 5.1 User or admin opens up the lost and found tab
  - 5.2 Clicks the search bar
  - 5.3 Types the title of the lost and found post he/she wants to find
  - 5.4 Clicks to search button
  - 5.5 Matching lost and found posts are fetched



- 5.5.1 “Not Found” message is displayed if there are no matching results
- 5.6 The participating actor can click the details button of a post to view it

1. **Name:** Search Forum Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the search button in the forum
4. **Exit Condition:** Choosing a tab from the navigation bar or viewing a post
5. **Flow of Events:**
  - 5.1 User or admin opens up the forum
  - 5.2 Clicks the search bar
  - 5.3 Types the title of the forum post he/she wants to find
  - 5.4 Clicks to search button
  - 5.5 Matching forum posts are fetched
    - 5.5.1 “Not Found” message is displayed if there are no matching results
  - 5.6 The participating actor can click the details button of a post to view it

1. **Name:** View Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the details button of a post
4. **Exit Condition:** Clicking the back button
5. **Flow of Events:**
  - 5.1 The participating actor opens up any tab
  - 5.2 Clicks the details button of a post
  - 5.3 Sees the details of the post

1. **Name:** Save Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the save button of a post
4. **Exit Condition:** Clicking the unsave button of a post
5. **Flow of Events:**
  - 5.1 The participating actor searches a post or opens up a tab
  - 5.2 Clicks the save button of a post

1. **Name:** See Profile
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the username or profile picture of a user
4. **Exit Condition:** Clicking the back button
5. **Flow of Events:**
  - 5.1 The participating actor clicks the details button of a post
  - 5.2 Sees the user information in the details page

5.3 Clicks the username or the profile picture of the post owner

1. **Name:** Filter
  2. **Participating Actor:** User, Admin
  3. **Entry Condition:** Clicking the filter button
  4. **Exit Condition:** Clicking the remove filter button
  5. **Flow of Events:**
    - 5.1 The participating actor opens up any tab
    - 5.2 Clicks the filter button
      - 5.2.1 Filters by category
      - 5.2.2 Filters by date
    - 5.3 Clicks the apply button
    - 5.4 Matching posts are fetched
- 
1. **Name:** Filter Second-Hand Post
  2. **Participating Actor:** User, Admin
  3. **Entry Condition:** Clicking the filter button in the second-hand tab
  4. **Exit Condition:** Clicking the remove filter button
  5. **Flow of Events:**
    - 5.1 The participating actor opens up the second-hand tab
    - 5.2 Clicks the filter button
      - 5.2.1 Filters by category
      - 5.2.2 Filters by date
      - 5.2.3 Filters by value
    - 5.3 Clicks the apply button
    - 5.4 Matching posts are fetched
- 
1. **Name:** Filter Borrow Post
  2. **Participating Actor:** User, Admin
  3. **Entry Condition:** Clicking the filter button in the borrow tab
  4. **Exit Condition:** Clicking the remove filter button
  5. **Flow of Events:**
    - 5.1 The participating actor opens up the borrow tab
    - 5.2 Clicks the filter button
      - 5.2.1 Filters by category
      - 5.2.2 Filters by date
    - 5.3 Clicks the apply button
    - 5.4 Matching posts are fetched

1. **Name:** Filter Section Exchange Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the filter button in the section exchange tab
4. **Exit Condition:** Clicking the remove filter button
5. **Flow of Events:**
  - 5.1 The participating actor opens up the section exchange tab
  - 5.2 Clicks the filter button
    - 5.2.1 Filters by category
    - 5.2.2 Filters by date
  - 5.3 Clicks the apply button
  - 5.4 Matching posts are fetched

1. **Name:** Filter Donate Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the filter button in the donate tab
4. **Exit Condition:** Clicking the remove filter button
5. **Flow of Events:**
  - 5.1 The participating actor opens up the donate tab
  - 5.2 Clicks the filter button
    - 5.2.1 Filters by category
    - 5.2.2 Filters by date
  - 5.3 Clicks the apply button
  - 5.4 Matching posts are fetched

1. **Name:** Filter Lost and Found Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the filter button in the lost and found tab
4. **Exit Condition:** Clicking the remove filter button
5. **Flow of Events:**
  - 5.1 The participating actor opens up the lost and found tab
  - 5.2 Clicks the filter button
    - 5.2.1 Filters by category
    - 5.2.2 Filters by date
  - 5.3 Clicks the apply button
  - 5.4 Matching posts are fetched

1. **Name:** Filter Forum Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the filter button in the forum
4. **Exit Condition:** Clicking the remove filter button

5. **Flow of Events:**

- 5.1 The participating actor opens up the forum
- 5.2 Clicks the filter button
  - 5.2.1 Filters by category
  - 5.2.2 Filters by date
- 5.3 Clicks the apply button
- 5.4 Matching posts are fetched

1. **Name:** Remove Filter

2. **Participating Actor:** User, Admin

3. **Entry Condition:** Clicking the remove filter button inside the filter dropdown menu

4. **Exit Condition:** -

5. **Flow of Events:**

- 5.1 The participant actor has an applied filter
- 5.2 Clicks the cancel button inside the filter dropdown menu

1. **Name:** Sort Second Hand Post

2. **Participating Actor:** User, Admin

3. **Entry Condition:** Clicking the sort second hand posts button inside the filter dropdown menu

4. **Exit Condition:** -

5. **Flow of Events:**

- 5.1 The participant actor has an applied filter
  - 5.1.1 Sort by date
  - 5.1.2 Sort by Value
- 5.2 Clicks the cancel button inside the filter dropdown menu

1. **Name:** Sort Borrow Post

2. **Participating Actor:** User, Admin

3. **Entry Condition:** Clicking the sort borrow button inside the filter dropdown menu

4. **Exit Condition:** -

5. **Flow of Events:**

- 5.1 The participant actor has an applied filter
  - 5.1.1 Sort by date
- 5.2 Clicks the cancel button inside the filter dropdown menu

1. **Name:** Sort Section Exchange Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the section exchange button inside the filter dropdown menu
4. **Exit Condition:** -
5. **Flow of Events:**
  - 5.1 The participant actor has an applied filter
    - 5.1.1 Sort by date
  - 5.2 Clicks the cancel button inside the filter dropdown menu

1. **Name:** Sort Donate Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the sort donate button inside the filter dropdown menu
4. **Exit Condition:** -
5. **Flow of Events:**
  - 5.1 The participant actor has an applied filter
    - 5.1.1 Sort by date
  - 5.2 Clicks the cancel button inside the filter dropdown menu

1. **Name:** Sort Lost and Found Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the sort lost and found button inside the filter dropdown menu
4. **Exit Condition:** -
5. **Flow of Events:**
  - 5.1 The participant actor has an applied filter
    - 5.1.1 Sort by date
  - 5.2 Clicks the cancel button inside the filter dropdown menu

1. **Name:** Sort Forum Post
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking the sort forum button inside the filter dropdown menu
4. **Exit Condition:** -
5. **Flow of Events:**
  - 5.1 The participant actor has an applied filter
    - 5.1.1 Sort by date
  - 5.2 Clicks the cancel button inside the filter dropdown menu

## Admin Privileges Package

1. **Name:** View Report
  2. **Participating Actor:** Admin
  3. **Entry Condition:** Presses the reports button on the admin panel
  4. **Exit Condition:** Presses the go back button on the admin panel
  5. **Flow of Events:**
    - 5.1. The participant actor presses the waiting reports button
      - 5.1.1. The participant actor presses go back button newly opened panel
      - 5.1.2. The participant actor presses a report present in the newly opened panel
- 
1. **Name:** Delete Report
  2. **Participating Actor:** Admin
  3. **Entry Condition:** Admin must already be looking on a report
  4. **Exit Condition:** If the admin chooses the report he/she is looking at, he/she exits the report view and returns back to admin panel
  5. **Flow of Events:**
    - 5.1. After opening the report panel the participant actor clicks on a report present there
    - 5.2. After the click a new panel opens where the actor can inspect the report and delete it if he/she presses the delete report button.
- 
1. **Name:** Force Remove
  2. **Participating Actor:** Admin
  3. **Entry Condition:** Admin must be looking to the flow of the BEN and press the remove post button
  4. **Exit Condition:** After pressing the remove post button it exits.
  5. **Flow of Events:**
    - 5.1. Press the remove post button (that is only visible to the participant actor) alongside a post in the flow.
- 
1. **Name:** Ban
  2. **Participating Actor:** Admin
  3. **Entry Condition:** Admin must be looking at a user profile and press ban button
  4. **Exit Condition:** After pressing the ban button it exits.
  5. **Flow of Events:**
    - 5.1. Goes to the profile page of a user.
    - 5.2. Press the BAN user button on the right side of the profile photo of the user (only visible to the participant actor).

1. **Name:** Admin Login
2. **Participating Actor:** Admin
3. **Entry Condition:** Uses the correct email/username and password on the login page
4. **Exit Condition:** Logout button
5. **Flow of Events:**
  - 5.1. The participant actor fills in the credentials and presses the login button
    - 5.1.1. The participant actor is prompted to re-enter his/her credentials due to an invalid password
    - 5.1.2. The participant actor is prompted to re-enter his/her credentials due to the unrecognized username/email in the database

## Notification Package

6. **Name:** View Notification
7. **Participating Actor:** User, Admin
8. **Entry Condition:** Notification signal
9. **Exit Condition:** -
10. **Flow of Events:**
  - 5.1 Notification from app signal user to check for updates
  - 5.2 User opens the notification content

1. **Name:** Clear Notification
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking clear notification button
4. **Exit Condition:** -
5. **Flow of Events:**
  - 5.1 User select notifications page
  - 5.2 User press clear notification button

1. **Name:** Delete Notification
2. **Participating Actor:** User, Admin
3. **Entry Condition:** Clicking delete notification button
4. **Exit Condition:** -
5. **Flow of Events:**
  - 5.1 User select notifications page
  - 5.2 User press delete notification button

# Non-functional Requirements

## Usability

- Bilkent Exchange Network must have an intuitive and user-friendly interface, making it easy for both users and administrators to use the app without extensive effort.
- The application should be accessible to all users by complying with accessibility standards.
- Bilkent Exchange Network should have a responsive design, which makes it available for different devices and platforms.
- Bilkent Exchange Network should have a concise and clear user documentation for UI elements.

## Reliability

- Bilkent Exchange Network should be available with at least a 95% uptime rate, ensuring that users can access it whenever they want.
- Data stored in the database, such as user accounts and posts, must be reliably stored and protected.
- The application should handle errors gracefully. It should provide informative and clear error messages to prevent bad user experience.

## Security/Safety

- Bilkent Exchange Network should include robust user authentication and authorization mechanisms to ensure that only authorized users can access and modify data.
- Sensitive data, such as user passwords, must be encrypted with the SHA-256 algorithm before being stored in the database.
- The application should have measures, such as reporting to admins, to prevent malicious content and resolve any disagreement between users.
- Bilkent Exchange Network should respect and protect user information by sharing only the necessary amounts of information with other users.

## Performance

- The application should respond to the requests coming from the users quickly to provide a good user experience.
- The verification email should be sent to users within 1 minute after the request.
- Navigation among different pages should take less than 3 seconds.



## Maintainability

- Bilkent Exchange Network's code should be well-structured according to object-oriented design principles and should be documented to support future updates.
- The source code of the application should be designed in a way that it supports future improvements.

## Tech Stack

- **JavaScript**
  - A widely-used programming language for web development.
  - Used for both client-side and server-side development.
- **TypeScript**
  - A statically typed superset of JavaScript which help catch errors at compile-time and enhances code quality.
  - Provides improved code maintainability, better support for tools, and a more robust development experience than plain JavaScript.
- **React**
  - A popular JavaScript library for building user interfaces.
  - Allows for the creation of dynamic web applications.
- **Node.js**
  - An open-source, server-side runtime environment for executing JavaScript code.
  - Ideal for building scalable and high-performance back-end applications.
- **Next.js**
  - A framework for building React applications with server-side rendering and routing.
  - Helps improve the performance.
- **MongoDB**
  - A NoSQL database that stores data in JSON format..
  - Suitable for handling large amount of unstructured data.