Khmelnytskyi National University

Department of Computer Engineering and Information Systems

**Report**

Laboratory work №1

Discipline: “Object-oriented programming”

Topic: “Introduction to C#. Creating console applications

In C#”

Completed: 1st year student, group CEs-24-1 Maksim Lapko

Name, Surname

Checked: Viacheslav Boiko

Name, Surname

Khmelnytskyi, 2024

Purpose: This laboratory work aims to enable students to understand and apply use case analysis as a part of OOAD in the context of Object-Oriented Programming.

**Task 1**

Provide the short description of the domain you are working in. Provide the   
description of your problem domain, what was included and excluded from   
according to the scope of domain.

**Domain**:

A social network system is an online platform where users can interact with each other by creating and sharing content, such as posts. The system allows for community moderation through reports and administrative oversight.

#### ****Problem Domain****:

The problem domain focuses on managing user interactions, content creation, and content moderation. It addresses the need for a structured user experience where users can safely share posts, and administrators can maintain platform integrity by moderating content and managing admin roles.

#### ****Included in the Scope****:

* **User Management**: Users can sign up, log in, create, view, edit, delete and report posts.
* **Content Management**: Users can create, view and report posts.
* **Admin Roles**: Admins are categorized into levels 1-3 with varying permissions for moderating content and other admins.
* **Report System**: A system where users can report posts and admins review and moderate these reports.

#### ****Admin Privileges****:

Admins can **edit** or **delete** any user's posts for content moderation purposes.

Admins can **warn** users when they violate platform guidelines. Warnings may come before more severe actions like banning.

Admins can **ban** users, either temporarily or permanently, if they repeatedly violate the platform's rules.

Admins can also manage lower-level admins (starting from level 2).

#### ****Excluded from the Scope****:

* **Advanced Social Features**: Features such as comments, likes, private messaging, and real-time chat are not included in the current scope.
* **Monetization**: No focus on paid features, advertisements, or premium accounts.
* **Data Analytics**: Tracking user engagement or activity through analytics is not part of this scope.

**Task 2**

Determine the main notations of your system for use case analysis. Compose

the table with the description of each component.

**Notation description:**

|  |  |  |
| --- | --- | --- |
| **Notation Type** | **Name** | **Description** |
| **Actor** | **User** | A regular user who can sign up, log in, create posts, and report posts. |
| **Actor** | **Admin** | A platform administrator with levels 1-3 who moderates posts and manages admins. |
| **Use Case** | **Sign Up** | The process where a user creates an account on the platform. |
| **Use Case** | **Log In** | The process where a user logs into the system. |
| **Use Case** | **Create Post** | A user writes and shares a post on the platform. |
| **Use Case** | **View Post** | A user views posts shared by other users. |
| **Use Case** | **Edit Post** | A user can edit their own posts. Admins can edit any user`s post. |
| **Use Case** | **Delete Post** | A user can delete their own posts. Admins can delete any user`s post. |
| **Use Case** | **Report Post** | A user reports another user's post for violating platform guidelines. |
| **Use Case** | **Moderate Reports** | Admins review and take action on reported posts (e.g., delete or warn user). |
| **Use Case** | **Warn User** | Admins can issue warnings to users if their posts or behavior violate guidelines. |
| **Use Case** | **Ban User** | Admins can ban users from the platform temporarily or permanently based on violations. |
| **Use Case** | **Moderate Admins** | Admins of level 2 and above manage other admins (e.g., promote, demote). |

**Task 3**

Create a detailed Use Case diagram which may contain all previously

described notations.

**Conclusions**

1. We studied…