TEAM ID:66

# PROBLEM CORNER (STACKOVER FLOW)

TA: MOHAMED SAMIR

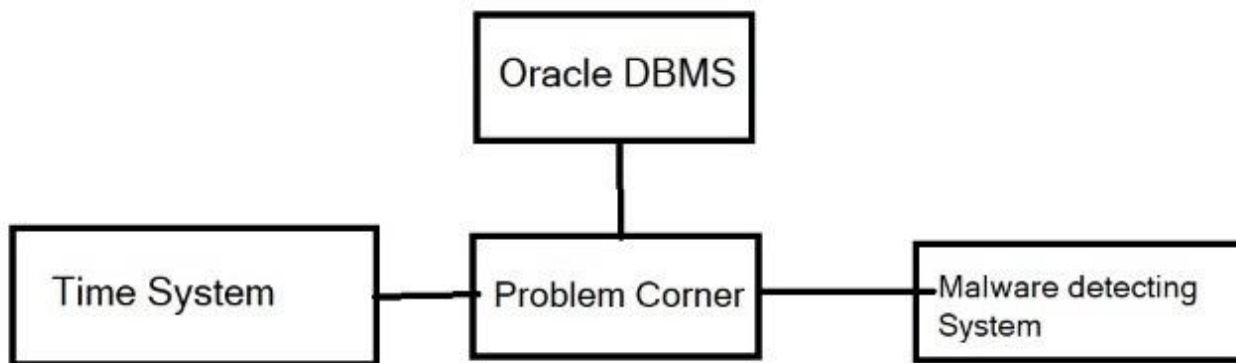| كيرلس نبيل منير فهمي | 20191700460 | SC |
| مايكل مجدي فكري شحاته | 20191700487 | IS |
| كيرمينا أشرف ميخائيل ميخائيل | 20191700462 | IS |
| مارينا فوزي وديع ميخائيل | 20191700474 | IS |
| شادي رأفت فايق توفيق | 20191700311 | Csys |
| يوسف نادر ميشيل صبحي | 20191700793 | SC |
| ابانوب جمال فكري فوزي | 20191700001 | SC |

# Problem Corner

## Introduction

The system aims to minimize the effort, time, and facilitate searching about information. By allowing the users to ask, reply and promote replies.

The system does not concern about exact domain it is free and allow anyone to ask anything in any domain.

## Context Diagram



## User Requirements

- The system must allow new users to create new accounts.
- The system must allow registered users to login to the system.
- The system shall allow registered users to write posts and replies.
- The system shall allow registered users to search for any concerns and questions.
- The system shall allow registered users to promote the replies and answers.
- The system shall allow registered users to sort the answers.
    - Highest score
    - Date modified
    - Date created
- The system shall allow registered users to save favorite questions and answers.
- The system shall allow admin users to control the system to Maintains standards and policies.

# Functional Requirements

Problem Corner/ SRS/Ver1.0.0

| Function | Register |
|---|---|
| Description | Create account for new users |
| Input | <ul><li>First name</li><li>Last name</li><li>Email</li><li>Password</li><li>Phone number</li></ul> |
| Output | The system sends activation code to users' email |
| Action | The user enters the required information. If the information meets the standards an activation code is send to the user to activate the account. If the required information is not correct the system, ask the user for trying to enter it again with helping message. |
| Precondition | The user must have any account e.g. (Google, Microsoft, etc.) |
| Postcondition | Enter the activation code for account activation |

| | |
|---|---|
| **Function** | **Login** |
| **Description** | The registered user enters his account |
| **Input** | <ul><li>Email</li><li>Password</li></ul> |
| **Output** | Redirect the user to the home page |
| **Action** | The user enters the email and password. The system compares the entered data to the database. If the entered data are correct the system redirect the user to his home page. If the system did not find that the entered data in the database error message will appear asking the user to make an account or enter the correct data |
| **Precondition** | The user must be registered |
| **Postcondition** | The system will redirect the user to his home page. |

| Function | Write post / question |
|---|---|
| Description | The user writes the post or question, the text field supports inserting images, code format and attaching files |
| Input | <ul><li>Text</li><li>Image</li><li>File</li></ul> |
| Output | A post or question can be read by other users |
| Action | The user writes a post or question in a text field supports inserting images, code format and attaching files<br>The text filed supports several types of fonts, colors, and styles<br>The text field supports bullets, lists, and quotes |
| Precondition | The user must be logged in |
| Postcondition | The post is published and stored in the database |

| Function | Write comment / answer |
|---|---|
| Description | The user writes the comment or answer, the text field supports inserting images, code format and attaching files |
| Input | <ul><li>Text</li><li>Image</li><li>File</li></ul> |
| Output | Other users can read a comment or answer |
| Action | The user writes a comment or answer in a text field supports inserting images, code format and attaching files<br>The text filed supports several types of fonts, colors, and styles<br>The text field supports bullets, lists, and quotes |
| Precondition | The user must be logged-in |
| Postcondition | The comment will be attached to the question, published, and stored in the database. |

| Function | Promote |
|---|---|
| Description | Voting for the answer (agree and disagree) |
| Input | Users' vote |
| Output | The difference between agreement and disagreement votes (agreement – disagreement) |
| Action | The user chooses his vote by clicking up If he agrees with the answer or down If he disagree with the answer. |
| Precondition | The user must be logged in |
| Postcondition | The difference between the votes is updated. |

| Function | Sort |
|---|---|
| Description | The user can choose how the answers will be appear |
| Input | The user chooses one of these criteria:<br>• Highest score<br>• Date modified<br>• Date created |
| Output | Sorted answers based on the chosen criteria |
| Action | The user chooses the criteria then sort and update the view based on the selection |
| Precondition | The user must be logged in.<br>There must be answers to be sorted |
| Postcondition | The system provides the sorted view |

| Function | Search |
|---|---|
| Description | The user search for questions or posts |
| Input | Question text |
| Output | List of related topics |
| Action | The user writes the question, and the system will view matched previous stored questions in the database. |
| Precondition | The user must be logged-in |
| Postcondition | The system redirects the user to related topics |

## Nonfunctional Requirements

### Product requirements

- Response time

The time which the system takes from the time that user request an action to the time that the computer starts to response or display the result should not be more than few seconds.

This can be achieved by using

1. Fast web hosting: It is essential to maintain fast server response times to achieve that, it is necessary to use a high-performance server.
2. Optimized database: The response speed is dependent on database optimization. As you first set up a website, the database responds quickly to queries

3. Use caching: Caching ensures fast delivery to visitors. Without caching, a browser requests assets from the server each time a page loads instead of accessing them from a local or intermediary cache.

- Storage

The system can store the data efficiency and estimate the remaining time of available storage until it filled up.

This can be achieved by using specific data structures, efficient algorithms and provide the suitable storage for the users.

- Reliability:

This feature indicates the percentage of the performance without failure in specific amount of time and specific number of users.

This can be achieved by using

1. Avoid Anonymous Authors.
2. Quickly and easily meet the needs of its user.
3. Website's information is truthful or dependable.

- Security

The system keeps the user information private and saves it using private database and does not let anyone to access to it except admin and the owner only.

This can be achieved by using Malware detecting system

## Organizational requirements

### Operational process requirements
- Users of the system shall be authenticated by phone number as each phone number mapped to an SSN number
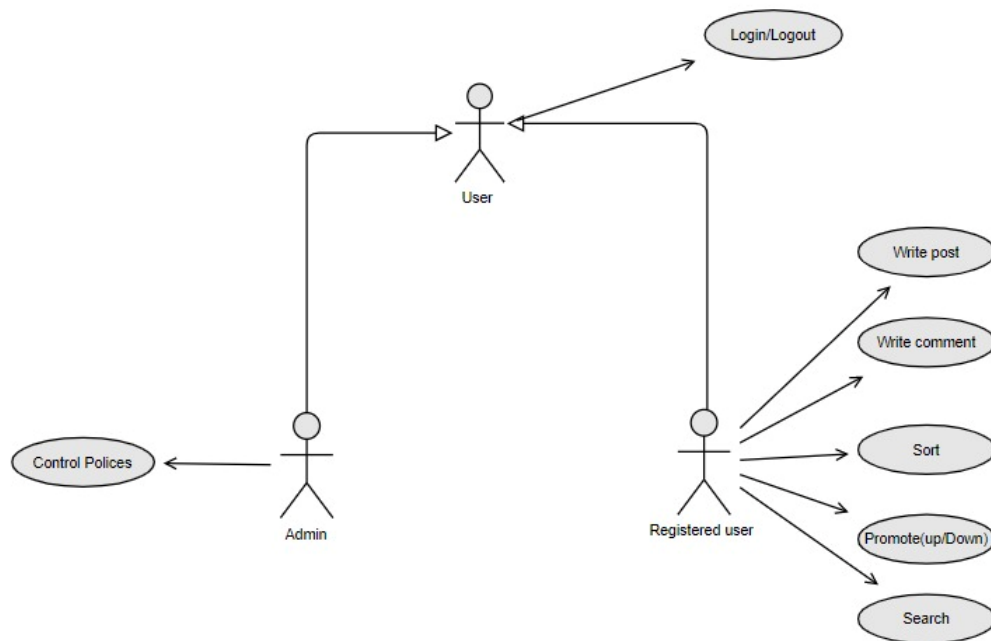
### Development process requirements
The system will use Qt for frontend phase and C# for backend phase

### Environmental process requirements
The system will be available on windows operating system and open sources OS like Linux/Ubuntu

# Use case diagram

# Sequence diagram