

# **PBL-103-Project Based Learning-III**

## **Project Proposal**

**Project Title: Cyber Management System**

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## **1 Introduction**

Cyber Management System (CMS) is a system that helps organizations to manage and protect their IT infrastructure and data from cyber threats. The CMS includes a variety of different tools and processes such as intrusion detection and prevention systems, firewalls, antivirus software, security incident and event management, vulnerability management, and security compliance management. The goal of the CMS is to provide a comprehensive and integrated approach to securing an organization's IT assets and data by identifying, preventing, and responding to cyber threats. It also helps to continuously monitor and improve the organization's cybersecurity posture. It includes various policies, procedures, and standards to maintain the security of the organization's network, systems and data.

## **2 Motivation**

People in Bangladesh, from every sector, have poor or no concern about how their information is spread online, and on the protection of personal information -- which is why cyber-crime in Bangladesh is increasing rapidly. There is seemingly little interest amongst the general population to find out about this virus, and they have no idea on how to protect themselves against it. Unfortunately, cyber criminals have used this to their advantage and are seeking to exploit those fears and uncertainty for financial gain. So I develop this project by using C++ programming language to protect networks and data from Unauthorized accesses. This project will help users to stay secured from cyber threats and cyber attacks and it will keep their information protected and safe.

### 3 Objectives

- Protect the Confidentiality of data.
- Preserve the Integrity of data.
- Restrict the Availability of data only to authorized users.

### 4 Overall Description

Cyber Management System is a compiler based C++ project. In this project, we can store users information using file handling which works as a data base in C++. It is a simple console application developed without the use of graphics component. We can view complete information of the users by giving their user ID. In this project, I created login system which is separate for Admin and User. Admin can Add, show, Search, Update and Delete user information. Users can only login and see his/her details. And if any user is there for a long time i.e. more than 7 hours then it will notify the admin an alert message saying that –

“ ALERT !!! MALICIOUS ACTIVITY FOUND. “

I did this project on Code::Blocks and this project follows the Binary Searching Algorithm Method to find the required elements. It is suitable for beginners who wants to learn how to Add, Edit, Search, Delete or Modify records in a file, and how to use file as database overall.

#### 4.1 User Sign In

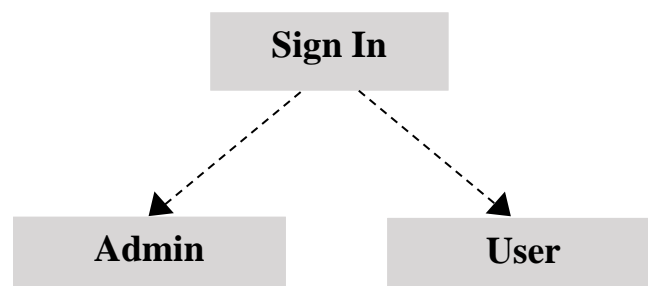
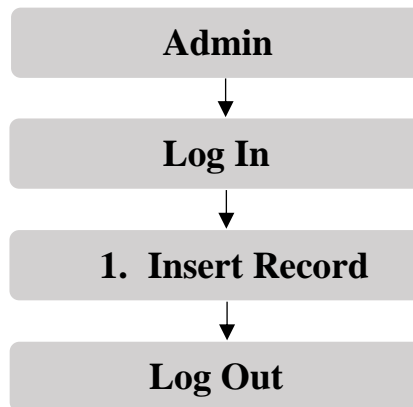


Fig1: Sign In Block Diagram

## 4.2 Add Data

Admin can add information about Users.

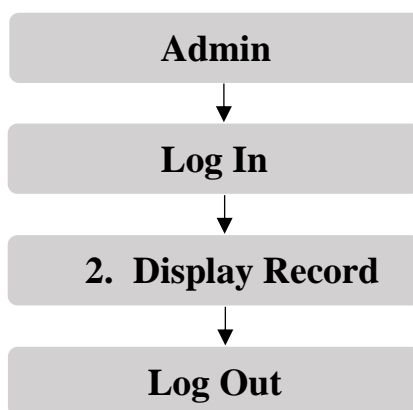
At first, the admin must log in using his username and password, and then he has to choose option 1. Insert Record. By choosing option 1, he can add information e.g. user ID, username, phone number, email address of users.



## 4.3 Show Data

Admin can show information about Users.

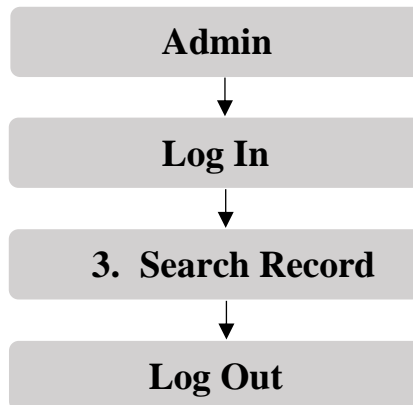
After logging in, the admin has to choose option 2. Display Record. By choosing option 2, admin can see user details e.g. user ID, username, phone number, email address, log in date, log in time, and time duration of users.



## 4.4 Search Data

Admin can search for information of any User.

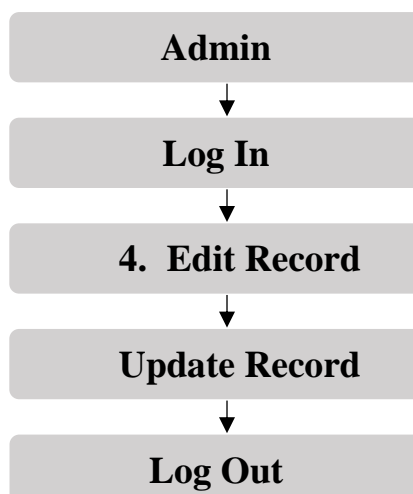
After logging in the admin has to choose option 3. Search Record. By choosing option 3, admin has to give the user's user ID he wants to search to see the information. After giving the user ID he can see the information of that user. And if that user's time duration is more than 7 Hours, he will see an Alert message with the information of that user.



## 4.5 Update Data

Admin can update information about Users.

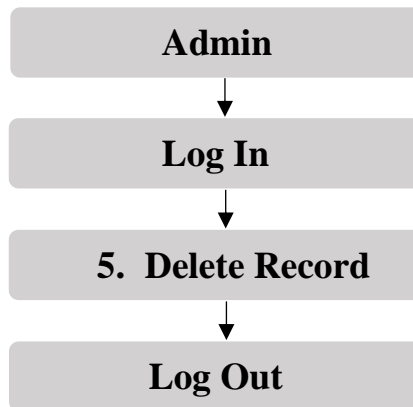
After logging in the admin has to choose option 4. Edit Record. By choosing option 4, admin can Edit information e.g. phone number, email address of users. After editing the information, admin has to select update record. Then the information of the user will be updated.



## 4.6 Delete Data

Admin can Delete information of Users.

After logging in the admin has to choose option 5. Delete Record. After choosing option 5, admin has to enter the user's user ID he wants to delete. After entering the user's user ID the information about that user will be deleted.



## 5 Development Tools and Technology

### 5.1 Technology Uses

- DESKTOP-DMC7042

### 5.2 Development Tools

- Code::Blocks

### 5.3 Requirements

**Processor:** 11th Gen Intel(R) Core(TM) i5-1135G7

**Operating System:** Windows 11

**Programing Language:** C++