Green University of Bangladesh

Department of Computer Science and Engineering (CSE)

Faculty of Sciences and Engineering
Semester: (Spring, Year: 2022), B.Sc. in CSE (Day)

Course Title: Structured Programming Lab
Course Code: CSE 104   Section: 213DC

Lab Project Name: Cyber Management System

Student Details

	Name	ID
1.	Mostofa Rafid	213902097

Submission Date: 15/05/2022
Course Teacher's Name: Md. Sultanul Islam Ovi

[For Teachers use only: Don't Write Anything inside this box]

Lab Project Status

Marks: …………………………………   **Signature: ....**

Comments: ....   **Date: ....**

Table of Contents

Chapter 1

Introduction

1.1 Introduction

C is a general-purpose high-level language that was originally developed by Dennis Ritchie for the Unix operating system. It was first implemented on the Digital Equipment Corporation PDP-11 computer in 1972.

The Unix operating system and virtually all Unix applications are written in the C language. C has now become a widely used professional language for various reasons.

- Easy to learn

- Structured language

- It produces efficient programs.

- It can handle low-level activities.

- It can be compiled on a variety of computers.

1.2 Design Goals/Objective

Utilizing the advanced features of C, this Cyber Management System application has been built.

The program is responsible for the management of settings and client request. On the other hand, the client part gives clients in cyber access to the services provided by the place.

So, Cyber Cafe Management System interconnects different computers in a Cyber Cafe, and allows users to communicate over the computer network. It aims at managing Cyber Cafe with multiple clients and provide the clients service access.

In this cyber cafe management system project, clients can use the facilities provided by the Cyber Cafe.

Chapter 2

Implementation of the Project

2.1 Algorithms

- Admin and user login option
- Admin login with Username and Password
- Insert, View, Search, Delete functions for admin.
- Save records with date and time
- Login as user without username and password

2.2 Code

```c
#include<stdio.h>
#include<conio.h>
#include<string.h>
#include<stdlib.h>
#include<time.h>
#include<math.h>

void heading();
void main_heading();
void menu();
void user_menu();
void insert();
void display();
void search();
void delete();
void main()
{
    char name[30];
    int id;
    int ch;
```

```c
char username[20];
char password[20];

system("CLS");
heading();
printf("\n\n\t\t\t\t1) Login as Admin");
printf("\n\t\t\t\t2) Login as user");
printf("\n\n\t\t\t\tEnter your choice (1/2) : ");
scanf("%d",&ch);
system("CLS");

switch(ch)
{
case 1:
    system("CLS");
    heading();
    printf("\n\n\t\t\t\t\t||    ADMIN LOGIN    ||\t\t\t");
    printf("\n\n\n\t\t\t\tUsername :");
    scanf("%s",&username);
    printf("\t\t\t\tPassword :");
    scanf("%s",&password);

    if(strcmp(username, "admin")==0)
    {
        if(strcmp(password,"admin123")==0)
        {
            system("CLS");
            main_heading();
            printf("\n\n\t\t\t\t\tLOGIN SUCCESSFULL!!!");
            menu();
        }
        else
        {
```

```c
            printf("\t\t\t\tIncorrect Password !!! Failed to Login");
        }
    }
    else
    {
        printf("\t\t\t\tUsername is invalid !!! Failed to Login");
    }

    break;
    case 2:
        system("CLS");
        main_heading();
        user_menu();

    default:
    {
        printf("\n\n\t\t\t\tInvalid Choice!!!");
    }
    break;
    }
}
void heading()
{

printf("\n\t\t\t*************************************************\t\t\t");
    printf("\n\t\t\t||    WELCOME TO CYBER MANAGEMENT SYSTEM    ||\t\t");

printf("\n\t\t\t*************************************************\t\t\t\n"
);
}

void main_heading()
{
```

```c
printf("\n\t\t\t*****************************************************\t\t\t\t");

   printf("\n\t\t\t||          CYBER MANAGEMENT SYSTEM          ||\t\t");

printf("\n\t\t\t*****************************************************\t\t\t\t");

}

void menu()
{
   int choice;
   printf("\n\n\n\t\t\t\t\t  |<----MENU---->|");
   printf("\n\n\t\t\t\t\t1.Insert Record");
   printf("\n\t\t\t\t\t2.Display Record");
   printf("\n\t\t\t\t\t3.Search Record");
   printf("\n\t\t\t\t\t4.Delete Record");
   printf("\n\t\t\t\t\t5.Exit");
   printf("\n\n\t\t\t\t\tEnter your choice :");
   scanf("%d",&choice);

   switch(choice)
   {
   case 1:
      system("CLS");
      insert();
      break;

   case 2:
      system("CLS");
      main_heading();
      display();
      printf("\n\n\t\t\t\tPress any key to continue ");
```

```c
        fflush(stdin);
        getchar();
        menu();

    case 3:
        system("CLS");
        search();
        printf("\n\n\t\t\t\t\tPress any key to continue ");
        fflush(stdin);
        getchar();
        menu();
        break;

    case 4:
        system("CLS");
        delete();
        break;

    case 5:
        system("CLS");
        exit(0);
        break;

    default:
        printf("INVALID CHOICE !!!");
    }
}

void user_menu()
{
    int choice;
    printf("\n\n\n\t\t\t\t\t|<----MENU---->|");
    printf("\n\n\t\t\t\t\t1.View Your Record");
```

```c
        printf("\n\t\t\t\t\t2.Exit");
        printf("\n\n\t\t\t\t\tEnter your choice :");
        scanf("%d",&choice);


        switch(choice)
        {
        case 1:
            system("CLS");
            search();
            break;


        case 2:
            system("CLS");
            exit(0);
            break;
        }
}

void insert()
{
    time_t mytime;
    struct tm* current_time;
    mytime = time(NULL);
    current_time = localtime(&mytime);


    FILE *fp;
    char name[30];
    int id;
    char choice='y';
    system("CLS");
    fp = fopen("cyber.txt","ab+");


    if(fp==NULL)
```

```c
    {
        printf("\n\t\t\t\t\tERROR OPENING FILE !!!");
        return;
    }
    fflush(stdin);
    while(choice=='y')
    {
        main_heading();
        printf("\n\n\t\t\t\t\tENTER NEW USER DATA :");
        printf("\n\n\t\t\t\t\tEnter ID : ");
        scanf("%d",&id);
        fflush(stdin);
        printf("\n\n\t\t\t\t\tEnter Name : ");
        scanf("%s",&name);
        fflush(stdin);
        fprintf(fp,"%d %s\t",id,name);
        fprintf(fp,"%02d/%02d/%d     %02d:%02d",current_time->tm_mday,current_time-
>tm_mon+1,current_time->tm_year+1900,current_time->tm_hour,current_time-
>tm_min);
        fprintf(fp,"\n");
        printf("\n\n\t\t\t    USER RECORD INSERTED SUCCESSFULLY !!!");
        printf("\n\n\t\t\t    Want to add another record ? (y/n) : ");
        scanf("%c",&choice);
        fflush(stdin);
        system("CLS");
        fflush(stdin);
    }
    fclose(fp);
    printf("\n\n\t\t\t\t    Press any key to continue ");
    getchar();
    menu();
}
```

```c
void display()
{
    time_t mytime;
    struct tm* current_time;
    mytime = time(NULL);
    current_time = localtime(&mytime);
    FILE *fp;
    fp = fopen("cyber.txt","rb");

    if(fp==NULL)
    {
        printf("\n\t\t\t\tERROR OPENING FILE !!!");
        return;
    }
    char name[30];
    int id;
    int mday,mmon,myear,mmin,mhour;
    printf("\n\n\t\t\t\t\t<|----USER DETAILS----|>");
    printf("\n\t\t\t
_____");
    printf("\n\n\t\t\t   User_ID\t\tName of User\t\tDate\t\tTime");
    printf("\n\t\t\t
_____");

    while(fscanf(fp,"%d                    %s                    %02d/%02d/%d
%02d:%02d",&id,&name,&mday,&mmon,&myear,&mhour,&mmin)!=EOF)
    {
        printf("\n\n\t\t\t                    %d       \t\t\t%s       \t\t\t%02d/%02d/%d
\t%02d:%02d",id,name,mday,mmon,myear,mhour,mmin);
    }
    fclose(fp);
}
void search()
```

```c
{
  system("CLS");
  main_heading();
  int my_id,flag=0;
  time_t mytime;
  struct tm* current_time;
  mytime = time(NULL);
  current_time = localtime(&mytime);
  FILE *fp;
  char name[30];
  int id;
  int mday,mmon,myear,mmin,mhour;
  fp = fopen("cyber.txt","rb");
  if(fp==NULL)
  {
    printf("\n\t\t\t\tERROR OPENING FILE !!!");
    return;
  }
  printf("\n\n\t\t\t\tEnter ID to fetch information :");
  scanf("%d",&my_id);
  while(fscanf(fp,"%d                %s                %02d/%02d/%d %02d:%02d",&id,&name,&mday,&mmon,&myear,&mhour,&mmin)!=EOF)
  {
    if(my_id == id)
    {
      flag=1;
      printf("\n\t\t\t\tRECORD FOUND SUCCESSFULLY !!!");
      printf("\n\n\t\t\t\tUser ID : %d",id);
      printf("\n\t\t\t\tName : %s",name);
      printf("\n\t\t\t\tLogin     Date     And     Time     :     %02d/%02d/%d %02d:%02d",mday,mmon,myear,mhour,mmin);
    }
  }
```

```c
    fclose(fp);
    if(flag==0)
    {
        printf("\n\t\t\t\t\tRECORD NOT FOUND !!!");
    }
}


void delete()
{
    system("CLS");
    main_heading();
    FILE *fp,*ft;
    time_t mytime;
    struct tm* current_time;
    mytime = time(NULL);
    current_time = localtime(&mytime);
    int my_id;
    char name[30];
    int id;
    int mday,mmon,myear,mmin,mhour;
    unsigned flag=0;
    fp = fopen("cyber.txt","rb");
    if(fp==NULL)
    {
        printf("\n\t\t\t\t\tERROR OPENING FILE !!!");
        return;
    }
    printf("\n\t\t\t\t\t<|-------- PREVIOUS ENTERED DATA --------|>");
    display();
    printf("\n\n\n\t\t\tEnter ID to delete : ");
    scanf("%d",&my_id);


    ft = fopen("cyber1.txt","wb");
```

```c
    if(ft==NULL)
    {
        printf("\n\t\t\t\tERROR OPENING NEW FILE !!!");
    }
    while(fscanf(fp,"%d                    %s                    %02d/%02d/%d
%02d:%02d",&id,&name,&mday,&mmon,&myear,&mhour,&mmin)!=EOF)
    {
        if(my_id!=id)
        {
            flag=1;
            fprintf(ft,"%d %s\t",id,name);
            fprintf(ft,"%02d/%02d/%d %02d:%02d",mday,mmon,myear,mhour,mmin);
            fprintf(ft,"\n");
        }
    }
    if(flag==0)
    {
        printf("\n\t\t\t\tNo Such Record Found!!!");
    }
    fclose(fp);
    fclose(ft);
    remove("cyber.txt");
    rename("cyber1.txt","cyber.txt");
    printf("\n\n\t\t\t\tRecord Deleted Successfully!!!");
    printf("\n\n\t\t\t\t\t   <|----- Updated Records -----|> ");
    display();
    printf("\n\n\t\t\t\t\tPress any key to Continue");
    fflush(stdin);
    getchar();
    system("CLS");
    main_heading();
    menu();
}
```

2.3 Screenshots

Figure 1: Main Menu interface

When the program is executed, two selections are made for the user as the user can choose to Login as admin or user.

Figure 2: Login as Admin

Admin need to input correct username and password
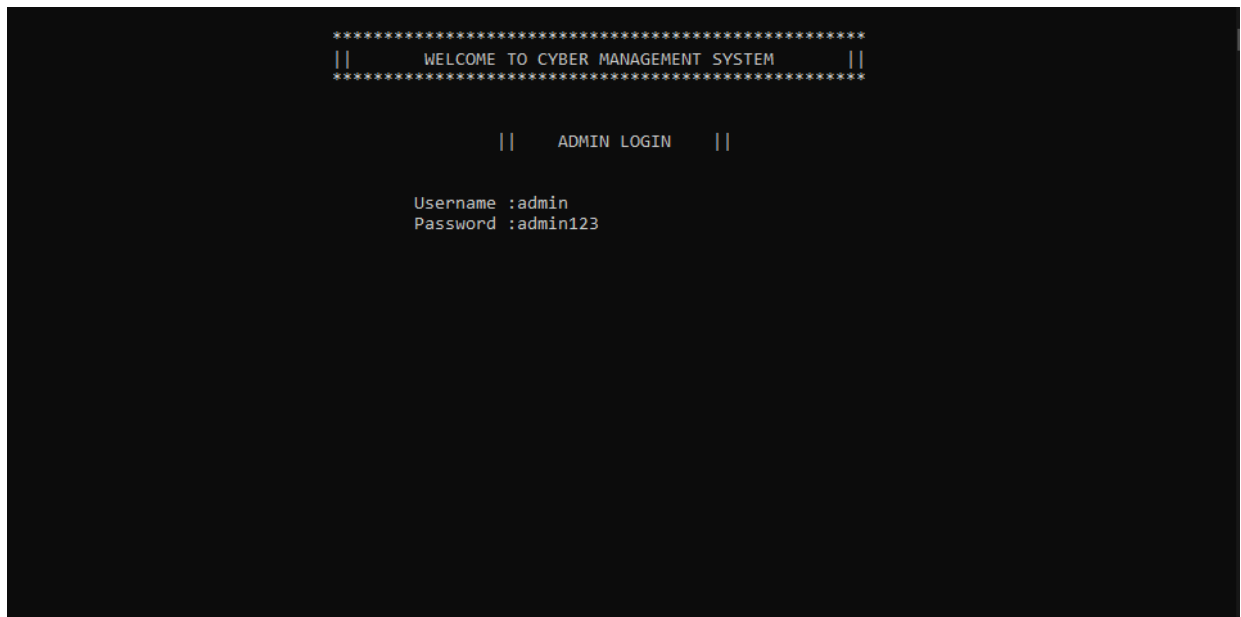
Figure 3: Admin username and password

Figure 4: Menu

After login as admin, admin can use these functions.

Figure 5: Insert

Admin can insert data

Figure 6: Insert again

Figure 7: Display records

Admin can show all user data

Figure 8: Search

Admin can search a user, by user ID

Figure 9: Search

Figure 10: Delete

Delete a user data

Figure 11: User Login

A user can view his record.

Figure 12: User Record

Chapter 3

Conclusion

3.1 Learning Outcome

The Cyber management system is designed for insert, display, search and delete user information. Also, login for user which is easy.

From this project, I have learnt to implement a few C concepts in the future projects such as functions, switch statement, loops, arrays, pointers and structures in the program.

3.2 Future Scope

- This project can be used in Cyber Cafe
- I added database to this project to store all user information.