

**ASIAN COLLEGE OF HIGHER STUDIES**

**(Affiliated to Tribhuvan University)**

**Dhobidhara, Kathmandu**



**PROJECT REPORT**

**ON**

**“CYBER MANAGEMENT SYSTEM”**

**“C PROGRAMMING”**

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**First Semester**

**Submitted to**

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**March, 2020**

## **LETTER OF APPROVAL**

This is to certify that this project is prepared by Smaran Sapkota and Subash Tamang entitled “CYBER MANAGEMENT SYSTEM” in partial fulfillment of the requirement for the degree of B.Sc. Computer Science and Information Technology has been well studied. In our opinion it is satisfactory in the scope and quality as a project for the required degree.

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## **ACKNOWLEDGEMENT**

We would like to express our special thanks of gratitude to our teacher Mr. Prarup Gurung, who gave us the golden opportunity to do this wonderful project of C Programming.

Who also helped us in completing our project. We came to know about so many things that We are really thankful to him.

Secondly, We would also like to thanks our friends who helped us a lot in finalizing this project within the limited time frame.

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## **ABSTRACT**

The issue of handling with the users and computer is very paramount in any cyber. Therefore, we intend to aid in managing a Cyber-System by bringing a concept of cyber management system that involves an individual to login through the Admin or Guest part before getting access to cyber system. This is not just a normal single user management system but has an administrative part and can access a multiple user. Users or a Admin can login through the guest login portal and Admin portal with the username and password provided by the cyber manager. In the guest login portal, a user can view the price for using the computer and can choose the time he wants to work, when the time gets over a time over message is show and the system is logged off, going through the admin portal admin can fill the cyber detail, view cyber information, delete cyber details, can observe the computer run time, and can view the total price to be paid by the users. Admin can also login as the user and can get access to the computers of the cyber. From this project, we hope to build the alternative management system for cyber.

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## **LIST OF ABBREVIATIONS**

DDS.....	Design Document Specification
PHP .....	Personal Home Page
SDLC.....	Software Development Lifecycle
SRS.....	Software Requirement Specification
UAT.....	User Acceptance Testing

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# **CHAPTER 1: INTRODUCTION**

## **1.1. INTRODUCTION TO PROJECT**

The project titled “Cyber Management System” is cyber management software for monitoring and controlling the transactions in a cyber. This project is developed using C programming, which mainly focuses on the basic operations in a cyber like adding new users, Calculation of computer run time, Calculation of payments and also has a features of Admin part that helps in managing the cyber details, removing the details, updating the details etc.

“Cyber Management System” is a windows application written for both 32-bit and 64-bit windows operating systems, designed to help users to maintain and organize cyber system. Our software is easy to use and is user friendly. It has password protection features, can support multiple users. The users can get access to the cyber system using usernames and password, can select the time to use the computers and the money is calculated as per the time.

The Cyber Management System has two main parts:

Admin Login – Can get access by using username and password and has a feature of managing all the activities like collection of details, removing the details, and can also login to the guest part.

Guest Login – Can get access by using username and password has a feature of selecting the time to use the computers.



## **1.2. SOFTWARE DEVELOPMENT LIFECYCLE**

Software Development Lifecycle is a process followed for a software project, within a software organization. It consists of a detailed plan describing how to develop, maintain, replace and alter or enhance specific software. The life cycle defines a methodology for improving the quality of software and the overall development process. A Software Development Life Cycle consists of the following stages:

### **Stage 1: Planning and Requirement Analysis**

Planning for the quality assurance requirements and identification of the risks associated with the project is also done in the planning stage. The outcome of the technical feasibility study is to define the various technical approaches that can be followed to implement the project successfully with minimum risks.

### **Stage 2: Defining Requirements**

Once the requirement analysis is done the next step is to clearly define and document the product requirements and get them approved from the customer or the market analysts. This is done through an SRS (Software Requirement Specification) document which consists of all the product requirements to be designed and developed during the project life cycle.

### **Stage 3: Designing the Product Architecture**

SRS is the reference for product architects to come out with the best architecture for the product to be developed. Based on the requirements specified in SRS, usually more than one design approach for the product architecture is proposed and documented in a DDS - Design Document Specification.

This DDS is reviewed by all the important stakeholders and based on various parameters as risk assessment, product robustness, design modularity, budget and time constraints, the best design approach is selected for the product.

A design approach clearly defines all the architectural modules of the product along with its communication and data flow representation with the external and third party modules (if any). The internal design of all the modules of the proposed architecture should be clearly defined with the minutest of the details in DDS.

#### **Stage 4: Building or Developing the Product**

In this stage of SDLC the actual development starts and the product is built. The programming code is generated as per DDS during this stage. If the design is performed in a detailed and organized manner, code generation can be accomplished without much hassle.

Developers must follow the coding guidelines defined by their organization and programming tools like compilers, interpreters, debuggers, etc. are used to generate the code. Different high level programming languages such as C, C++, Pascal, Java and PHP are used for coding. The programming language is chosen with respect to the type of software being developed.

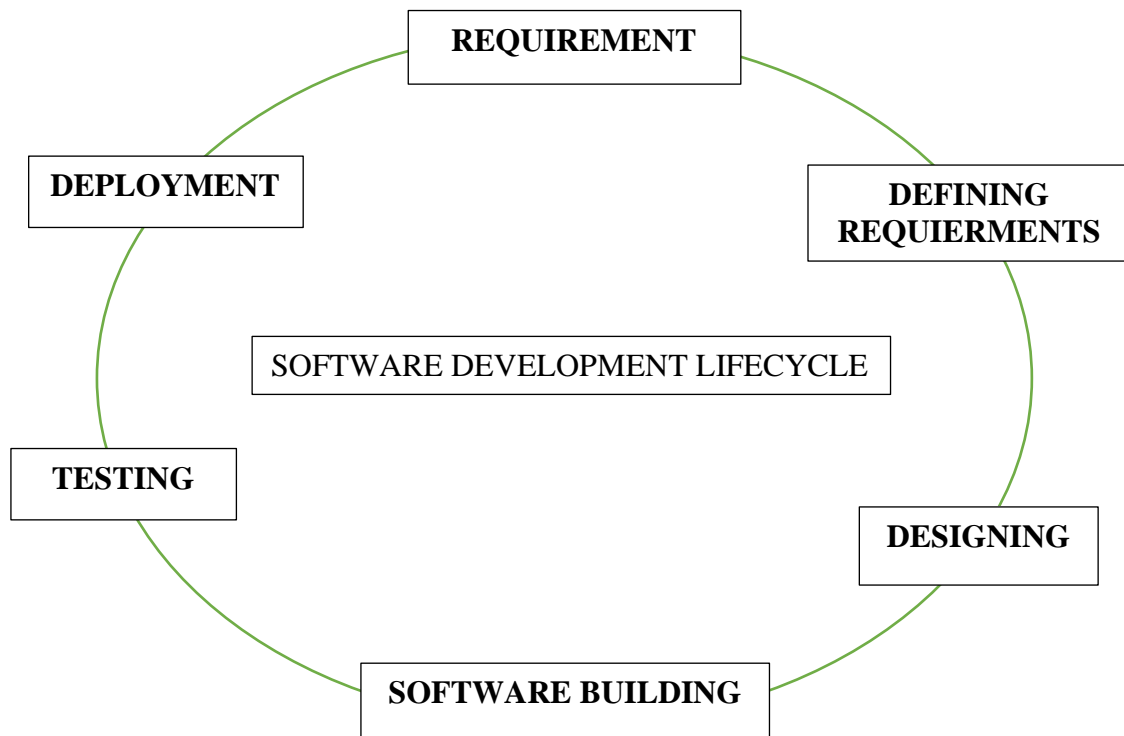
#### **Stage 5: Testing the Product**

This stage is usually a subset of all the stages as in the modern SDLC models, the testing activities are mostly involved in all the stages of SDLC. However, this stage refers to the testing only stage of the product where product defects are reported, tracked, fixed and retested, until the product reaches the quality standards defined in the SRS.

#### **Stage 6: Deployment in the Market and Maintenance**

Once the product is tested and ready to be deployed it is released formally in the appropriate market. Sometimes product deployment happens in stages as per the business strategy of that organization. The product may first be released in a limited segment and tested in the real business environment (UAT- User acceptance testing). Then based on the feedback, the product may be released as it is or with suggested enhancements in the targeting market segment. After the product is released in the market, its maintenance is done for the existing customer base.

The following figure is a graphical representation of the various stages of a typical SDLC.



**Figure 1 : Software Development Lifecycle**

## **CHAPTER 2: REQUIREMENTS**

### **2.1. FEATURES**

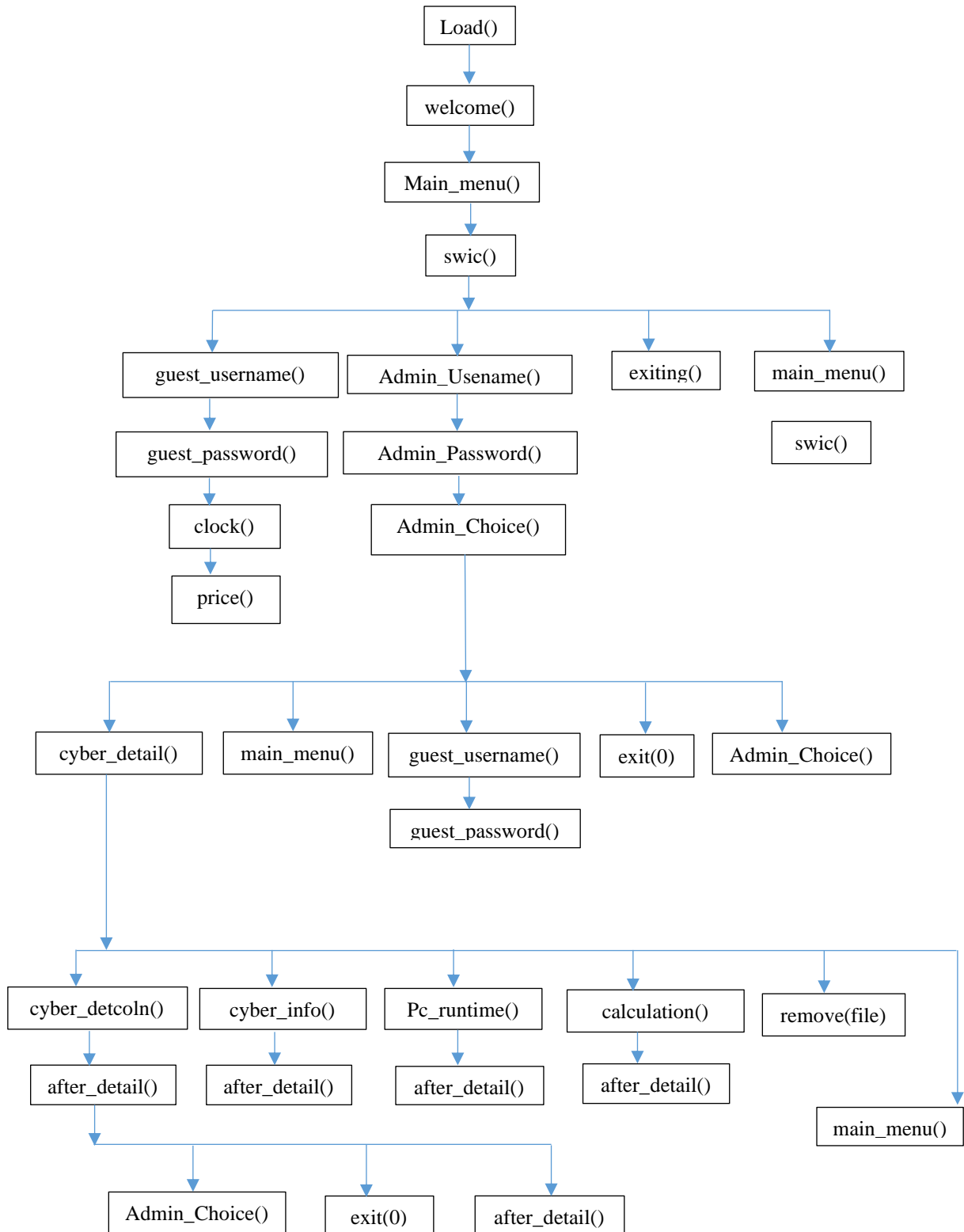
Our mini project in Cyber Management System utilizes various features of C programming and more. It can prove to be very useful for C languages learners who are beginners in the programming field. File handling has been used as database to store records. Understanding this project will help to create management software or your own mini projects like employee record, bank management, library management, etc. This whole project is divided into two parts, one for the guest/user and other for the Admin.

In the Admin part the cyber owner can fill the details of the cyber can view the details of the user, can get the information about how long did the computers has been used by the users and also can get the calculation of the fee automated. It also has a feature to show the total PC run time and total earning of the day.

In the Guest part the user can get access to use the systems of the cyber by logging in using the username and password. The user can set the time for using the system and gets alert when is time is over.

## CHAPTER 3: DESIGN

### 3.1. BLOCK DIAGRAM



## CHAPTER 4: IMPLEMENTATION

```
#include <stdio.h>
#include <conio.h>
#include <stdio.h>
#include <stdlib.h>
#include <windows.h>

void load();
void welcome();
void gotoxy(int x, int y);
void main_menu();
void swic();
void exiting();
void guest_Username();
void guest_Password();
void Admin_Username();
void Admin_Password();
void clock();
void Admin_Choice();
void cyber_detcoln();
void cyber_detail();
void cyber_info();
void pc_runtime();
void price();
void after_detail();
void calculation();

struct login
{
    char name[50];
```

```

    char pass[50];
}ln;
struct cyber_detail
{
char name[50];
char address[50];
long long int ph_no;
char email[50];
}cd;
int main()
{
system("color F5");
load();
welcome();
main_menu();
}
void gotoxy(int x, int y)
{
COORD coord;
coord.X = x;
coord.Y = y;
SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE), coord);
}
void load()
{
int r,c,q;
gotoxy(40,4);
printf("LOADING CYBER SYSTEM...");
gotoxy(40,5);
for(r=1; r<=20; r++)
{

```

```

        for(q=0; q<=1000000000; q++); //to display the character slowly
        printf("%c",177);
    }
    system("cls");
}

void welcome(int x, int y)
{
    gotoxy(40,2);
    printf("*****");
    gotoxy(40,3);
    printf("***** WELCOME TO CYBER NEPAL *****");
    gotoxy(40,4);
    printf("*****");
    gotoxy(45,6);
    printf("Press Any Key To Continue.");
    getch();
    system("cls");
}

void main_menu()
{
    gotoxy(40,2);
    printf("*****");
    gotoxy(40,3);
    printf("***** MENU SCREEN *****");
    gotoxy(40,4);
    printf("*****");
    gotoxy(43,6);
    printf("Enter your choice : ");
    gotoxy(43,7);
    printf("1 : Guest Login");
    gotoxy(43,8);

```



```

printf("2 : Admin Login");
gotoxy(43,9);
    printf("3 : Leave the Computer\n");
    gotoxy(43,10);
    swic();
}
void guest_username()
{
    gotoxy(40,2);
    printf("***** GUEST PORTAL *****");
    gotoxy(43,3);
    printf("Username : ");
    scanf("%s",&ln.name);
    if(!strcmp(ln.name,"guest")==0)
    {
        gotoxy(43,4);
        printf("Invalid Username");
        getch();
        system("cls");
        guest_username();
    }
}
void guest_Password()
{
    int i=0;
    char ch;
    gotoxy(40,2);
    printf("***** GUEST PORTAL *****");
    gotoxy(43,5);
    printf("Password : ");
    while(ch!=13)

```

```

    {
        ch=getch();
        if(ch!=13 && ch!=8)
        {
            putchar('*');
            ln.pass[i] = ch;
            i++;
        }
    }

    ln.pass[i] = '\0';

    if(strcmp(ln.pass,"user")==0)
    {
        system("cls");
    }
    else
    {
        gotoxy(43,6);
        printf("INVALID Password");
        getch();
        system("cls");
        gotoxy(43,6);
        guest_Password();
    }
}

void Admin_Username()
{
    gotoxy(40,2);
    printf("***** ADMIN PORTAL *****");
    gotoxy(43,3);
    printf("Username : ");

```

```

scanf("%s",&ln.name);
if(!strcmp(ln.name,"Admin")==0)
{
    gotoxy(43,4);
    printf("Invalid Username");
    getch();
    system("cls");
    Admin_Username();
}
}
void Admin_Password()
{
    char ch;
    int i=0;
    gotoxy(40,2);
    printf("***** ADMIN PORTAL *****");
    gotoxy(43,5);
    printf("Password : ");
    while(ch!=13)
    {
        ch=getch();
        if(ch!=13 && ch!=8)
        {
            putchar('*');
            ln.pass[i] = ch;
            i++;
        }
    }
    ln.pass[i] = '\0';
    if(strcmp(ln.pass,"Oppa")==0)
    {

```

```

        system("cls");
    }
    else
    {
        gotoxy(43,6);
        printf("INVALID Password");
        getch();
        system("cls");
        gotoxy(43,3);
        Admin_Password();
    }
}

void swic()
{
    FILE *fp;
    char choics;
    fflush(stdin);
    choics=getch();
    system("cls");
    gotoxy(40,2);
    printf("***** LOGIN PORTAL *****\n\n");

    switch(choics)
    {
        case '1':
            gotoxy(35,7);
            guest_Username();
            guest_Password();
            clock();
            exiting();
            exit(0);

```

```

        break;
    case '2':
        Admin_Username();
        Admin_Password();
        Admin_Choice();
        exit(0);
        break;
    case '3':
        exiting();
        exit(0);
        break;
    default :
        gotoxy(40,4);
        printf("Invalid Option : Enter any key for option menu");
        getch();
        system("cls");
        main_menu();
        swic();
}
system("cls");
}

void clock()
{
    FILE *clock_ptr;
    int hour, minute, second, hr, mn, sc;
    gotoxy(40,2);
    printf("*****");
    gotoxy(40,3);
    printf("***** TIME SCHEDULE *****");
    gotoxy(40,4);
    printf("*****");

```

```

        price();
gotoxy(40,14);
printf("Enter the Hour      : ");
scanf("%d",&hr);
gotoxy(40,15);
printf("Enter the Minute : ");
scanf("%d",&mn);
gotoxy(40,16);
printf("Enter the Second : ");
scanf("%d",&sc);
system("cls");
clock_ptr = fopen("clock_data.txt", "a");
fprintf(clock_ptr,"%d %d %d\n",hr,mn,sc);
fclose(clock_ptr);

hour=hr;
minute=mn;
second=sc;
while(1)
{
    gotoxy(40,1);
    printf("*****  TIME COUNTER  *****");
    gotoxy(40,2);
    printf("*****");
    gotoxy(40,3);
    printf(" *****  %02d : %02d : %02d  *****",hour,minute,second);
    gotoxy(40,4);
    printf("*****");
    fflush(stdout);
    second--;
    if((hour!=0 || minute!=0) && second==0)
    {

```

```

        if(minute!=0)
        {
            minute-=1;
second=59;
        }

if(hour!=0 && minute==0)
{
    if(hour!=0)
    {
        hour--;
        minute=59;
    }
}

}

if(hour==0 && minute==0 && second==0)
{
    gotoxy(42,6);
    printf("Guest Portal Time Overed.");
    exiting();
    exit(0);
}

sleep(1);
}

}

void Admin_Choice()
{
    gotoxy(40,3);
    printf("***** Welcome to Admin Portal *****");
    gotoxy(43,5);
    printf("1 : Excess Cyber Details");
    gotoxy(43,6);

```

```

printf("2 : Back to main menu");
gotoxy(43,7);
printf("3 : For Guest Login");
gotoxy(43,8);
printf("4 : To Exit the PC");
char choics;
fflush(stdin);
choics=getch();
system("cls");
switch(choics)
{
    case '1':
        cyber_detail();
        break;
    case '2':
        main_menu();
        break;
    case '3':
        guest_Username();
        guest_Password();
        clock();
        exiting();
        exit(0);
        break;
    case '4':
        exit(0);
        break;
    default :
        gotoxy(40,4);
        printf("Invalid Option : Enter any key for option menu");
        getch();
}

```



```

        system("cls");
        Admin_Choice();
        break;
    }
}

void cyber_detail()
{
    gotoxy(40,2);
    printf("***** CYBER DETAILS *****");
    gotoxy(43,4);
    printf("1 : Cyber Detail Collection");
    gotoxy(43,5);
    printf("2 : Cyber Info");
    gotoxy(43,6);
    printf("3 : Today's PC Runtime");
    gotoxy(43,7);
    printf("4 : Today's Earning");
    gotoxy(43,8);
    printf("5 : To remove Cyber Detail");
    gotoxy(43,9);
    printf("6 : Back to main menu");
    char choics;
    fflush(stdin);
    choics=getch();
    system("cls");
    switch(choics)
    {
        case '1':
            cyber_detcoln();
            after_detail();
            break;

```

```

        case '2':
            cyber_info();
            after_detail();
            break;
        case '3':
            pc_runtime();
            after_detail();
            break;
        case '4':
            calculation();
            after_detail();
            break;
        case '5':
            remove("Detail.txt");
            gotoxy(43,4);
            printf("Cyber Detail has been Removed.");
            break;
        default :
            gotoxy(40,4);
            printf("Invalid Option : Enter any key for option menu");
            getch();
            system("cls");
            main_menu();
            break;
    }
}

void cyber_detcoln()
{
    gotoxy(40,2);
    printf("***** CYBER DETAIL COLLECTION *****");

```

```

gotoxy(43,4);
FILE *detail_fptr;
detail_fptr=fopen("Detail.txt","w");
fflush(stdin);
printf("Cyber Name : ");
    gets(cd.name);
fflush(stdin);
    gotoxy(43,5);
    fflush(stdin);
    printf("Address : ");
    gets(cd.address);
    fflush(stdin);
    gotoxy(43,6);
    fflush(stdin);
    printf("Phone Number : ");
    scanf("%lld",&cd.ph_no);
    gotoxy(43,7);
    fflush(stdin);
    printf("Email : ");
    gets(cd.email);
    fflush(stdin);
    fwrite(&cd,sizeof(cd),1,detail_fptr);
fclose(detail_fptr);
gotoxy(43,9);
printf("Details Collected.");
}

void cyber_info()
{
FILE *detail_fptr;
detail_fptr = fopen("Detail.txt","r");
if(detail_fptr== NULL)

```



```

        total_sec = total_sec+sec;
        total_min = total_min +min;
        total_hr = total_hr +hr;
        i++;
    }
    if(total_sec >= 60)
    {
        total_min = total_min+ total_sec/60;
        total_sec = total_sec%60;
        if(total_min >= 60)
        {
            total_hr = total_hr + total_min /60;
            total_min = total_min%60;
        }
    }
    printf("\n\n\t\t\t\t\tTotal PC Runtime : %d HOUR : %d MIN : %d
    SEC\n",total_hr,total_min,total_sec);
    fclose(clock_ptr);
}

void after_detail()
{
    char choics;
    printf("\n\n\t\t\t\t\t Press");
    printf("\n\n\t\t\t\t\t 1 : For Return to Admin Menu");
    printf("\n\n\t\t\t\t\t 2 : To exit from Program");
    fflush(stdin);
    choics=getch();
    system("cls");
    switch(choics)
    {
        case '1':

```

```

Admin_Choice();
break;
    case '2':
        exit(0);
        break;
    default :
        printf("\n\n\t\t\t\t\t");
        printf("Invalid Choice");
        getch();
        after_detail();
        break;
}
}
void price()
{
    gotoxy(40,6);
    printf("TIME");
    gotoxy(40,7);
    printf("-----");
    gotoxy(40,8);
    printf("30 MIN");
    gotoxy(40,10);
    printf("1 HOUR");
    gotoxy(40,12);
    printf("2 HOUR");
    gotoxy(58,6);
    printf("PRICE");
    gotoxy(58,8);
    printf("50 rupees");
    gotoxy(58,10);
    printf("100 rupees");

```

```

gotoxy(58,12);
printf("200 rupes");
}
void calculation()
{
FILE *clock_ptr;
int i=1,hr,min,sec,total_hr=0,total_min=0,total_sec=0,    Total_price, Grand_Total;
clock_ptr = fopen("clock_data.txt","r");
gotoxy(40,4);
printf("*****");
gotoxy(40,5);
printf("***** TOTAL PRICE TO PAY *****");
gotoxy(40,6);
printf("*****");
while((fscanf(clock_ptr,"%d %d %d",&hr,&min,&sec))!=EOF)
{
    Total_price = (hr * 120)+(min * 2 ) ;
    printf("\n\n\t\t\t\t\tUser %d:\t",i);
    printf("\n\n\t\t\t\t\t%d HOUR : ",hr);
    printf("%d MIN : ",min);
    printf("%d sec\n",sec);
    printf("\t\t\t\t\tTotal Price : Rs. %d",Total_price);
    total_sec = total_sec+sec;
    total_min = total_min +min;
    total_hr = total_hr +hr;
    Grand_Total = (total_hr * 120)+(total_min * 2 ) ;
    i++;
}
printf("\n\n\t\t\t\t\tGrand Total Amount : Rs. %d",Grand_Total);
fclose(clock_ptr);
}

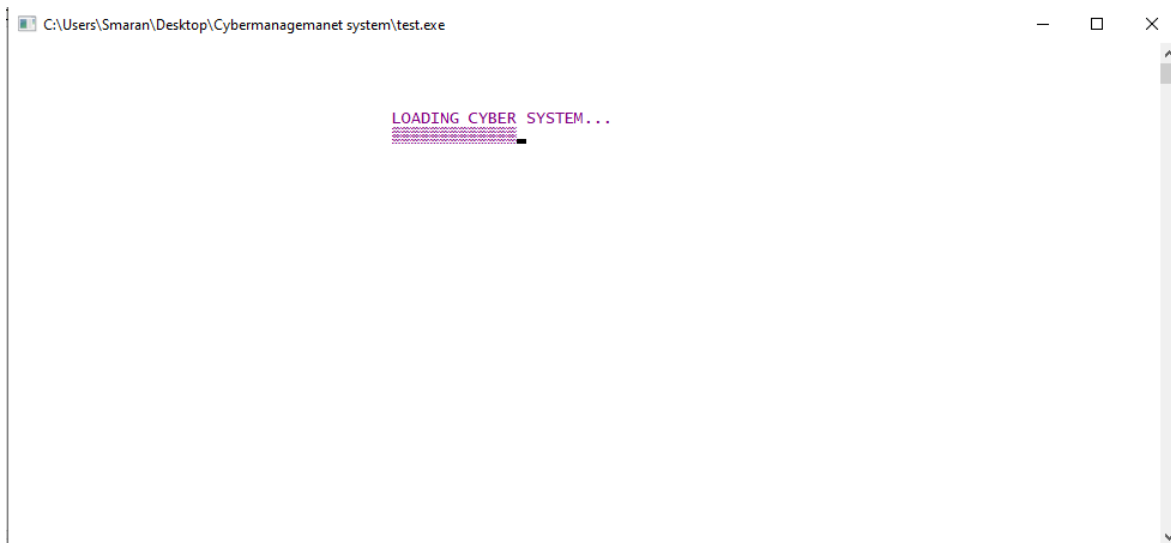
```

```
void exiting()
{
    int r,q;
    gotoxy(42,8);
    printf("EXITING CYBER SYSTEM...");
    gotoxy(42,9);
    for(r=1; r<=20; r++)
    {
        for(q=0; q<=1000000000; q++);
        printf("*");
    }
    system("cls");
}
```

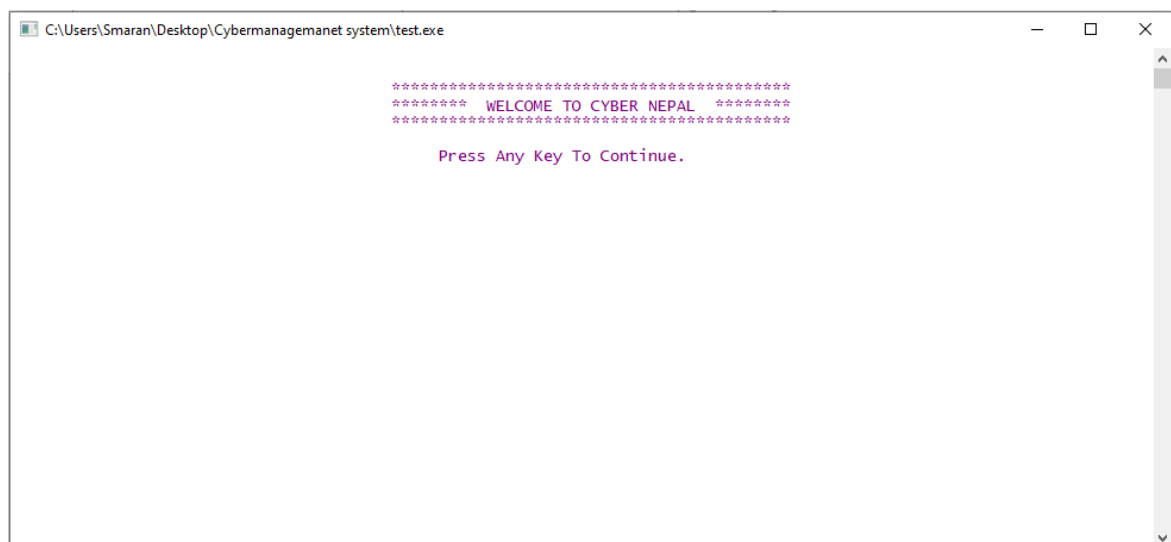


# CHAPTER 5: TESTING

## 5.1. SCREENSHOTS



**Figure 2 : Loading Screen**



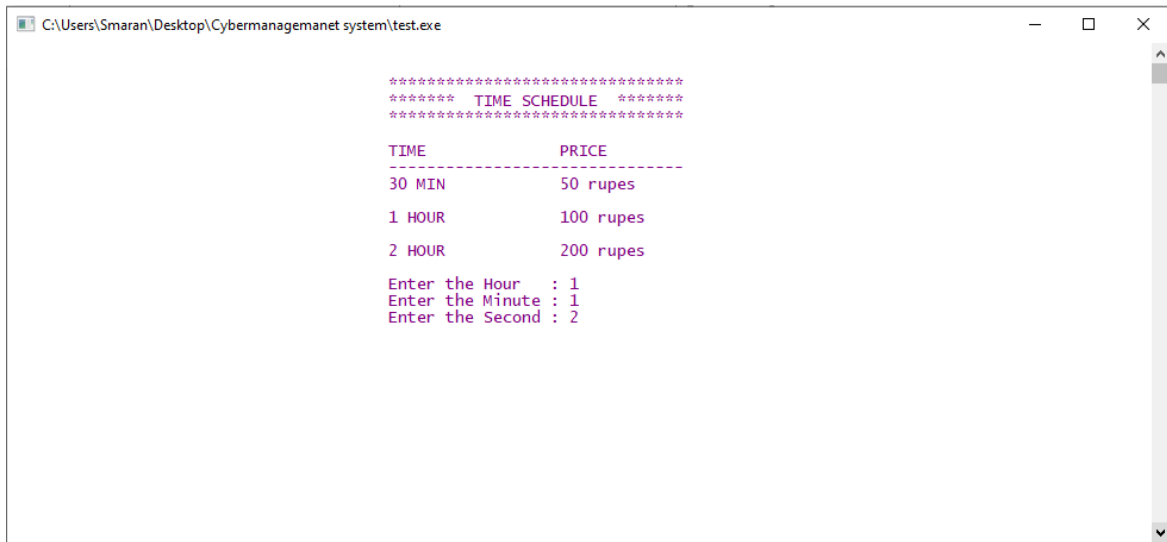
**Figure 3 : Welcome Screen**



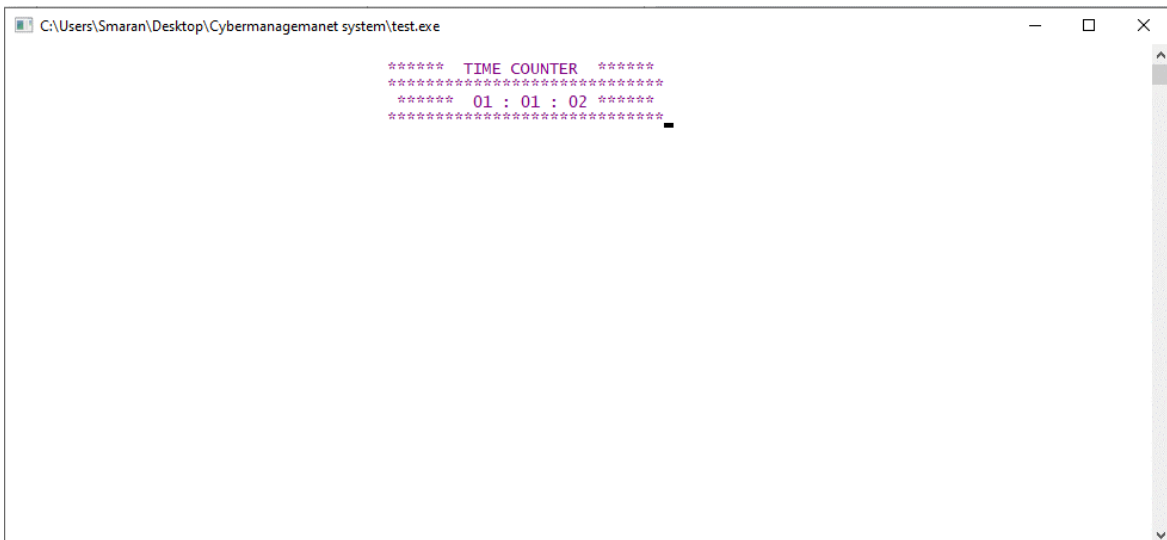
**Figure 4 : Menu Screen**



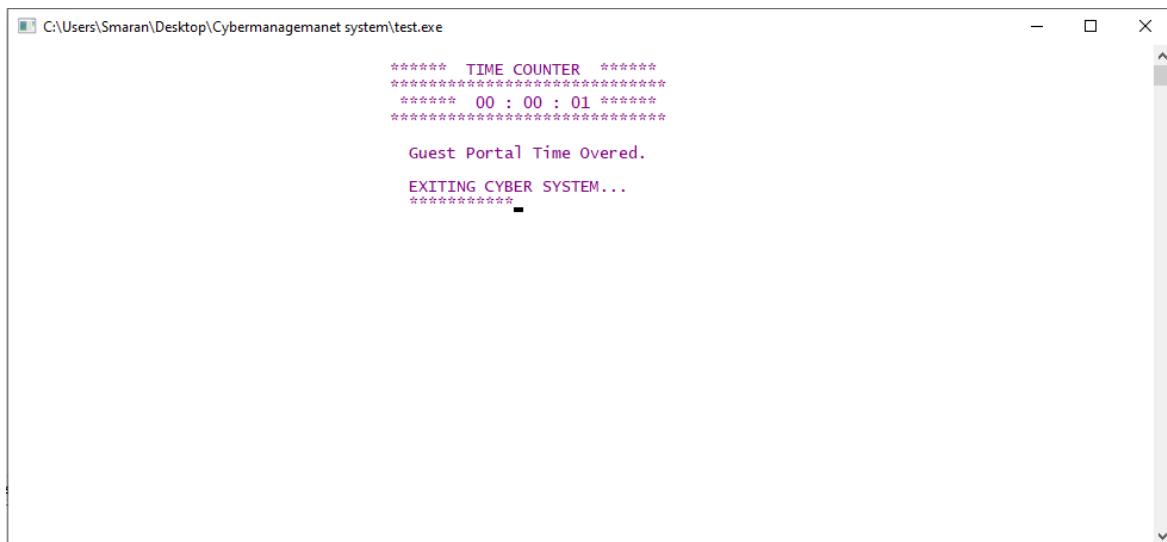
**Figure 5 : Guest Portal**



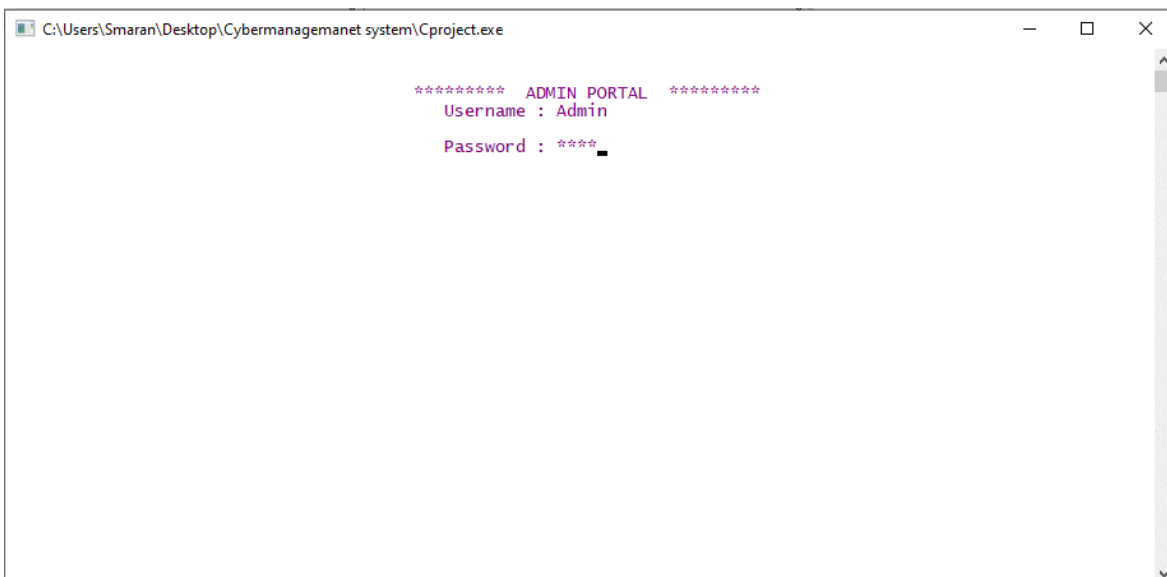
**Figure 6 : Time Schedule**



**Figure 7 : Time Counter**



**Figure 8 : Exiting Cyber Portal**



**Figure 9 : Admin Portal**



**Figure 10 : Admin Portal Options**



**Figure 11 : Cyber Details**



**Figure 12 : Cyber Detail Collection**



**Figure 13 : Cyber Information**

```
C:\Users\Smaran\Desktop\Cybermanagemanet system\Cproject.exe

***** Today's PC Runtime *****

User 1:
1 HOUR : 30 MIN : 30 sec

User 2:
1 HOUR : 1 MIN : 2 sec

User 3:
1 HOUR : 1 MIN : 2 sec

User 4:
0 HOUR : 0 MIN : 2 sec

Total PC Runtime : 3 HOUR : 32 MIN : 36 SEC

Press
1 : For Return to Admin Menu
```

**Figure 14 : Today's PC Runtime**

```
C:\Users\Smaran\Desktop\Cybermanagemanet system\Cproject.exe

*****
***** TOTAL PRICE TO PAY *****
*****

User 1:
1 HOUR : 30 MIN : 30 sec
Total Price : Rs. 180

User 2:
1 HOUR : 1 MIN : 2 sec
Total Price : Rs. 122

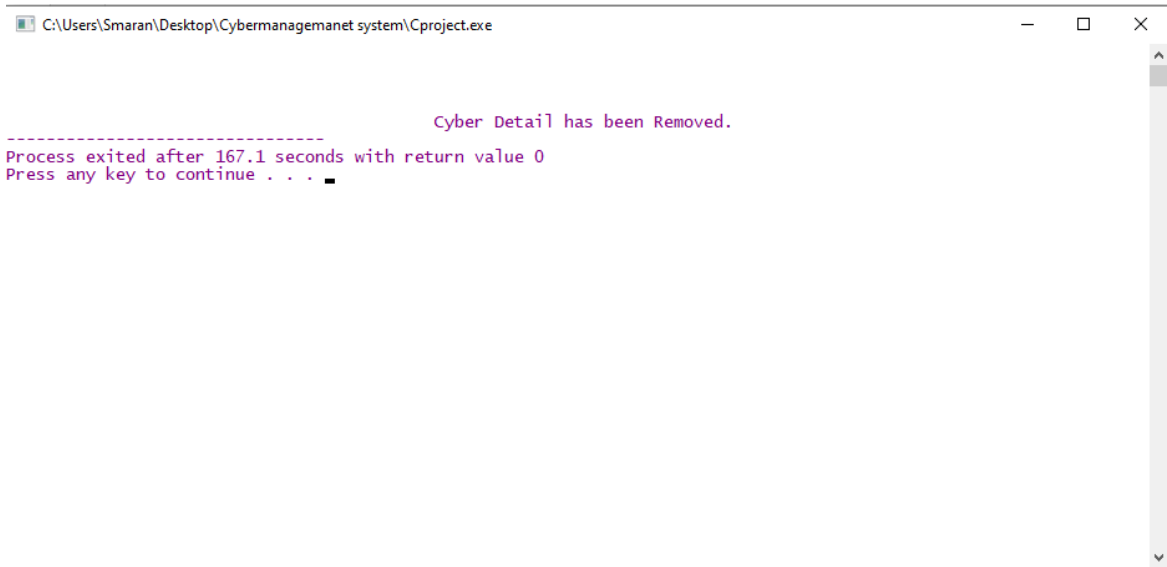
User 3:
1 HOUR : 1 MIN : 2 sec
Total Price : Rs. 122

User 4:
0 HOUR : 0 MIN : 2 sec
Total Price : Rs. 0

Grand Total Amount : Rs. 424

Press
1 : For Return to Admin Menu
```

**Figure 15 : Amount Detail Counter**



**Figure 16 : Remove Cyber Details**



## **CONCLUSION**

Solving out the various problems and errors in the code we have finally completed the project in developing the Cyber Management System Software. Going through our software it is very effective and easy to use as compare to other software. This project is much helpful for the cyber system in managing the multiple users. It saves the time of the cyber owner as he does not need to calculate the bills since it is automated. There is less chance of error in the system. Time taken for the overall processing in the cyber is reduced using this software. We hope that our project in the Cyber Management System becomes a fruitful project for managing the cyber system in better way.