Hostel Management System

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Course:

CSC-102 Programming Fundamentals

Department of Computer Science

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Here you can find the major parts of your Proposal documentation

- ## Short Description of your project
    - A hostel management system is essential for efficiently managing hostel operations by automating the tasks like room allocation , fee management and record keeping. It ensures accuracy , enhances security, and facilitates effective communication.
    - The system's data analysis and reporting features contribute to the informed decision making.
- ## Users of Application (minimum 2 users for your project)
    - Admin: The admin includes the owners of private hostels, management of universities and any educational institute having hostels.
    - Users: The students, bachelors and the people who come from other cities to do some work or to study are the users.
    - There are only two users of this application:
- ## Functional Requirements
    - Functional requirements are a detailed description of what a system, product, or service must do to meet the needs and expectations
    - Use the following format to write the Functional Requirements

User Story ID	***As a***	***I want to perform***	***So that I can***
1			

Admin	**Functionalities**	**Functions**
1.View the registered students	Wants to view all the registered students	Displays all the registered students
2.Update the mess menu	Wants to update the menu of mess	Displays the menu of mess and allows admin to make changes in it
3.Update prices	Wants to update the prices of mess service, room rents	Displays all the prices and allows the users to make changes in the prices
4.Dues Management	Wants to see the dues of the registered students and can pay the dues	Displays the dues of the registered students and can pay their dues
5.Check/Delete users account	Wants to unregister or remove the user.	Displays the accounts of the users allows the

		admin to delete the users accounts.
6.Change username/password	Wants to change the username or password of his own account	Allows the admin to change username or password of his own account
7.View Complaints	Wants to view the complaints of his users	Allows the admin to view the complaints of his users.
8.View feedback	Wants to view the feedback of his users.	Allows the admin to view the feedback given by the users.
9.Logout	Wants to logout of his account	Allows the admin to logout of his account

User	**Functionalities**	**Functions**
1.Student Details	Students enters his personal details.	Takes the personal details of the students.
2.Room categories	Students can choose his room category	Asks the room category of student
3.Mess info	Students can get the mess service	Asks about the mess service
4.Premium facilities	Students can get some premium facilities	Asks about premium facilities
5.Dues section	Students can check their dues and can get the receipt	Shows students their receipt
6.Send feedback	Students can give their feedback here	Asks about feedback there
7.Send Complaints	Students can submit their complaints	Asks about complaints there.
8. Change username/password	Wants to change the username or password of his own account	Allows the admin to view the feedback given by the users.
9.Logout	Wants to logout of his account	Allows the admin to logout of his account

Wireframes

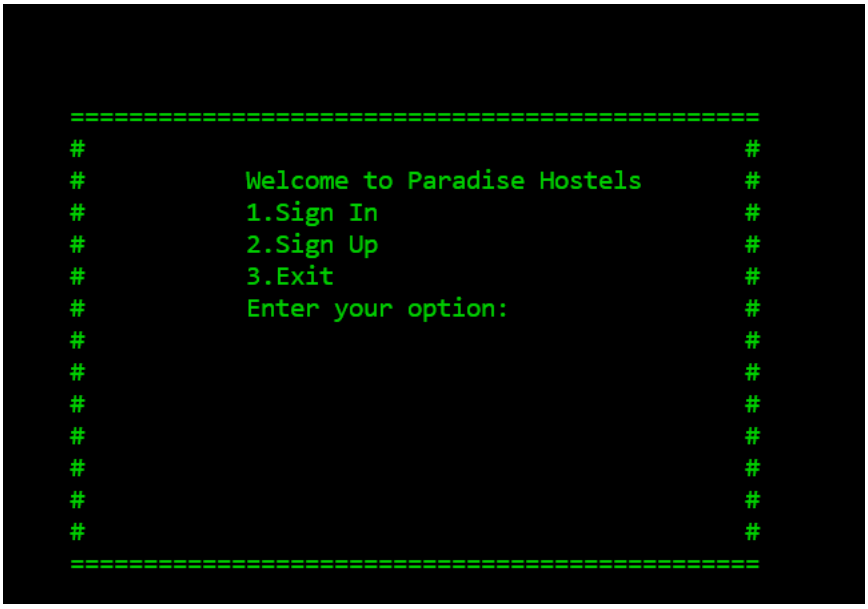


Figure 1: Login Screen

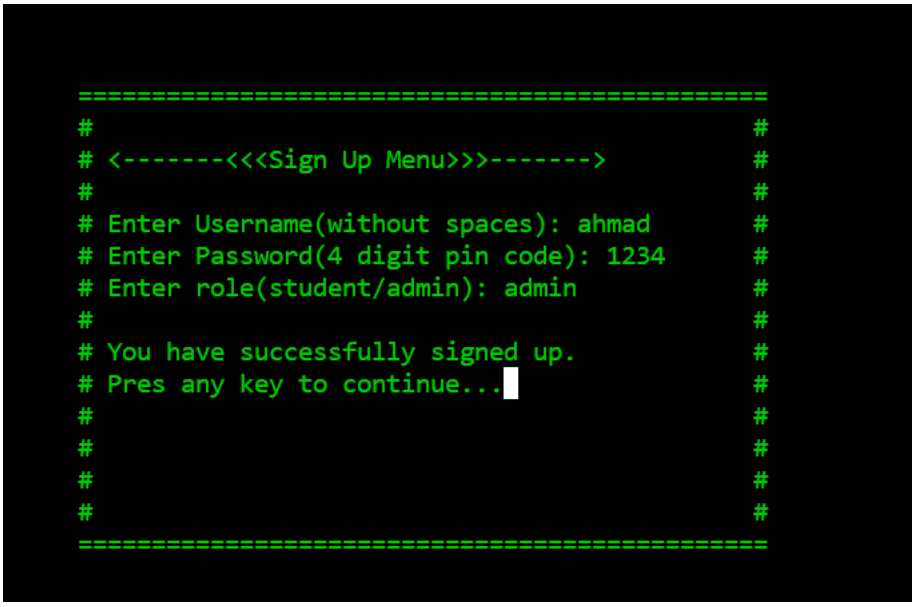


Figure 2:Sign up Screen

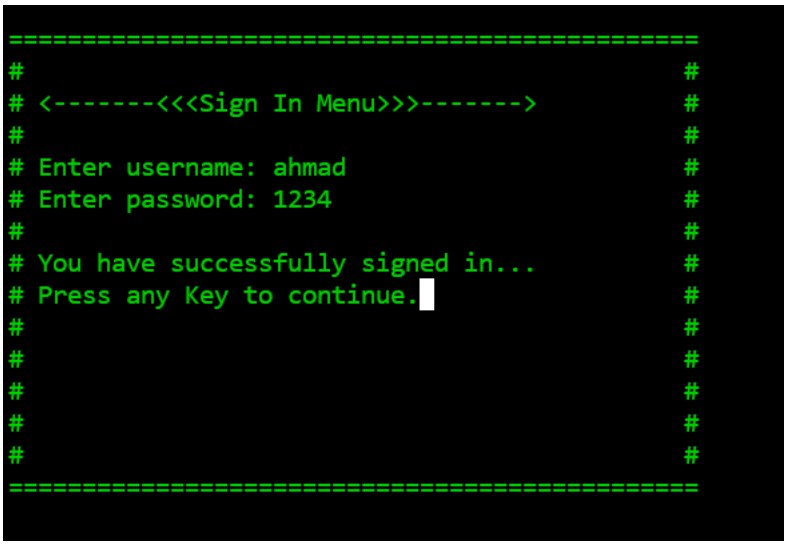


Figure 3:Sigin screen

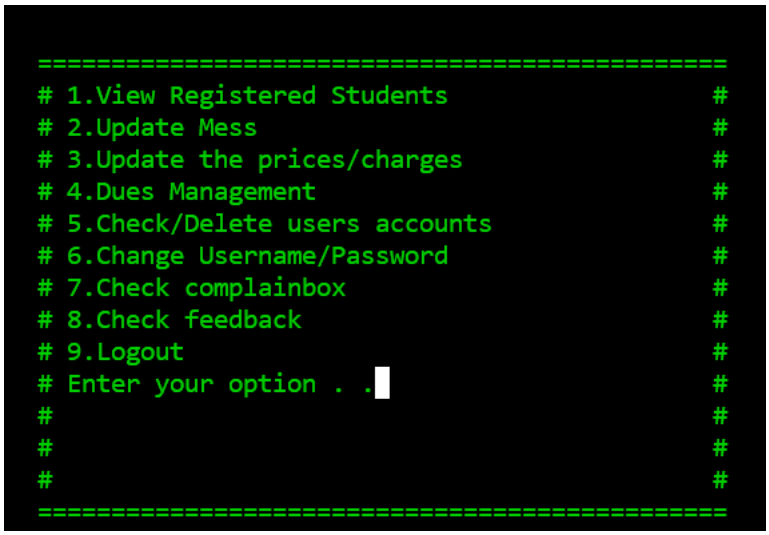


Figure 4:Admin functionalities

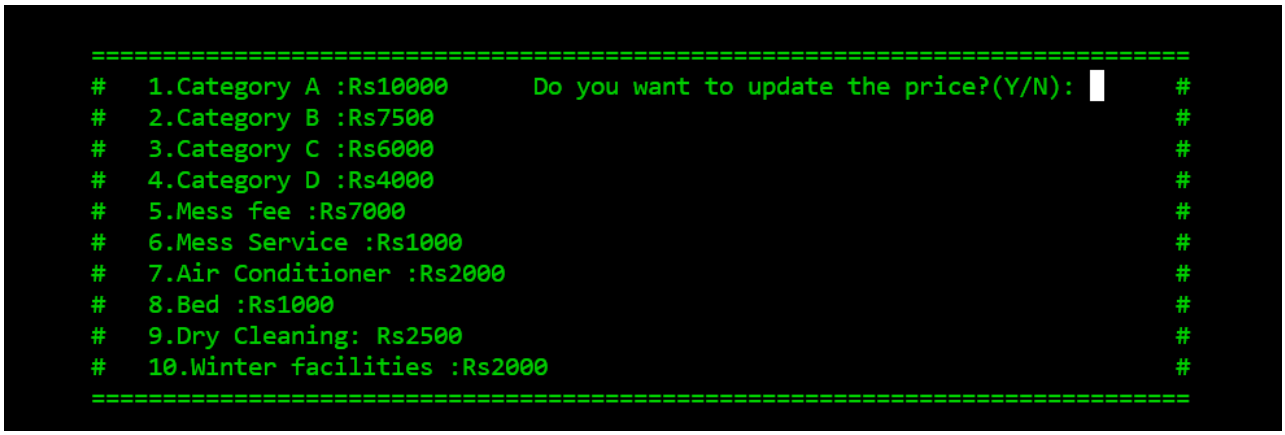


Figure 5:Update prices functionality

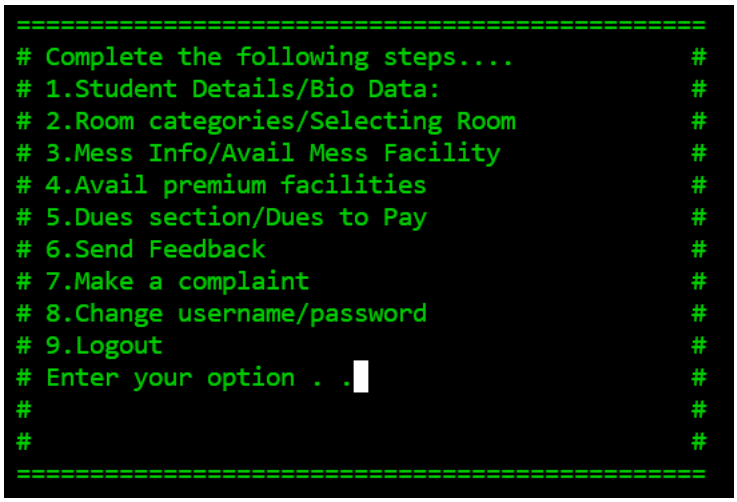


Figure 6:User Functionalities

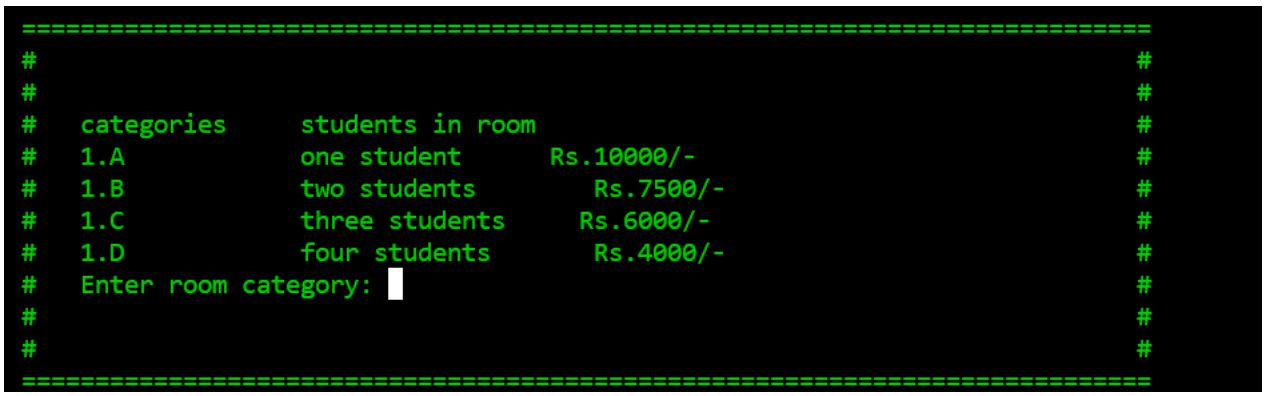


Figure 7:User Functionality example

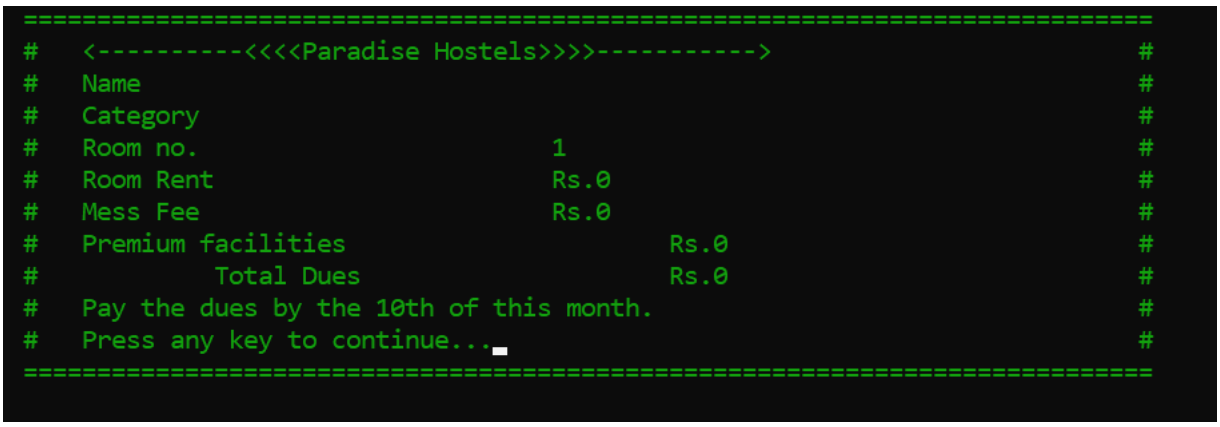


Figure 8:Receipt

- **Data Structures (Parallel Arrays)**

```
    string username [100];
    string password[100];
    string role[100];
    string name[100];
    string fathername[100];
    string category[100];
    string phone[100];
    string CNIC[100];
    int roomrent[100];
    int messfee[100];
    int premium[100];
    string feedbk[100];
    string complaint[100];
    string mess[100];
    int total[100];
    string paymentstatus[100];
```

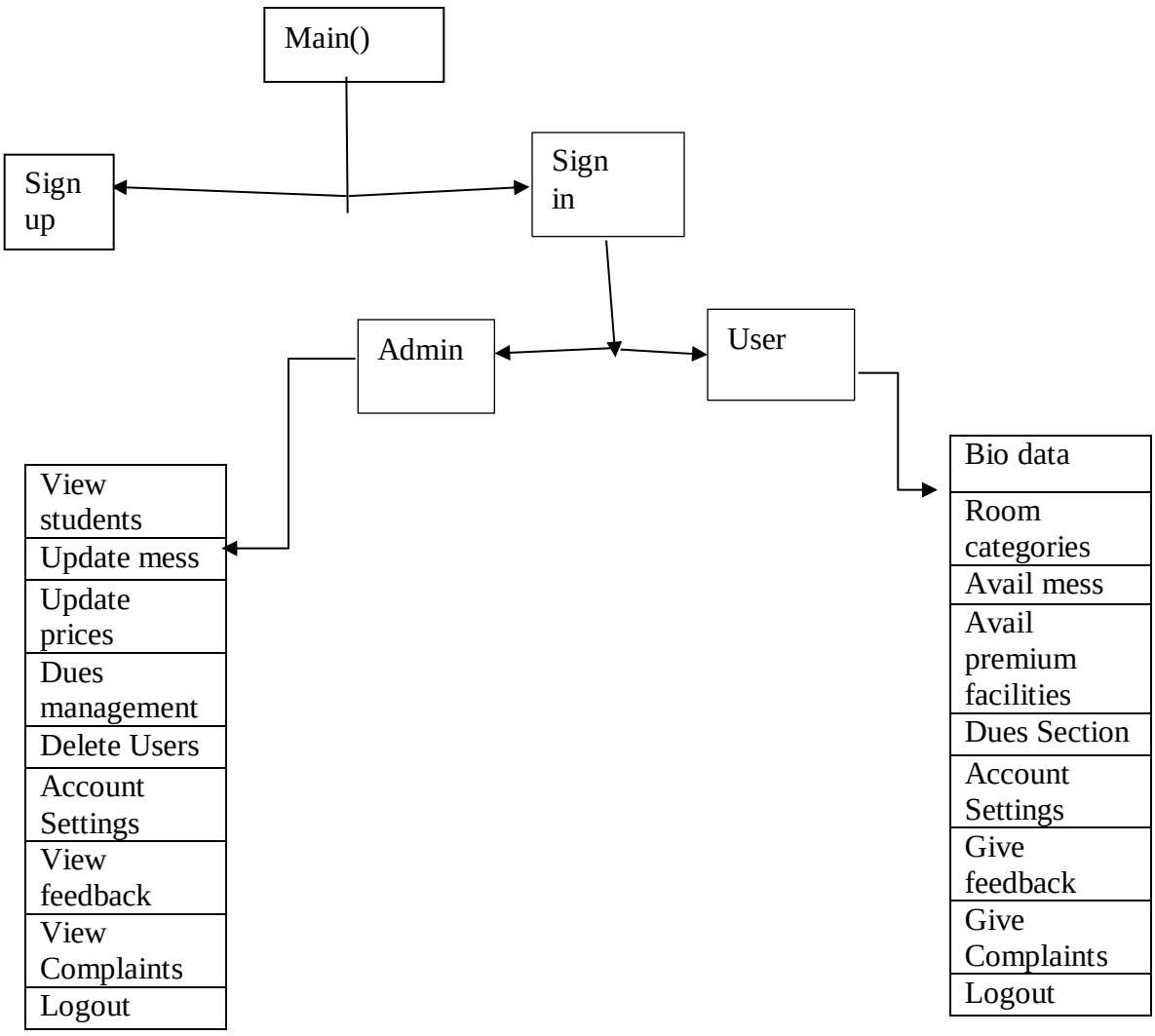
- **Function Prototypes**

```
bool aplha(string user_name, string pass_word, string r_ole, string username[], string password[], string role[]);
void printhead1();
void erasefirstbox();
void eraseinside2();
void erasebox2();
string complaints(string complaint[]);
bool checkcredentials(string username, string password);
string feeds(string feedbk[]);
string changepass(string username[], string password[], int j);
string useraccounts(string username[], string password[], string role[]);
string Complainbox();
string Feedback();
void title();
```

```
void printhead2();
string premium1(int premium[], int i, int ACprice, int Bedprice, int Dcprice, int Winterprice);
int Menu();
void signup(string username[], string password[], string role[], int &i);
void printhead();
void menuhostelite(string name[], string fathername[], string category[], string phone[], string CNIC[], int roomrent[], int messfee[], int preminum[], string feedbk[], string complaint[], string username[], string password[], int i, string checkuser, string mess[], int Aprice, int Bprice, int Cprice, int Dprice, int Messfee, int Messservice, int ACprice, int Bedprice, int Dcprice, int Winterprice, int total[], int &j, string paymentstatus[]);
int signin(string username[], string password[], int &i, int &role_index, string &checkuser);
void Adminmenu(string name[], string fathername[], string category[], string phone[], string CNIC[], int roomrent[], int messfee[], int premium[], string feedbk[], string complaint[], string username[], string password[], int i, string role[], string mess[], int &Aprice, int &Bprice, int &Cprice, int &Dprice, int &Messfee, int &Messservice, int &ACprice, int &Bedprice, int &Dcprice, int &Winterprice, int total[], string paymentstatus[], string checkuser);
string StudentDetails(string name[], string fathername[], string category[], string phone[], int &k, string checkuser, string username[], int &j);
string firstmenu();
void gotoxy(int x, int y);
string viewstudents(string name[], string fathername[], string role[], int i);
string messupdate(string mess[]);
void messsetting(string mess[]);
string updateprice(int &Aprice, int &Bprice, int &Cprice, int &Dprice, int &Messfee, int &Messservice, int &ACprice, int &Bedprice, int &Dcprice, int &Winterprice);
string duesadmin(int total[], string name[], string paymentstatus[]);
string messinfo(int messfee[], int i, string mess[], int Messfee, int Messservice);
string roomcategories(string category[], int i, int roomrent[], int Aprice, int Bprice, int Cprice, int Dprice);
```

```
• string allotmentreceipt(string name[], string category[], int roomrent[],
  int messfee[], int premium[], int i, int total[], string paymentstatus[]);
• void duesstatus(string paymentstatus[]);
• string changeadminpass(string username[], string password[], string
  checkuser);
```

- **Functions Working Flow**
  - Here you have to draw a diagram that will show how you are calling your functions. This will show how you have designed the flow of your code.
  - Here is an example of your Functions Working Flow diagram.



- **Complete Code of the Business Application**
  - `#include <iostream>`
  - `#include <conio.h>`
  - `#include <winbase.h>`
  - `#include <wincon.h>`
  - `using namespace std;`
  - `bool aplha(string user_name, string pass_word, string r_ole, string username[], string password[], string role[]);`
  - `void printhead1();`
  - `void erasefirstbox();`
  - `void eraseinside2();`
  - `void erasebox2();`
  - `string complaints(string complaint[]);`
  - `bool checkcredentials(string username, string password);`
  - `string feeds(string feedbk[]);`
  - `string changepass(string username[], string password[], int j);`
  - `string useraccounts(string username[], string password[], string role[]);`
  - `string Complainbox();`
  - `string Feedback();`
  - `void title();`
  - `void printhead2();`
  - `string premium1(int premium[], int i, int ACprice, int Bedprice, int Dcprice, int Winterprice);`
  - `int Menu();`
  - `void signup(string username[], string password[], string role[], int &i);`
  - `void printhead();`
  - `void menuhostelite(string name[], string fathername[], string category[], string phone[], string CNIC[], int roomrent[], int messfee[], int preminum[], string feedbk[], string complaint[], string username[], string password[], int i, string checkuser, string mess[], int Aprice, int Bprice, int Cprice, int Dprice, int Messfee, int Messservice, int ACprice, int Bedprice, int Dcprice, int Winterprice, int total[], int &j, string paymentstatus[]);`
  - `int signin(string username[], string password[], int &i, int &role_index, string &checkuser);`
  - `void Adminmenu(string name[], string fathername[], string category[], string phone[], string CNIC[], int`

```
    roomrent[], int messfee[], int premium[], string
    feedbk[], string complaint[], string username[], string
    password[], int i, string role[], string mess[], int
    &Aprice, int &Bprice, int &Cprice, int &Dprice, int
    &Messfee, int &Messservice, int &ACprice, int
    &Bedprice, int &Dcprice, int &Winterprice, int total[],
    string paymentstatus[], string checkuser);
  o string StudentDetails(string name[], string
    fathername[], string category[], string phone[], int
    &k, string checkuser, string username[], int &j);
  o string firstmenu();
  o void gotoxy(int x, int y);
  o string viewstudents(string name[], string fathername[],
    string role[], int i);
  o string messupdate(string mess[]);
  o void messsetting(string mess[]);
  o string updateprice(int &Aprice, int &Bprice, int
    &Cprice, int &Dprice, int &Messfee, int &Messservice,
    int &ACprice, int &Bedprice, int &Dcprice, int
    &Winterprice);
  o string duesadmin(int total[], string name[], string
    paymentstatus[]);
  o // void allotmentreceipt(string
    string,char,int,int,int);
  o string messinfo(int messfee[], int i, string mess[],
    int Messfee, int Messservice);
  o string roomcategories(string category[], int i, int
    roomrent[], int Aprice, int Bprice, int Cprice, int
    Dprice);
  o string allotmentreceipt(string name[], string
    category[], int roomrent[], int messfee[], int
    premium[], int i, int total[], string paymentstatus[]);
  o void duesstatus(string paymentstatus[]);
  o string changeadminpass(string username[], string
    password[], string checkuser);
  o
  o main()
  o
  o {
  o     int i = 0;
  o     int k = 0;
  o     int role_index = 0;
  o     int Aprice = 10000, Bprice = 7500, Cprice = 6000,
    Dprice = 4000, Messfee = 7000, Messservice = 1000,
    ACprice = 2000, Bedprice = 1000, Dcprice = 2500,
```

```
  Winterprice = 2000;
o     string username[100];
o     string password[100];
o     string role[100];
o     string name[100];
o     string fathername[100];
o     string category[100];
o     string phone[100];
o     string CNIC[100];
o     int roomrent[100];
o     int messfee[100];
o     int premium[100];
o     string feedbk[100];
o     string complaint[100];
o     string mess[100];
o     int total[100];
o     string paymentstatus[100];
o     duesstatus(paymentstatus);
o     int j;
o
o
o     system("color 02");
o
o
o     messsetting(mess);
o     string checkuser;
o     while (true)
o     {
o         system("cls");
o         printhead1();
o         title();
o         string option1 = firstmenu();
o         if (option1 == "1")
o         {
o
o             int result = signin(username, password, i,
  role_index, checkuser);
o             if (result != 0)
o             {
o                 if (role[role_index] == "student" ||
  role[role_index] == "Student")
o                 {
```

```
o
o                    menuhostelite(name, fathername,
  category, phone, CNIC, roomrent, messfee, premium,
  feedbk, complaint, username, password, i, checkuser,
  mess, Aprice, Bprice, Cprice, Dprice, Messfee,
  Messservice, ACprice, Bedprice, Dcprice, Winterprice,
  total, j, paymentstatus);
o                }
o                else if (role[role_index] == "admin" ||
  role[role_index] == "Admin")
o                {
o
o                    Adminmenu(name, fathername,
  category, phone, CNIC, roomrent, messfee, premium,
  feedbk, complaint, username, password, i, role, mess,
  Aprice, Bprice, Cprice, Dprice, Messfee, Messservice,
  ACprice, Bedprice, Dcprice, Winterprice, total,
  paymentstatus, checkuser);
o                }
o            }
o         }
o         else if (option1 =="2" )
o         {
o             signup(username, password, role, i);
o         }
o         else if (option1 == "3"){
o             system("cls");
o             return 0;}
o
o         else {
o           gotoxy(7, 25);
o             cout << "Invalid Choice";
o             gotoxy(7,26);
o             cout << "Press any key to continue...";
o             getch();
o             erasefirstbox();
o         }
o
o     }
o }
o
o void printhead()
o {
```

```
    cout << "---------------------<<<<<<<<<<<<<<<<
PARADISE HOSTELS>>>>>>>>>>>>>>>>>>>>---------------------" <<
endl;
}
int Menu()
{
    int opt;
    cout << "Login as" << endl;
    cout << "1.Admin" << endl;
    cout << "2.Hostelite" << endl;
    cout << "3.Exit" << endl;
    cout << "Enter your option..";
    cin >> opt;
    return opt;
}

/*void menunext(int opt)
{

    if (opt == 1)
    {
        menuadmin();
    }
    if (opt == 2)
    {
        menuhostelite();
    }
    if (opt == 3)
    {
        exit(0);
    }
    else
    {
        cout << "Invalid option";
    }*/

void menuhostelite(string name[], string fathername[],
string category[], string phone[], string CNIC[], int
roomrent[], int messfee[], int premium[], string
feedbk[], string complaint[], string username[], string
password[], int i, string checkuser, string mess[], int
Aprice, int Bprice, int Cprice, int Dprice, int
Messfee, int Messservice, int ACprice, int Bedprice,
```

```
int Dcprice, int Winterprice, int total[], int &j,
string paymentstatus[])
{
    while (true)
    {
        erasefirstbox();

        string nextoption;
        gotoxy(7, 14);
        cout << "Complete the following steps...." <<
endl;
        gotoxy(7, 15);
        cout << "1.Student Details/Bio Data:" << endl;
        gotoxy(7, 16);
        cout << "2.Room categories/Selecting Room" <<
endl;
        gotoxy(7, 17);
        cout << "3.Mess Info/Avail Mess Facility" <<
endl;
        gotoxy(7, 18);
        cout << "4.Avail premium facilities" << endl;
        gotoxy(7, 19);
        cout << "5.Dues section/Dues to Pay" << endl;
        gotoxy(7, 20);
        cout << "6.Send Feedback" << endl;
        gotoxy(7, 21);
        cout << "7.Make a complaint" << endl;
        gotoxy(7, 22);
        cout << "8.Change username/password" << endl;
        gotoxy(7, 23);
        cout << "9.Logout";
        gotoxy(7, 24);

        cout << "Enter your option . .";
        cin >> nextoption;

        if (nextoption == "1")
        {
            printhead2();
           string result= StudentDetails(name,
fathername, CNIC, phone, i, checkuser, username, j);
           gotoxy(64,20);
           cout<<result;
```

```
            gotoxy(64,21);
            cout << "Press any key to continue...";
            getch();
            erasebox2();
        }
        else if (nextoption =="2" )
        {
            printhead2();
            string result=roomcategories(category, j,
roomrent, Aprice, Bprice, Cprice, Dprice);
            gotoxy(64,22);
            cout<<result;
              gotoxy(64,23);
            cout << "Press any key to continue...";
            getch();
            erasebox2();

        }
        else if (nextoption == "3")
        {
             printhead2();
            string result=messinfo(messfee, j, mess,
Messfee, Messservice);
            gotoxy(64,22);
            cout<<result;
            gotoxy(64,23);
            cout << "Press any key to continue...";
            getch();
            erasebox2();

        }
        else if (nextoption == "4")
        {
            printhead2();
           string result= premium1(premium, j, ACprice,
Bedprice, Dcprice, Winterprice);
             gotoxy(64,22);
            cout<<result;
            gotoxy(64,23);
            cout << "Press any key to continue...";
            getch();
            erasebox2();
```

```
o          }
o          else if (nextoption == "5")
o          {
o              printhead2();
o              string result=allotmentreceipt(name,
  category, roomrent, messfee, premium, j, total,
  paymentstatus);
o                gotoxy(64,22);
o              cout<<result;
o              gotoxy(64,23);
o              cout << "Press any key to continue...";
o              getch();
o              erasebox2();
o          }
o          else if (nextoption == "6")
o          {
o
o              printhead2();
o              string result = Feedback();
o              feedbk[i] = result;
o              gotoxy(64,22);
o              cout<<"Feedback has been recorded!";
o              gotoxy(64,23);
o              cout << "Press any key to continue...";
o              getch();
o              erasebox2();
o          }
o          else if (nextoption == "7")
o          {
o              printhead2();
o              string result = Complainbox();
o              complaint[i] = result;
o              gotoxy(64,22);
o              cout<<"Complaint has been recorded!";
o              gotoxy(64,23);
o              cout << "Press any key to continue...";
o              getch();
o              erasebox2();
o              }
o          else if (nextoption == "8")
o          {
o              printhead2();
```

```
            string result= changepass(username,
  password, j);
            gotoxy(64,20);
            cout<<result;
            gotoxy(64,21);
            cout << "Press any key to continue...";
            getch();
            erasebox2();
        }
        else if(nextoption=="9")
        {
            gotoxy(7, 25);
            cout << "Loged out";
            gotoxy(7,26);
            cout << "Press any key to continue...";
            getch();
            break;
        }
        else{
              gotoxy(7, 25);
            cout << "Invalid choice";
            gotoxy(7,26);
            cout << "Press any key to continue...";
            getch();
            continue;
        }
    }
}
void Adminmenu(string name[], string fathername[],
  string category[], string phone[], string CNIC[], int
  roomrent[], int messfee[], int premium[], string
  feedbk[], string complaint[], string username[], string
  password[], int i, string role[], string mess[], int
  &Aprice, int &Bprice, int &Cprice, int &Dprice, int
  &Messfee, int &Messservice, int &ACprice, int
  &Bedprice, int &Dcprice, int &Winterprice, int total[],
  string paymentstatus[], string checkuser)
{
    while (true)
    {
        erasefirstbox();
        string nextoption;
        gotoxy(7,14);
```

```
o          cout << "1.View Registered Students" << endl;
o          gotoxy(7,15);
o          cout << "2.Update Mess" << endl;
o          gotoxy(7,16);
o          cout << "3.Update the prices/charges" << endl;
o          gotoxy(7,17);
o          cout << "4.Dues Management" << endl;
o          gotoxy(7,18);
o          cout << "5.Check/Delete users accounts" <<
  endl;
o          gotoxy(7,19);
o          cout << "6.Change Username/Password" << endl;
o          gotoxy(7,20);
o          cout << "7.Check complainbox" << endl;
o          gotoxy(7,21);
o          cout << "8.Check feedback" << endl;
o          gotoxy(7,22);
o          cout << "9.Logout" << endl;
o          gotoxy(7,23);
o          cout << "Enter your option . .";
o          cin >> nextoption;
o          if (nextoption == "1")
o          {
o              printhead2();
o
o              string result=viewstudents(name,
  fathername, role, i);
o              gotoxy(64,21);
o              cout <<result;
o              gotoxy(64,22);
o                cout << "Press any key to continue...";
o              getch();
o              erasebox2();
o
o          }
o          else if (nextoption == "2")
o          {
o              printhead2();
o
o              string result= messupdate(mess);
o              gotoxy(64,19);
o              cout <<result;
```

```
            gotoxy(64,20);
            cout << "Press any key to continue...";
            getch();
            erasebox2();
        }
        else if (nextoption == "3")
        {
            printhead2();

            string result=updateprice(Aprice, Bprice,
Cprice, Dprice, Messfee, Messservice, ACprice,
Bedprice, Dcprice, Winterprice);
            gotoxy(91,19);
            cout <<result;
            gotoxy(91,21);
            cout << "Press any key to continue...";
            getch();
            erasebox2();
        }
        else if (nextoption == "4")
        {
            printhead2();
            string result=duesadmin(total, name,
paymentstatus);
            gotoxy(64,20);
            cout << result;
            gotoxy(64,21);
            cout << "Press any key to continue...";
            getch();
            erasebox2();
        }
        else if (nextoption == "5")
        {
            printhead2();
            string result=useraccounts(username,
password, role);
            gotoxy(64,22);
            cout << result;
            gotoxy(64,23);
            cout << "Press any key to continue...";
            getch();
            erasebox2();
```

```
o          }
o          else if (nextoption == "6")
o          {
o              printhead2();
o              string result=changeadminpass(username,
  password, checkuser);
o              gotoxy(64,20);
o              cout << result;
o              gotoxy(64,21);
o              cout << "Press any key to continue...";
o              getch();
o              erasebox2();
o          }
o          else if (nextoption == "7")
o          {
o              printhead2();
o              string result= complaints(complaint) ;
o              gotoxy(64,21);
o              cout <<result;
o              gotoxy(64,22);
o              cout << "Press any key to continue...";
o              getch();
o              erasebox2();
o          }
o          else if (nextoption == "8")
o          {
o              printhead2();
o              string result=feeds(feedbk) ;
o              gotoxy(64,20);
o              cout << result;
o              gotoxy(64,21);
o              cout << "Press any key to continue...";
o              getch();
o              erasebox2();
o          }
o          else if(nextoption=="9")
o          {
o              gotoxy(7, 25);
o              cout << "Loged out";
o              gotoxy(7,26);
o              cout << "Press any key to continue...";
o              getch();
```

```
            break;
        }
        else{
           gotoxy(7, 25);
            cout << "Invalid choice";
            gotoxy(7,26);
            cout << "Press any key to continue...";
            getch();
           continue;
        }
    }
}

string StudentDetails(string name[], string
fathername[], string CNIC[], string phone[], int &k,
string checkuser, string username[], int &j)
{

    for (int i = 0; i < k; i++)
    {
        if (checkuser == username[i])
        {
            j = i;
        }
    }
    gotoxy(64,16);
    cout << "Enter your name: ";
    cin >> name[j];
    gotoxy(64,17);
    cout << "Enter your father's name: ";
    cin >> fathername[j];
    gotoxy(64,18);
    cout << "Enter your phone number: ";
    cin >> phone[j];
    gotoxy(64,19);
    cout << "Enter your CNIC:";
    cin >> CNIC[j];
    string str="Student Details Completed!";
    return str;
}
string allotmentreceipt(string name[], string
category[], int roomrent[], int messfee[], int
```

```
premium[], int j, int total[], string paymentstatus[])
{
    gotoxy(64,14);
    cout << "<----------<<<<Paradise Hostels>>>>-------
----->" ;
    gotoxy(64,15);
    cout << "Name\t\t\t" << name[j] << endl;
    gotoxy(64,16);
    cout << "Category\t\t\t" << category[j] << endl;
    gotoxy(64,17);
    cout << "Room no.\t\t\t" << j+1 << endl;
    gotoxy(64,18);
    cout << "Room Rent\t\t\tRs." << roomrent[j] <<
endl;
    gotoxy(64,19);
    cout << "Mess Fee\t\t\tRs." << messfee[j] << endl;
    gotoxy(64,20);
    cout << "Premium facilities\t\t\tRs." << premium[j]
<< endl;
    int total2 = roomrent[j] + messfee[j] + premium[j];
    total[j] = total2;
    gotoxy(64,21);
    cout << "         Total Dues\t\t\tRs." << total2;
    string str;
    if (paymentstatus[j] == "Unpaid")
    {
        str="Pay the dues by the 10th of this month.";
    }
    else
    {
        str= "Status: Paid!";
    }
    return str;

}
string roomcategories(string category[], int j, int
roomrent[], int Aprice, int Bprice, int Cprice, int
Dprice)
{
    gotoxy(64,16);
    cout << "categories     students in room" << endl;
    gotoxy(64,17);
    cout << "1.A            one student      Rs." <<
```

```
  Aprice << "/-" << endl;
o     gotoxy(64,18);
o     cout << "1.B            two students        Rs." <<
  Bprice << "/-" << endl;
o     gotoxy(64,19);
o     cout << "1.C            three students     Rs." <<
  Cprice << "/-" << endl;
o     gotoxy(64,20);
o     cout << "1.D            four students       Rs." <<
  Dprice << "/-" << endl;
o     gotoxy(64,21);
o     cout << "Enter room category: ";
o     cin >> category[j];
o
o     if (category[j] == "A")
o     {
o         roomrent[j] = Aprice;
o     }
o     else if (category[j] == "B")
o     {
o         roomrent[j] = Bprice;
o     }
o     else if (category[j] == "C")
o     {
o         roomrent[j] = Cprice;
o     }
o     else if (category[j] == "D")
o     {
o         roomrent[j] = Dprice;
o     }
o     string str="Room category has been selected!";
o
o }
o string messinfo(int messfee[], int j, string mess[],
  int Messfee, int Messservice)
o {
o     gotoxy(64,14);
o     for (int i = 0; i < 8; i++)
o     {
o         if(i!=7){
o             if (i==5)
o             {
```

```
                gotoxy(64,15);
                cout << i + 1 << "." << mess[i] <<",";
            }
            else{
                cout << i + 1 << "." << mess[i] <<",";
            }

        }
        else{

           cout << i + 1 << "." << mess[i] ;
        }
    }
    gotoxy(64,17);
    cout << "The managment provides the mess two times
a day" << endl;
    gotoxy(64,18);
    cout << "Mess fee per month: Rs." << Messfee <<
endl;
    gotoxy(64,19);
    cout << "The mess service whic is " << Messservice
<< " rupees in addition to the mess fee." ;
    string str;
    char ans;
    gotoxy(64,20);
    cout << "Do you want mess service (Y/N): ";
    cin >> ans;
    if (ans == 'Y' || ans == 'y')
    {
        messfee[j] = Messservice + Messfee;
        str="Mess sevice accepted!";
    }
    else if (ans == 'N' || ans == 'n')
    {
        messfee[j] = 0;
        cout<<"Mess Service denied!";

    }
    else{
        cout<<"Invalid input!";
    }
    return str;
```

```
o
o
o
o  }
o
o  string firstmenu()
o  {
o      erasefirstbox();
o      string opt;
o      gotoxy(17, 15);
o      cout << "Welcome to Paradise Hostels";
o
o      gotoxy(17, 16);
o      cout << "1.Sign In" << endl;
o      gotoxy(17, 17);
o      cout << "2.Sign Up" << endl;
o      gotoxy(17, 18);
o      cout << "3.Exit" << endl;
o      gotoxy(17, 19);
o      cout << "Enter your option: ";
o      cin >> opt;
o      return opt;
o  }
o  int signin(string username[], string password[], int
   &i, int &role_index, string &checkuser)
o  {
o      string user, pass;
o      erasefirstbox();
o      gotoxy(7, 15);
o      cout << "<-------<<<Sign In Menu>>>------->" <<
   endl;
o      int option = 0;
o      gotoxy(7, 17);
o      cout << "Enter username: ";
o      cin >> user;
o      gotoxy(7, 18);
o      cout << "Enter password: ";
o      cin >> pass;
o      int signcount = 0;
o
o      for (int j = 0; j < i; j++)
o      {
```

```
        if (user == username[j])
        {
            if (pass == password[j])
            {
                checkuser = username[j];
                gotoxy(7, 20);
                cout << "You have successfully signed
in..." << endl;
                signcount++;
                gotoxy(7, 21);
                cout << "Press any Key to continue.";
                getch();
                role_index = j;
            }
        }
    }
    if (signcount == 0)
    {
        gotoxy(7, 20);
        cout << "Entered Credentials are wrong.";
        gotoxy(7, 21);
        cout << "Press any Key to continue.";
        getch();
    }
    return signcount;
}
void signup(string username[], string password[],
string role[], int &i)
{
    erasefirstbox();
    gotoxy(7, 15);
    cout << "<-------<<<Sign Up Menu>>>------->" <<
endl;

    if (i == 0)
    {

        gotoxy(7, 17);
        cout << "Enter Username(without spaces): ";

        cin >> username[i];
        gotoxy(7, 18);
```

```
o          cout << "Enter Password(4 digit pin code): ";
o
o          cin >> password[i];
o          gotoxy(7, 19);
o          cout << "Enter role(student/admin): ";
o          cin >> role[i];
o          bool roles = false;
o          if (role[i] == "Student" || role[i] ==
  "student" || role[i] == "admin" || role[i] == "Admin")
o          {
o              roles = true;
o          }
o
o          if (checkcredentials(username[i], password[i])
  == true && roles == true)
o          {
o
o              i++;
o              gotoxy(7, 21);
o              cout << "You have successfully signed up."
  << endl;
o              gotoxy(7, 22);
o              cout << "Pres any key to continue...";
o              getch();
o          }
o          else
o          {
o              username[i] = "";
o              password[i] = "";
o              role[i] = "";
o              gotoxy(7, 21);
o              cout << "Entered credentials are wrong.";
o              gotoxy(7, 22);
o              cout << "Pres any key to continue...";
o              getch();
o          }
o      }
o      else if (i > 0)
o      {
o          string user_name, pass_word, r_ole;
o          cin.ignore();
o          gotoxy(7, 17);
```

```
        cout << "Enter Username(without spaces): " ;
        getline(cin,user_name);
        gotoxy(7, 18);
        cout << "Enter Password(4 digit pin code): " ;
        getline(cin,pass_word);

        gotoxy(7, 19);
        cout << "Enter role(student/admin): " ;
        cin >> r_ole;
        bool roles = false;
        if (r_ole == "Student" || r_ole == "student" ||
r_ole == "admin" || r_ole == "Admin")
        {
            roles = true;
        }
        bool result55 = checkcredentials(user_name,
pass_word);
        if (result55 == true && roles == true)
        {
            bool alpha = aplha(user_name, pass_word,
r_ole, username, password, role);

            if (alpha == false)
            {
                gotoxy(7, 21);
                cout << "This signin info is already
taken." << endl;
                gotoxy(7, 22);
                cout << "Pres any key to continue...";
            getch();
            }
            else
            {
                username[i] = user_name;
                password[i] = pass_word;
                role[i] = r_ole;
                gotoxy(7, 21);
                cout << "You have successfully signed
up." << endl;
                i++;
                gotoxy(7, 22);
                cout << "Pres any key to continue...";
```

```
                getch();
            }
        }
        else
        {

            gotoxy(7, 21);
            cout << "Entered credentials are wrong." <<
endl;
            gotoxy(7, 22);
            cout << "Pres any key to continue...";
            getch();
        }
    }
}
void printhead1()
{
    gotoxy(5, 13);
    cout <<
"============================================== " <<
endl;
    gotoxy(5, 14);
    cout << "#
# " << endl;
    gotoxy(5, 15);
    cout << "#
# " << endl;
    gotoxy(5, 16);
    cout << "#
# " << endl;
    gotoxy(5, 17);
    cout << "#
# " << endl;
    gotoxy(5, 18);
    cout << "#
# " << endl;
    gotoxy(5, 19);
    cout << "#
# " << endl;
    gotoxy(5, 20);
    cout << "#
# " << endl;
    gotoxy(5, 21);
```

```
o       cout << "#
  # " << endl;
o       gotoxy(5, 22);
o       cout << "#
  # " << endl;
o       gotoxy(5, 23);
o       cout << "#
  # " << endl;
o       gotoxy(5, 24);
o       cout << "#
  # " << endl;
o       gotoxy(5, 25);
o       cout << "#
  # " << endl;
o       gotoxy(5, 26);
o       cout << "#
  # " << endl;
o       gotoxy(5, 27);
o       cout <<
  "============================================== " <<
  endl;
o   }
o   void gotoxy(int x, int y)
o   {
o       COORD coordinates;
o       coordinates.X = x;
o       coordinates.Y = y;
o
  SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE
  ), coordinates);
o   }
o   bool aplha(string user_name, string pass_word, string
  r_ole, string username[], string password[], string
  role[])
o   {
o       bool result = true;
o
o       for (int i = 0; i <10; i++)
o       {
o           if (user_name == username[i] && pass_word ==
  password[i] )
o           {
o               result = false;
o               break;
```

```
        }

    }
    return result;
}
string premium1(int premium[], int j, int ACprice, int
Bedprice, int Dcprice, int Winterprice)
{
    gotoxy(64,14);
    cout << "1.Air Conditioner
Rs." << ACprice << "/- per month " << endl;
    gotoxy(64,15);
    cout << "2.Double Bed.
Rs." << Bedprice << "/- per month " << endl;
    gotoxy(64,16);
    cout << "3.Get your clothes dry cleaned.
Rs." << Dcprice << "/- per month " << endl;
    gotoxy(64,17);
    cout << "4.Room Heater and warm water in winter.
Rs." << Winterprice << "/- per month " << endl;
    int count3 = 0;
    char AC;
    gotoxy(64,18);
    cout << "Do you want AC? (Y/N): " ;
    cin >> AC;
    if (AC == 'Y' || AC == 'y')
    {
        count3 = count3 + ACprice;
    }
    char Bed;
    gotoxy(64,19);
    cout << "Do you want Double Bed? (Y/N): " ;
    cin >> Bed;
    if (Bed == 'Y' || Bed == 'y')
    {
        count3 = count3 + Bedprice;
    }
    char Heater;
    gotoxy(64,20);
    cout << "Do you want your clothes dry cleaned?
(Y/N): " ;
    cin >> Heater;
    if (Heater == 'Y' || Heater == 'y')
```

```
    {
        count3 = count3 + Winterprice;
    }
    char dryclean;
    gotoxy(64,21);
    cout << "Do you want your Winter services? (Y/N): "
;
    cin >> dryclean;
    if (dryclean == 'Y' || dryclean == 'y')
    {
        count3 = count3 + Dcprice;
    }
    premium[j] = count3;
    string str="Seen all the facilities!";
    return str;

}
string Feedback()
{
    cin.ignore();
    string feed;
    gotoxy(64,16);
    cout << "Write the feedback: ";
    getline(cin, feed);
    return feed;
}
string Complainbox()
{
    cin.ignore();
    string comp;
    gotoxy(64,16);
    cout << "Submit your Complaint: ";
    getline(cin, comp);
    return comp;
}
string changepass(string username[], string password[],
int j)
{
    string change;
    gotoxy(64,16);
    cout << "What do you want to change?username or
password type:(User/Pass): ";
```

```
o      cin >> change;
o      if (change == "User" || change == "Pass")
o      {
o          if (change == "User")
o          {
o              string passcode;
o              string result;
o              gotoxy(64,17);
o              cout << "Enter password to make change in
  username.";
o              cin >> passcode;
o              if (passcode == password[j])
o              {
o                  gotoxy(64,18);
o                  cout << "Enter the new username: ";
o                  cin >> result;
o                  username[j] = result;
o              }
o              else
o              {
o                  gotoxy(64,18);
o                  cout << "Wrong password.";
o              }
o          }
o          else if (change == "Pass")
o          {
o              string passcode, pass;
o              gotoxy(64,17);
o              cout << "Enter the old password: ";
o              cin >> passcode;
o              if (passcode == password[j])
o              {
o                  gotoxy(64,18);
o                  cout << "Enter the new Password: ";
o                  cin >> pass;
o                  password[j] = pass;
o              }
o              else
o              {
o                  gotoxy(64,18);
o                  cout << "Wrong password.";
o              }
```

```
        }
    }
    else
    {
        gotoxy(64,17);
        cout << "Entered input is incorrect." ;
    }


    string account = "Changes have been made in the account";

    return account;
}

string viewstudents(string name[], string fathername[], string role[], int k)
{
    gotoxy(64,16);
    cout << "The list of Registered students is:" << endl;
    gotoxy(64,17);
    cout << "Name\t\t\tFather name" << endl;
    int count = 1;
    cout << k;
    int x=18;
    for (int j = 0; j < k; j++)
    {
        gotoxy(64,x);
        cout << count << "." << name[j] << "\t\t\t" << fathername[j];
        count++;
        x++;
    }
    string result = "These are the registered Students.";
    return result;
}
string messupdate(string mess[])
{
    gotoxy(64,14);
    for (int i = 0; i < 8; i++)
```

```
    {
        if(i!=7){
            if (i==5)
            {
                gotoxy(64,15);
                cout << i + 1 << "." << mess[i] <<",";
            }
            else{
                cout << i + 1 << "." << mess[i] <<",";
            }

        }
        else{

           cout << i + 1 << "." << mess[i] ;
        }
    }

    string ans;
    string str;
    gotoxy(64,16);
    cout << "Do you want to make change in the
menu(Y/N)? ";
    cin >> ans;
    if (ans == "Y" || ans == "y")
    {

        int nextoption;
        gotoxy(64,17);
        cout << "Which Dish do you want to change(dish
number)?";
        cin >> nextoption;
        gotoxy(64,18);
        cout << "Enter the new dish...";
        cin >> mess[nextoption];

        str = "Your menu has been updated";
    }
    else
    {
        str = "no changes made!";
    }
```

```
o
o       return str;
o   }
o   void messsetting(string mess[])
o   {
o       mess[0] = "Chicken Karahi";
o       mess[1] = "Biryani";
o       mess[2] = "Roast";
o       mess[3] = "Palao Rice";
o       mess[4] = "Minced Meat";
o       mess[5] = "Chinese Rice";
o       mess[6] = "Special Dish";
o       mess[7] = "Kari Pakora";
o   }
o   string updateprice(int &Aprice, int &Bprice, int
    &Cprice, int &Dprice, int &Messfee, int &Messservice,
    int &ACprice, int &Bedprice, int &Dcprice, int
    &Winterprice)
o   {
o       gotoxy(64,14);
o       cout << "1.Category A :Rs" << Aprice ;
o       gotoxy(64,15);
o       cout << "2.Category B :Rs" << Bprice ;
o       gotoxy(64,16);
o       cout << "3.Category C :Rs" << Cprice ;
o       gotoxy(64,17);
o       cout << "4.Category D :Rs" << Dprice ;
o       gotoxy(64,18);
o       cout << "5.Mess fee :Rs" << Messfee ;
o       gotoxy(64,19);
o       cout << "6.Mess Service :Rs" << Messservice ;
o       gotoxy(64,20);
o       cout << "7.Air Conditioner :Rs" << ACprice ;
o       gotoxy(64,21);
o       cout << "8.Bed :Rs" << Bedprice ;
o       gotoxy(64,22);
o       cout << "9.Dry Cleaning: Rs" << Dcprice ;
o       gotoxy(64,23);
o       cout << "10.Winter facilities :Rs" << Winterprice ;
o       int elements[10] = {Aprice, Bprice, Cprice, Dprice,
    Messfee, Messservice, ACprice, Bedprice, Dcprice,
    Winterprice};
```

```
o       char ans;
o       gotoxy(91,14);
o       cout << "Do you want to update the price?(Y/N): ";
o       cin >> ans;
o
o       string str;
o       if (ans == 'Y' || ans == 'y')
o       {
o           int opt, newprice;
o           gotoxy(91,15);
o           cout << "Which charges do you want to update?:
    ";
o           cin >> opt;
o           gotoxy(91,16);
o           cout << "Enter the new price: ";
o           if (opt == 1)
o           {
o               cin >> Aprice;
o               str = "Prices are Updated";
o           }
o           else if (opt == 2)
o           {
o               cin >> Bprice;
o               str = "Prices are Updated";
o           }
o           else if (opt == 3)
o           {
o               cin >> Cprice;
o               str = "Prices are Updated";
o           }
o           else if (opt == 4)
o           {
o               cin >> Dprice;
o               str = "Prices are Updated";
o           }
o           else if (opt == 5)
o           {
o               cin >> Messfee;
o               str = "Prices are Updated";
o           }
o           else if (opt == 6)
o           {
```

```
            cin >> Messservice;
            str = "Prices are Updated";
        }
        else if (opt == 7)
        {
            cin >> ACprice;
            str = "Prices are Updated";
        }
        else if (opt == 8)
        {
            cin >> Bedprice;
            str = "Prices are Updated";
        }
        else if (opt == 9)
        {
            cin >> Dcprice;
            str = "Prices are Updated";
        }
        else if (opt == 10)
        {
            cin >> Winterprice;
            str = "Prices are Updated";
        }
        else
        {
            str = "No changes made!";
        }
    }

    else
    {
        str = "No changes made!";
    }
    // Bprice=8000;
    return str;
}
string duesadmin(int total[], string name[], string
paymentstatus[])
{
    int j = 0;
    gotoxy(64,14);
    cout << "Name\t\t\t          Dues" ;
```

```
    int x=15;
    for (int i = 0; i < 100; i++)
    {
        if (total[i] != 0)
        {
            gotoxy(64,x);
            cout << i + 1 << ". " << name[i] << " " <<
total[i] << paymentstatus[i] ;
            x++;
        }
    }
    char ans;
    string str;
    gotoxy(64,19);
    cout << "Do you want to Pay the charges(Y/N)?";
    cin >> ans;
    if (ans == 'Y' || ans == 'y')
    {
        string answer;
        gotoxy(64,20);
        cout << "Which user?(enter the name)?";
        cin >> answer;
        for (int k = 0; k < 100; k++)
        {
            if (answer == name[k])
            {
                paymentstatus[k] = "paid";
            }
        }

        str = "changes made!";
    }
    else
    {
        str = "No Changes Made!";
    }

    return str;
}
void duesstatus(string paymentstatus[])
{
    for (int i = 0; i < 100; i++)
```

```
    {
        paymentstatus[i] = "Unpaid";
    }
    cout << " ";
}
string useraccounts(string username[], string
password[], string role[])
{
    gotoxy(64,15);
    cout<<"Users account are the following: ";
    int count = 1;
    int x=16;
    for (int i = 0; i < 100; i++)
    {
        if (role[i] == "student")
        {
            gotoxy(64,x);
            cout << count << ". " << username[i] <<
"\t\t\t" << password[i] << endl;
            count++;
            x++;
        }
    }
    char ans;
    gotoxy(64,20);
    cout << "Do you want to delete account?(Y/N)";
    cin >> ans;
    string str;
    if (ans == 'y' || ans == 'Y')
    {
        string userdel;
        gotoxy(64,21);
        cout << "Enter the username of the account
which you want to delete";
        cin >> userdel;
        for (int i = 0; i < 100; i++)
        {
            if (userdel == username[i])
            {
                username[i] = "";
                password[i] = "";
                role[i] = "";
```

```
            }
        }
        str = "User account deleted!";
    }
    else
    {
        str = "No changes made!";
    }

    return str;
}
string changeadminpass(string username[], string
password[], string checkuser)
{
    int j = 0;
    for (int i = 0; i < 100; i++)
    {
        if (checkuser == username[i])
        {
            j = i;
        }
    }
    string change;
    gotoxy(64,16);
    cout << "What do you want to change?username or
password type:(User/Pass): ";
    cin >> change;
    if (change == "User" || change == "Pass")
    {
        if (change == "User")
        {
            string passcode;
            string result;
            gotoxy(64,17);
            cout << "Enter password to make change in
username.";
            cin >> passcode;
            if (passcode == password[j])
            {
                gotoxy(64,18);
                cout << "Enter the new username: ";
                cin >> result;
```

```
                username[j] = result;
            }
            else
            {
                gotoxy(64,18);
                cout << "Wrong password.";
            }
        }
        else if (change == "Pass")
        {
            string passcode, pass;
            gotoxy(64,17);
            cout << "Enter the old password";
            cin >> passcode;
            if (passcode == password[j])
            {
                gotoxy(64,18);
                cout << "Enter the new Password: ";
                cin >> pass;
                password[j] = pass;
            }
            else
            {
                gotoxy(64,18);
                cout << "Wrong password.";
            }
        }
    }
    else
    {
        gotoxy(64,17);
        cout << "Entered input is incorrect." << endl;
    }

    string account = "Changes have been made in the
account";

    return account;
}
string complaints(string complaint[])
{
    int count = 0;
```

```
    string str;
    int x=16;
    for (int i = 0; i < 100; i++)
    {
        if (complaint[i] != "")
        {
            gotoxy(64,x);
            cout << complaint[i] ;
            count++;
            x++;
        }
    }
    if (count > 0)
    {
        str = "These are all the complaints.";
    }
    else
    {
        str = "No complaints yet!";
    }
    return str;
}
string feeds(string feedbk[])
{
    int count = 0;
    string str;
    int x=16;
    for (int i = 0; i < 100; i++)
    {
        if (feedbk[i] != "")
        {
            gotoxy(64,x);
            cout << feedbk[i] ;
            count++;
            x++;
        }
    }
    if (count > 0)
    {
        str = "These are all the feedbacks.";
    }
    else
```

```
    {
        str = "No feedbacks yet!";
    }
    return str;
}
void title()
{
    gotoxy(14, 1);
    cout << R"(
        _____                       _ _             _    _
_       _
        |  __ \                     | (_)           | |  |
|         | |     | |
        | |__) |_ _ _ __ __ _  __| |_ ___  ___  | |__|
| ___  ___| |_ ___| |___
        |  ___/ _` | '__/ _` |/ _` | / __|/ _ \ |  __
|/ _ \/ __| __/ _ \ / __|
        | |  | (_| | | | (_| | (_| | \__ \  __/ | |  |
| (_) \__ \ ||  __/ \__ \
        |_|   \__,_|_|  \__,_|\__,_|_|___/\___| |_|
|_|\___/|___/\__\___|_|___/

)"
         << endl;
}
void printhead2()
{
    gotoxy(60, 13);
    cout <<
"=============================================================
====================== " << endl;
    gotoxy(60, 14);
    cout << "#
# " << endl;
    gotoxy(60, 15);
    cout << "#
# " << endl;
    gotoxy(60, 16);
    cout << "#
# " << endl;
    gotoxy(60, 17);
    cout << "#
# " << endl;
    gotoxy(60, 18);
```

```
    cout << "#
  # " << endl;
    gotoxy(60, 19);
    cout << "#
  # " << endl;
    gotoxy(60, 20);
    cout << "#
  # " << endl;
    gotoxy(60, 21);
    cout << "#
  # " << endl;
    gotoxy(60, 22);
    cout << "#
  # " << endl;
    gotoxy(60, 23);
    cout << "#
  # " << endl;
    gotoxy(60, 24);
    cout <<
  "=========================================================
  ======================== " << endl;
}

void erasefirstbox()
{
    gotoxy(6, 14);
    cout << "
  " << endl;
    gotoxy(6, 15);
    cout << "
  " << endl;
    gotoxy(6, 16);
    cout << "
  " << endl;
    gotoxy(6, 17);
    cout << "
  " << endl;
    gotoxy(6, 18);
    cout << "
  " << endl;
    gotoxy(6, 19);
    cout << "
  " << endl;
    gotoxy(6, 20);
```

```
    cout << "
" << endl;
    gotoxy(6, 21);
    cout << "
" << endl;
    gotoxy(6, 22);
    cout << "
" << endl;
    gotoxy(6, 23);
    cout << "
" << endl;
    gotoxy(6, 24);
    cout << "
" << endl;
    gotoxy(6, 25);
    cout << "
" << endl;
    gotoxy(6, 26);
    cout << "
" << endl;
}

bool checkcredentials(string username, string password)
{
    int size1 = username.length();
    int size2 = password.length();
    bool result = true;
    int count = 0;
    for (int i = 0; i < size1; i++)
    {
        if (username[i] == ' ')
        {
            count++;
        }
    }

    for (int j = 0; j < size2; j++)
    {
        if (password[j] == ' ')
        {
            count++;
        }
    }
```

```
o
o       if (password.length() != 4)
o       {
o           count++;
o       }
o       int count55 = 0;
o
o       if (password[0] == '0' || password[0] == '1' ||
  password[0] == '2' || password[0] == '3' || password[0]
  == '3' || password[0] == '4' || password[0] == '6' ||
  password[0] == '7' || password[0] == '8' || password[0]
  == '9')
o       {
o           count55++;
o       }
o       if (password[1] == '0' || password[1] == '1' ||
  password[1] == '2' || password[1] == '3' || password[1]
  == '3' || password[1] == '4' || password[1] == '6' ||
  password[1] == '7' || password[1] == '8' || password[1]
  == '9')
o       {
o           count55++;
o       }
o       if (password[2] == '0' || password[2] == '1' ||
  password[2] == '2' || password[2] == '3' || password[2]
  == '3' || password[2] == '4' || password[2] == '6' ||
  password[2] == '7' || password[2] == '8' || password[2]
  == '9')
o       {
o           count55++;
o       }
o       if (password[3] == '0' || password[3] == '1' ||
  password[3] == '2' || password[3] == '3' || password[3]
  == '3' || password[3] == '4' || password[3] == '6' ||
  password[3] == '7' || password[3] == '8' || password[3]
  == '9')
o       {
o           count55++;
o       }
o       if (count > 0 || count55 != 4)
o       {
o           result = false;
o       }
o
```

```
    return result;
}
void erasebox2()
{
    gotoxy(60, 13);
    cout << "
" << endl;
    gotoxy(60, 14);
    cout << "
" << endl;
    gotoxy(60, 15);
    cout << "
" << endl;
    gotoxy(60, 16);
    cout << "
" << endl;
    gotoxy(60, 17);
    cout << "
" << endl;
    gotoxy(60, 18);
    cout << "
" << endl;
    gotoxy(60, 19);
    cout << "
" << endl;
    gotoxy(60, 20);
    cout << "
" << endl;
    gotoxy(60, 21);
    cout << "
" << endl;
    gotoxy(60, 22);
    cout << "
" << endl;
    gotoxy(60, 23);
    cout << "
" << endl;
    gotoxy(60, 24);
    cout << "
" << endl;
}

void eraseinside2()
{
```

```
o
o      gotoxy(61, 13);
o      cout << "
   " << endl;
o      gotoxy(61, 14);
o      cout << "
   " << endl;
o      gotoxy(61, 15);
o      cout << "
   " << endl;
o      gotoxy(61, 16);
o      cout << "
   " << endl;
o      gotoxy(61, 17);
o      cout << "
   " << endl;
o      gotoxy(61, 18);
o      cout << "
   " << endl;
o      gotoxy(61, 19);
o      cout << "
   " << endl;
o      gotoxy(61, 21);
o      cout << "
   " << endl;
o      gotoxy(61, 21);
o      cout << "
   " << endl;
o      gotoxy(61, 22);
o      cout << "
   " << endl;
o  }
```

- **Weakness in the Business Application**
  - I have not made it much flexible that the admin can make his own change in facilities.
- **Future Directions**
  - I will make it capable of providing the admin the above facility.

Further Instructions

1. Discuss with your TAs in the PD about how to prepare the document.
2. Submit the soft form in google classroom along with .cpp file till 26 November 2023.