**Institutional Practical Training Project Report**

**On**

**“HOSTEL BOOKING SYSTEM”**

Submitted in the Partial fulfillment of the requirement for the Award of Degree of

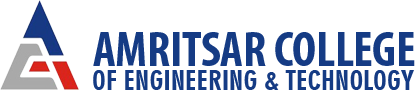
**Bachelor of Technology**

in

**COMPUTER SCIENCE & ENGINEERING**

Batch

(2019-23)



|  |  |
| --- | --- |
| **Submitted to**  MS. VINOD SHARMA  (HOD- CSE DEPARTMENT) | **Submitted by**  SALIL CHANDAN (1900250)  SHELLY (1900262)  ABHISHEK BAVORIA(1900105)  SHEWANI KATAL (1900263) |

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**Amritsar College of Engineering & Technology, Amritsar**

**(Autonomous college under UGC Act – 1956[2(f) and 12(B)])**

###### ACKNOWLEDGEMENTS

This is a humble effort to express my sincere gratitude towards those who have guided and helped me to complete this project

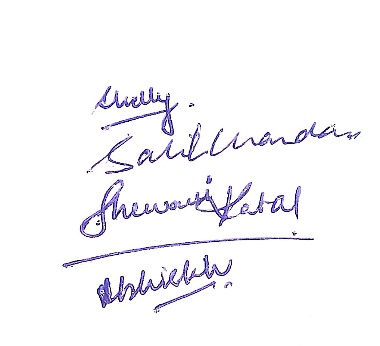
A project is major milestone during the study period of a student. As such this project was a challenge to me and was an opportunity to prove my caliber. I am highly grateful and obliged to each and everyone making me help out of problems being faced by me.

It would not have been possible to see through the undertaken project without the guidance of **SHIVANI SHARMA**. It was purely on the basis of their experience and knowledge that we able to clear all the theoretical and technical hurdles during the development phases of this project work.

Last but not the least I am very thankful to our Head of Department **Er. VINOD SHARMA** and all Members of Computer Science Deptt. who gave us an opportunity to face real time problems while fulfilling need of an organization by making projects for them.

**DECLARATION**

We Shelly(1900262), Salil Chandan(1900250), Shewani Katal(1900263), Abhishek Bavoria(1900105) hereby declare that the project work entitled **“HOSTEL BOOKING SYSTEM”** is an authentic record of our own work carried out as requirements of Institutional Training project for the award of degree of B.Tech (CSE), **Amritsar College of Engineering And Technology, Amritsar,** under the guidance of **MS**. **SHIVANI SHARMA**



(Signature of students)

**Name of Students:**

Shelly (1900262)

Salil Chandan (1900250)

Shewani Katal (1900263)

Abhishek Bavoria (1900105)

Certified that the above statement made by the students is correct to the best of our knowledge

and belief.

**Faculty Coordinator**

Er. Vinod Sharma (Head Of Department – CSE Department)

Er. Shivani Sharma(Associate Professor – CSE Department)

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## Introduction to C++

## The Origins of C++

C++ was developed by Bjarne Stroustrup of AT&T Bell Laboratories in the early 1980's, and is based on the C language. The "++" is a syntactic construct used in C (to increment a variable), and C++ is intended as an incremental improvement of C. Most of C is a subset of C++, so that most C programs can be compiled (i.e. converted into a series of low-level instructions that the computer can execute directly) using a C++ compiler

## The Programming Environment

We need several pieces of software:

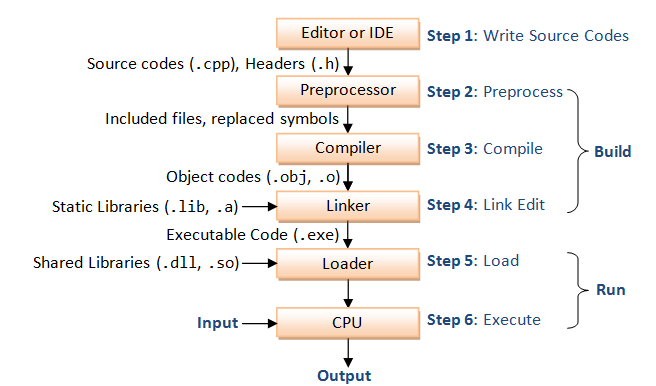
�� an editor with which to write and modify the C++ program components or source code, 

�� a compiler with which to convert the source code into machine instructions which can be executed by the computer directly, 

�� A linking program with which to link the compiled program components with each other and with a selection of routines from existing libraries of computer code, in order to form the complete machine-executable object program, 

�� A debugger to help diagnose problems, either in compiling programs in the first place, or if the object program runs but gives unintended results

**Program Execution Stages**



**The Features of C++**

C++ is the multi paradigm, compile, free form, general purpose, statistically typed programming language. This is known as middle level language as it comprises of low level and high level language features.

And there are some other things and advantages of this language over the C. The first commercial implementation of the C++ was released in 1985 and before that the name of language was changed to “C++”. And some new features were added to the language and the main features of the C++ are

* Classes
* Inheritance
* Data abstraction and encapsulation
* Polymorphism
* Dynamic Binding
* Message Passing

1)   **Classes:** By using classes we can create user defined data types. In other words the class is the collection of set of data and code. The class allows us to do some things which are polymorphism, inheritance, abstraction, encapsulation which are our next features. The objects are the instances of classes.

The syntax for class is 🡪 :

Class <class-name>

{

//Body of class;

};

2)      **Inheritance:** Inheritance allows one data type to acquire properties of other data types. Inheritance from a base class may be declared as public, protected, or private. If the access specifier is omitted, a “class” inherits privately, while a “struct” inherits publicly. This provides the idea of reusability that means we can add the new features to an existing class without modifying it.

3)      **Data Abstraction and Encapsulation:** Encapsulation means hiding of data from the data structures or in other words wrapping up of data in single entity is known as Encapsulation. In this the data is not accessible to outside world and only the functions are allowed to access it.  When we want to write the class in which we don’t have the knowledge about the arguments used to instantiate it then we can use templates in C++. Abstraction can be defined as the act of representing essential features without including background details.

4)      **Polymorphism:** it means that the one interface can be used for many implementation so that object can behave differently for each implementation. The different types of polymorphism are static (Compile time) and dynamic (Run time).

5)      **Dynamic Binding:** It means that the linking of a procedure call to code to be executed in response to the call. A function call associated with a polymorphic reference depends on the dynamic type that reference. And at run-time the code matching the object under current reference will be called.

6)      **Message Passing:** An object oriented program consists of the set of objects that communicate with each other. Objects communicate with one another by sending and receiving information much the same way as people pass messages to one another. The concept of message passing makes it easier to direct model or simulate their real world counterparts.

## OBJECTIVES OF THE PROJECT

In our proposed system we maintain the Design Software in an automated form in which the search can be based on various field such as student’s basic information of the students, hostel fee processing, etc,. In this system we are going to maintain the Record of different designs with different patterns.

The main objective of the proposed system is that any modification can be made by just the touch of a button instead of going through directory and keep on turning pages.

***Proposed system will contain:***

1. Information of all students who register their name for hostel.
2. It keeps track of the entire bill Details.
3. It also tells us whether you choose an A.C room, Cooler room or Fan.
4. It keeps track of room number of hostel.

**Project Code**

#include <iostream>

#include <conio.h>

#include <fstream>

#include <string.h>

#include <stdio.h>

#include <stdlib.h>

#include <process.h>

int bill\_no = 1;

using namespace std;

class hostel

{

private:

int room\_no;

char name[30];

char address[50];

char phone[10];

int uni\_roll;

char course[10];

char branch[10];

char semester[10];

char batch[10];

public:

void main\_menu();

void book\_room();

void search\_bar();

void uni\_search();

void search\_roomno();

void room\_alloc();

void edit\_menu();

int check(int);

void modify();

void vacate\_room();

void bill\_generate();

bool check\_digit(string x);

}hos;

void hostel::main\_menu()

{

int option;

while (option != 6)

{

system("cls");

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t\t \* MAIN MENU \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\n\n\t\t\t1.Book A Room";

cout << "\n\t\t\t2.Search Room Records";

cout << "\n\t\t\t3.Rooms Allotted lsit";

cout << "\n\t\t\t4.Edit Menu";

cout << "\n\t\t\t5.Generate My Bill";

cout << "\n\t\t\t6.Exit";

cout << "\n\n\t\t\tEnter Option you want to choose: ";

cin >> option;

switch (option)

{

case 1:

book\_room();

break;

case 2:

search\_bar();

break;

case 3:

room\_alloc();

break;

case 4:

edit\_menu();

break;

case 5:

bill\_generate();

break;

case 6:

exit(0);

default:

{

cout << "\n\n\t\t\tWrong choice.....!!!";

cout << "\n\t\t\tPress any key to continue....!!";

getch();

}

}

}

}

void hostel::book\_room()

{

system("cls");

int r, n, flag;

char ch;

ofstream fout("Record.dat", ios::app);

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n============================================= Room List is as follows: =================================================";

cout << "\n\n\t\t\t Total no. of Rooms present: \t 60 ";

cout << "\n\t\t -------------------------------------------------";

cout << "\n\t\t | Types of room | Room Number |";

cout << "\n\t\t -------------------------------------------------";

cout << "\n\t\t | AC Room |\t01 - 20 |";

cout << "\n\t\t | Water-Cooler Room |\t21 - 40 |";

cout << "\n\t\t | Fan Room |\t41 - 60 |";

cout << "\n \t\t -------------------------------------------------";

top:

cout << "\n\n\t\t Enter the room you want to book:- ";

cin >> r;

if( r ==0 || r >60)

{

cout << "\n\t\t\t Room number invalid....!!";

goto top;

}

else

{

flag = check(r);

if (flag)

{

cout << "\n Sorry..!!! Room is already booked";

goto top;

}

else

{

char space[10],p[10];

room\_no = r;

cout << "\n\t\t\tThe room is available.........!!" << endl;

cout << "\n\t\t---------------------------- Kindly enter your details: --------------------------------------" << endl;

gets(space);

cout << " Name: ";

gets(name);

cout << " Course: ";

gets(course);

cout << " Branch: ";

gets(branch);

cout << " Semester: ";

gets(semester);

cout << " Address: ";

gets(address);

cout<< " University Roll number: ";

cin>>uni\_roll;

cout << " Phone Number: ";

cin >> p;

if (check\_digit(p) == true)

{

strcpy(phone,p);

cout << endl;

}

else

{

cout << "\t\t Phone Number you entered is not valid";

cout << "\n Please enter your phone number again: ";

cin >> phone;

}

cout << "\n\n\t\t Do you want to save the data? (y/n)";

cin >> ch;

if (ch == 'y')

{

fout.write((char \*)this, sizeof(hostel));

cout << "\n Room booked successfully...!!!";

cout << "\n You can get your bill from the main menu.........";

fout.close();

}

else

{

cout << "Data not saved.. " << endl;

fout.close();

}

}

cout << "\n Press any key to continue.....!!";

getch();

fout.close();

}

}

void hostel ::search\_bar()

{

system("cls");

int opt;

do

{

system("cls");

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n==================================================== \* SEARCH MENU \* ===================================================";

cout << "\n\n 1.Search details by university roll no.";

cout << "\n 2.Search details by room no.";

cout << "\n 3.Go to Main menu .";

cout << "\n\n Enter your choice: ";

cin >> opt;

switch (opt)

{

case 1:

uni\_search();

break;

case 2:

search\_roomno();

break;

case 3:

main\_menu();

break;

default:

{

cout << "\n Wrong Choice.....!!";

cout << "\n Press any key to continue....!!!";

getch();

}

}

}while (opt != 3);

}

void hostel::search\_roomno()

{

int r,flag =0;

ifstream fin("Record.dat", ios::in);

system("cls");

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n==================================================== \* SEARCH MENU \* ===================================================";

cout << "\n\n Enter room no.to get the student`s details :- ";

cin >> r;

while (!fin.eof())

{

fin.read((char \*)this, sizeof(hostel));

if (room\_no == r)

{

cout << "\n Student Details";

cout << "\n ---------------";

cout << "\n\n Room no: " << room\_no;

cout << "\n University Roll Number : " << uni\_roll;

cout << "\n Name: " << name;

cout << "\n Address: " << address;

cout << "\n Semester: " <<semester ;

cout << "\n Branch: " << branch;

cout << "\n Course: " << course;

cout << "\n Phone number: " << phone;

flag = 1;

break;

}

}

if (flag == 0)

{

cout << "\n Sorry Room you entered found vacant....!!";

}

cout << "\n\n Press any key to continue....!!";

getch();

fin.close();

}

void hostel ::uni\_search()

{

int ur,u,flag =0,temp =0;

ifstream fin("Record.dat", ios::in);

system("cls");

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***\*\*\*\*\*\*\*";**

cout << "\n==================================================== \* SEARCH MENU \* ===================================================";

num:

cout << "\n\n Enter university roll no.to get the student`s details :- ";

cin >> ur;

while (!fin.eof())

{

fin.read((char \*)this, sizeof(hostel));

if (uni\_roll == ur)

{

cout << "\n Student Details";

cout << "\n ---------------";

cout << "\n\n Room no: " << room\_no;

cout << "\n Name: " << name;

cout << "\n Address: " << address;

cout << "\n University Roll Number : " << uni\_roll;

cout << "\n Semester: " <<semester ;

cout << "\n Branch: " << branch;

cout << "\n Course: " << course;

flag = 1;

break;

}

else

}

if (flag == 0)

{

cout << "\n Sorry Room not found....!!";

}

}

cout << "\n\n Press any key to continue....!!";

getch();

fin.close();

void hostel ::room\_alloc()

{

system("cls");

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n============================================== ROOM ALLOCATION MENU: ===================================================";

ifstream fin("Record.dat", ios::in);

cout << "\n\n\t List Of Rooms Allotted";

cout << "\n\t ----------------------";

cout << "\n\n Room No.\t\tName\t\tRollNO\t\t\tAddress\t\t\tPhone Not\t\tSemester\t\t\tCourse\t\t\tBranch\n";

while (fin.read((char \*)this, sizeof(hostel)))

{

cout << "\n\n " << room\_no << "\t\t\t" << name;

cout << "\t\t\t" << uni\_roll << "\t\t\t\t" << address;

cout << "\t\t\t" << phone << "\t\t\t\t" << semester;

cout << "\t\t\t" << course << "\t\t\t\t" << branch;

}

cout << "\n\n\n\t\t\tPress any key to continue.....!!";

getch();

fin.close();

}

int hostel ::check(int r)

{

int flag = 0;

ifstream fin("Record.dat", ios::in);

while (!fin.eof())

{

fin.read((char \*)this, sizeof(hostel));

if (room\_no == r)

{

flag = 1;

break;

}

}

fin.close();

return (flag);

}

void hostel ::bill\_generate()

{

system("cls");

int dd, mm, yy, r, flag = 0;

int acprice = 40000, cprice = 30000, fprice = 24000;

static int mess = 15000;

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \* ";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n================================================= GENERATE BILL: =======================================================";

cout << "Enter the date of the bill" << endl;

cin >> dd >> mm >> yy;

ifstream rd;

rd.open("record.dat", ios::in | ios::binary);

cout << "Enter the room number " << endl;

cin >> r;

if (!rd)

{

cout << "Error opening file.........!" << endl;

}

else

{

rd.read((char \*)&hos, sizeof(hostel));

while (rd)

{

rd.read((char \*)&hos, sizeof(hostel));

}

if (hos.room\_no == r)

{

system("cls");

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \* ";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n================================================== HOSTEL BILL: ========================================================";

if (hos.room\_no >= 1 && hos.room\_no <= 20)

{

cout << "\n\n\n========================================================================================================================";

cout << "\n\tDate:" << dd << "-" << mm << "-" << yy << "\t\t\t\t\t\t\t\t "

<< "Bill Number:" << bill\_no;

;

cout << "\n========================================================================================================================";

cout << "\n\n Student Details";

cout << "\n ---------------";

cout << "\n\n Room no: " << room\_no;

cout << "\n Name: " << name;

cout << "\n Address: " << address;

cout << "\n University Roll Number : " << uni\_roll;

cout << "\n Semester: " <<semester ;

cout << "\n Branch: " << branch;

cout << "\n Course: " << course;

cout << "\n\n\t\t You are booked for AC Room";

cout << "\n\n Charges:";

cout << "\n --------";

cout << "\n Hostel Room Charges: \t\t\t" << acprice;

cout << "\n Mess Charges: \t\t\t\t" << mess;

cout << "\n ------------- ";

cout << "\n Total Charges: \t\t\t" << (mess + acprice);

}

else if (hos.room\_no >= 21 && hos.room\_no <= 40)

{

cout << "\n\n\n========================================================================================================================";

cout << "\n\tDate:" << dd << "-" << mm << "-" << yy << "\t\t\t\t\t\t\t\t "

<< "Bill Number:" << bill\_no;

;

cout << "\n========================================================================================================================";

cout << "\n\n Student Details";

cout << "\n ---------------";

cout << "\n\n Room no: " << room\_no;

cout << "\n Name: " << name;

cout << "\n Address: " << address;

cout << "\n University Roll Number : " << uni\_roll;

cout << "\n Semester: " <<semester ;

cout << "\n Branch: " << branch;

cout << "\n Course: " << course;

cout << "\n\n\t\t You are booked for cooler Room";

cout << "\n\n Charges:";

cout << "\n --------";

cout << "\n Hostel Room Charges: \t\t\t" << cprice;

cout << "\n Mess Charges: \t\t\t\t" << mess;

cout << "\n ------------- ";

cout << "\n Total Charges: \t\t\t" << (mess + cprice);

}

else

{

cout << "\n\n\n========================================================================================================================";

cout << "\n\tDate:" << dd << "-" << mm << "-" << yy << "\t\t\t\t\t\t\t\t "

<< "Bill Number:" << bill\_no;

;

cout << "\n========================================================================================================================";

cout << "\n\n Student Details";

cout << "\n ---------------";

cout << "\n\n Room no: " << room\_no;

cout << "\n Name: " << name;

cout << "\n Address: " << address;

cout << "\n University Roll Number : " << uni\_roll;

cout << "\n Semester: " <<semester ;

cout << "\n Branch: " << branch;

cout << "\n Course: " << course;

cout << "\n\n\t\t You are booked for Fan Room";

cout << "\n\n Charges:";

cout << "\n --------";

cout << "\n Hostel Room Charges: \t\t\t" << fprice;

cout << "\n Mess Charges: \t\t\t\t" << mess;

cout << "\n ------------- ";

cout << "\n Total Charges: \t\t\t" << (mess + fprice);

}

bill\_no++;

cout << "\n\n\t\t\t\t\t THANK YOU...!";

cout << "\n\n\n========================================================================================================================";

flag = 1;

getch();

}

}

}

void hostel ::edit\_menu()

{

int choice;

do

{

system("cls");

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n=================================================== EDIT MENU: =========================================================";

cout << "\n\n 1.Modify My Record.";

cout << "\n 2.Vacate My Room.";

cout << "\n 3.Go to Main menu .";

cout << "\n\n Enter your choice: ";

cin >> choice;

switch (choice)

{

case 1:

modify();

break;

case 2:

vacate\_room();

break;

case 3:

main\_menu();

break;

default:

{

cout << "\n Wrong Choice.....!!";

cout << "\n Press any key to continue....!!!";

getch();

}

}

} while (choice != 3);

}

void hostel::modify()

{

system("cls");

int pos, flag = 0, r;

char space[10];

fstream file("Record.dat", ios::in | ios::out | ios::binary);

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n=============================================== MODIFY RECORD MENU: ===================================================";

cout << "\n\n Enter room no: ";

cin >> r;

while (!file.eof())

{

pos = file.tellg();

file.read((char \*)this, sizeof(hostel));

if (room\_no == r)

{

cout << "\n Enter New Details";

cout << "\n -----------------";

gets(space);

cout << " Name: ";

gets(name);

cout << " Course: ";

gets(course);

cout << " Branch: ";

gets(branch);

cout << " Semester: ";

gets(semester);

cout << " Address: ";

gets(address);

cout<< " University Roll number: ";

cin>>uni\_roll;

cout << " Phone Number: ";

cin >> phone;

file.seekp(pos);

file.write((char \*)this, sizeof(hostel));

cout << "\n\n\t\t Record is modified....!!";

cout << "\n\n Updated details are:";

cout << "\n\n Room no: " << room\_no;

cout << "\n Name: " << name;

cout << "\n Address: " << address;

cout << "\n University Roll Number : " << uni\_roll;

cout << "\n Semester: " <<semester ;

cout << "\n Branch: " << branch;

cout << "\n Course: " << course;

flag = 1;

break;

}

}

if (flag == 0)

{

cout << "\n Sorry Room found vacant...!!";

}

file.close();

}

void hostel::vacate\_room()

{

system("cls");

int flag = 0, r;

char ch;

ifstream fin("Record.dat", ios::in);

ofstream fout("temp.dat", ios::out);

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n============================================== VACATE MY ROOM MENU: ===================================================";

cout << "\n\n Enter room no: ";

cin >> r;

while (fin.read((char \*)this, sizeof(hostel)))

{

if (room\_no == r)

{

cout << "\n\n Room no: " << room\_no;

cout << "\n Name: " << name;

cout << "\n Address: " << address;

cout << "\n University Roll Number : " << uni\_roll;

cout << "\n Semester: " <<semester ;

cout << "\n Branch: " << branch;

cout << "\n Course: " << course;

cout << "\n\n Do you want to delete this record(y/n): ";

cin >> ch;

if (ch == 'y')

{

cout << "\t\t\t\t\tYour record is deleted. ";

flag = 1;

}

else

{

cout<< "\n\n\t\t\tRecord not deleted....";

cout << "\n\t\t\t Press any key to continue....!!!";

getch();

}

}

else

{

fout.write((char \*)this, sizeof(hostel));

}

}

fin.close();

fout.close();

if (flag == 0)

{

cout << "\t\tSorry room not found vacant......!!!!! " << endl;

}

else

{

remove("Record.dat");

rename("temp.dat", "Record.dat");

}

}

bool hostel::check\_digit(string x)

{

if (x.length() == 10)

{

return true;

}

else

{

return false;

}

}

int main()

{

hostel hos;

system("cls");

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\t\t \* WELCOME TO AGC ONLINE HOSTEL BOOKING PORTAL \*";

cout << "\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*";

cout << "\n\n\n\n\t\tProject Developed By:";

cout << "\n\n\t\t\t\t Shelly \t\t\t\t\t (1900262)";

cout << "\n\t\t\t\t Abhishek Bavoria \t\t\t\t (1900105)";

cout << "\n\t\t\t\t Salil Chandan \t\t\t\t\t (1900250)";

cout << "\n\t\t\t\t Shewani Katal \t\t\t\t\t (1900263)";

cout << "\n\n\n\n\n\n\n\t\t\t\t\tPress any key to continue....!!";

getch();

hos.main\_menu();

return 0;

}

**Output Screen Snapshots:**

* **Main menu:**
* **Room Booking Menu**

**References**

1. **Books**
   * C++ Programming by Anshuman Sharma
   * Programming in C++ by Robert Lafore
   * C++ Concepts by R S Salaria
2. **Web URLs**

* <https://ameyasworld.wordpress.com/2010/11/27/features-of-c/>
* [www.ntu.edu.sg/home/ehchua/programming/cpp/cp1\_**Basics**.html](http://www.ntu.edu.sg/home/ehchua/programming/cpp/cp1_Basics.html)
* [www.tutorialspoint.com/cplusplus/cpp\_**files**\_streams.htm](http://www.tutorialspoint.com/cplusplus/cpp_files_streams.htm)
* [www.codinpsycho.blogspot.com/2011/11/**file**-**handling**-in-c++**basics**.html](http://www.codinpsycho.blogspot.com/2011/11/file-handling-in-c++basics.html)
* [www.csegeek.com/csegeek/view/tutorials/cpp\_lang/cpp\_**file**.php](http://www.csegeek.com/csegeek/view/tutorials/cpp_lang/cpp_file.php)