مـــدرستنـا الثـانـويـــة، الـورقـاء
OUR OWN HIGH SCHOOL, AL WARQA'A

COMPUTER SCIENCE PROJECT

HOTEL MANAGEMENT AND RESERVATION

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Grade 12-A

مـــدرستنـا الثـانـويـــة، الـورقـاء
OUR OWN HIGH SCHOOL, AL WARQA'A

EDUCATION

Certificate

ROLL NO: _____ DATE: _____

It is hereby certified that Master _____ of Grade 12, section 'A' has carried out the project work and its documentation, prescribed by the Central Board of Secondary Education, New Delhi during the academic year 2018-2019.

_____

Teacher – In – Charge

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External Examiner Internal Examiner

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INDEX

INTRODUCTION TO C++

C++ is a general-purpose programming language. It has imperative, object-oriented and generic programming features, while also providing facilities for low-level memory manipulation.

It was designed with a bias toward system programming and embedded, resource-constrained and large systems, with performance, efficiency and flexibility of use as its design highlights. C++ has also been found useful in many other contexts, with key strengths being software infrastructure and resource-constrained applications, including desktop applications, servers (e.g. e-commerce, Web search or SQL servers), and performance-critical applications (e.g. telephone switches or space probes). C++ is a compiled language, with implementations of it available on many platforms. Many vendors provide C++ compilers, including the Free Software Foundation, Microsoft, Intel, and IBM.

C++ is standardized by the International Organization for Standardization (ISO), with the latest standard version ratified and published by ISO in December 2017 as ISO/IEC 14882:2017 (informally known as C++17). Before the initial standardization in 1998, C++ was developed by Bjarne Stroustrup at Bell Labs since 1979, as an extension of the C language as he wanted an efficient and flexible language similar to C, which also provided high-level features for program organization. C++20 is the next planned standard thereafter. Many other programming languages have been influenced by C++ including C#, D, Java, and newer versions of C.

Features of C++:

C++ is an object oriented programming language and is a very simple and easy language, it is an enhanced form of C programming language. this language has a bunch of features and here we discuss some important features of C++.

- Simple
- Portability
- Powerful
- Platform dependent
- Object oriented oriented
- Case sensitive
- Compiler based
- Syntax based language

- Use of Pointers

Advantages of C++ Programming Language:

- Abstract data type defining is very good.
- C++ language is efficient having less compile time.
- It is much more suitable for large projects.
- Encapsulation, polymorphism, abstraction are the important properties of C++ language.
- Objects, methods, instance, message passing and inheritance are some important properties inherited by this language
- C++ Programming is easy to maintain and modify existing code as new objects with small difference to existing ones.
- C++ Programming is implemented on real life scenario.
- The properties of inheritance make simple the program by complexity. Do not required to write again.
- Implementation details are hidden from other modules which represent a clearly defined interface.

Language:

The C++ language has two main components: a direct mapping of hardware features provided primarily by the C subset, and zero-overhead abstractions based on those mappings. Stroustrup describes C++ as "a light-weight abstraction programming language [designed] for building and using efficient and elegant abstractions"; and "offering both hardware access and abstraction is the basis of C++. Doing it efficiently is what distinguishes it from other languages."

C++ introduces object-oriented programming (OOP) features to C. It offers classes, which provide the four features commonly present in OOP (and some non-OOP) languages: *abstraction, encapsulation, inheritance, and polymorphism.* One distinguishing feature of C++ classes compared to classes in other programming languages is support for deterministic

destructors, which in turn provide support for the Resource Acquisition is Initialization (RAII) concept.

Encapsulation:

Encapsulation is the hiding of information to ensure that data structures and operators are used as intended and to make the usage model more obvious to the developer. C++ provides the ability to define classes and functions as its primary encapsulation mechanisms. Within a class, members can be declared as either public, protected, or private to explicitly enforce encapsulation. A public member of the class is accessible to any function. A private member is accessible only to functions that are members of that class and to functions and classes explicitly granted access permission by the class. A protected member is accessible to members of classes that inherit from the class in addition to the class itself and any friends.

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. This access specifier determines whether unrelated and derived classes can access the inherited public and protected members of the base class. Only public inheritance corresponds to what is usually meant by "inheritance". The other two forms are much less frequently used. If the access specifier is omitted, a "class" inherits privately, while a "struct" inherits publicly. Base classes may be declared as virtual; this is called virtual inheritance. Virtual inheritance ensures that only one instance of a base class exists in the inheritance graph, avoiding some of the ambiguity problems of multiple inheritance.

Polymorphism:

Polymorphism enables one common interface for many implementations, and for objects to act differently under different circumstances. C++ supports several kinds of static (resolved at compile-time) and dynamic (resolved at run-time) polymorphisms, supported by the language features described above. Compile-time polymorphism does not allow for certain run-time decisions, while runtime polymorphism typically incurs a performance penalty.

Which software companies use C++?

The most notable big software companies that use C++ as their main technology include:

- Microsoft Oracle (including MySQL)
- Mozilla
- Adobe
- Opera
- PayPal
- LinkedIn
- Amazon
- Facebook
- Evernote

OBJECTIVE OF THE PROGRAM

A hotel reservation system is a computerized system that stores and distributes information of different hotels.

A hotel reservation system assists users by displaying a list of hotels and allowing the user to view the details of the hotel of his choice. The user can book in the desired hotel and modify his bookings at a later date. He can also enter feedback about his stay in a hotel.

OVERVIEW OF THE PROGRAM

The system is divided into the following modules:

1. ADMIN MODULE

2. CUSTOMER MODULE

1. ADMIN MODULE:

The admin module is responsible for uploading hotel details each time a new detail is added to the list. This is done by uploading through a file or screen. Details to be entered are: ID number of the staff, name of the staff, age, and position. Once these details are added, the admin can modify the hotel details or delete the details.

The admin module also consists of username/password. This username/password is used by the hotel management for the hotel.

2. CUSTOMER MODULE:

In this module, the user is the guest who will do online booking. The guest can view the number of rooms available.

Parameters to be entered:

1. Name- the user enters his/her name.

2. From Date- the user must enter the start date of his/her stay.

3. To Date- the user must enter the end date of his/her stay.

4. Number of rooms- the user must enter the number of rooms, based on which appropriate rooms (e.g. standard, deluxe, suite) are displayed.

Based on these parameters, the list of the hotels is displayed.

Once a booking is done, the system generates a unique booking reference number. Using this reference number, the guest can view/ modify/ cancel his booking at a later date. In case the guest wishes to modify his booking, the

parameters that he can change are – both the dates of booking(from/to), number of guests and the room type.

The guest can cancel his booking if he desires to do so. This is done by quoting the booking reference number generated earlier.

TECHNICAL DOCUMENTATION

ARCHITECTURE:

This program, was developed using Turbo C++ 3.2

SYSTEM REQUIREMENTS:

1. System must have at least windows XP installed.
2. System must have Turbo C++ installed.

FUNCTIONS IN THE PROGRAM

Class Staff

Data Members-

1. Id of the staff(Id)(int)
2. Name of the staff(Name)(char)
3. Role of the staff(char)
4. Age of the staff(int)

Member Functions-

1. Enter() (Enter the details of the new staff)
2. Display() (Displays the details of all the staffs in the hotel)

Class Admin

Data Members-

1. National Id(int)
2. No of rooms(int)
3. No of days(int)
4. Name(char)
5. Room type(char)
6. Check-in date(char)
7. Check-out date(char)
8. Rate(float)
9. Amount(float)
10. Total(float)

Member Functions-

1. CalcAmt() (Calculates amount according to room type)
2. Enter() (Enters the detail of the customer who's booking)
3. Display()(Displays the detail of a customer)

Other Functions for Staff

1. create_staff() →Function to write details entered to file.

2. append_staff()→ Adds more staff after the first one.
3. display_staff()→Displays details of staff by reading from file.
4. search_staff()→Searches a particular staff and display their details based on the id.
5. modify_staff()→Modifies a staff's detail based on his id.
6. delete_staff()- Dismisses a staff from the hotel.

Other Functions for Customer

1. create_customer()→To book rooms for the customer
2. datab()→Shows the complete database of all customers who has stayed at the hotel.
3. append_customer()→Booking is done for the customers who comes after the first one,
4. modify_customer()→Modifies detail of a customer staying if any detail given earlier was wrong.
5. display_bill()→Displays the bill when the customer is checking out from the hotel.

USER MANUAL

To run the program, the user must press ctrl+F9. The Welcome screen is displayed along with the main menu. There are three options. The user must press ‘1’ if he wishes to access the Administrator Module; option ‘2’ if he wishes to access the Customer Module. If the user wants to exit the system, he/she must enter ‘3’.

ADMINISTRATOR MODULE:

This module is used by the administrator to enter details of a new hotel like different room types and rates, number of rooms, etc. The administrator can also edit the details including username/password of an existing hotel or delete a hotel.

This menu is accessed by selecting option ‘1’ from the main menu. A welcome message is displayed and the administrator is prompted to enter his username/password. After successful login, the admin menu is displayed, which has the following options:

- If the user wishes to create a new staff list, then he must select option ‘1’ in the administrator menu. Then he will be asked how many staffs must be added to the list. He must then enter the ID, name, age and position of the staff being added to the list. The program will show that the staff has been successfully appointed. More staff members can then be added using option ‘2’.
- If the user wishes to add more staff members, he can do so using option ‘2’. He must enter the ID, name, age and position of the staff to be added to the list.
- If the user wishes to search the details of any staff member, he must select option ‘3’. He must enter the ID of the staff from the list displayed. All the details entered by him using options ‘1’ and ‘2’ are displayed.
- If the user wishes to display all the details that have been entered using options ‘1’ and ‘2’, he must select option ‘4’. All the staff members entered earlier will be displayed.
- If the user wishes to modify any details of a staff member, he can do so by selecting option ‘5’. He must enter the id of the staff member whose

details he wishes to edit. All details entered by him using option ‘1’ are editable. However, he cannot change the ID.

- If the user wishes to dismiss a staff member, he must select option ‘6’, He must then enter the ID of the staff member which he wants to delete.
- To return to the main menu, the user must select option ‘7’.

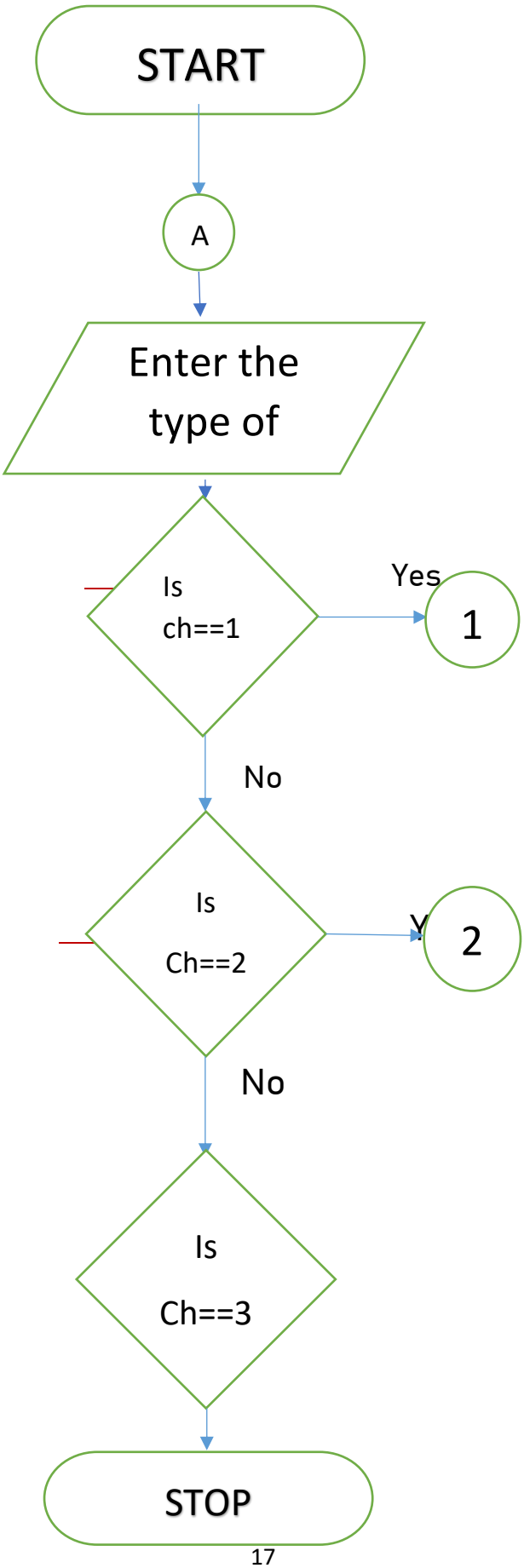
CUSTOMER MODULE:

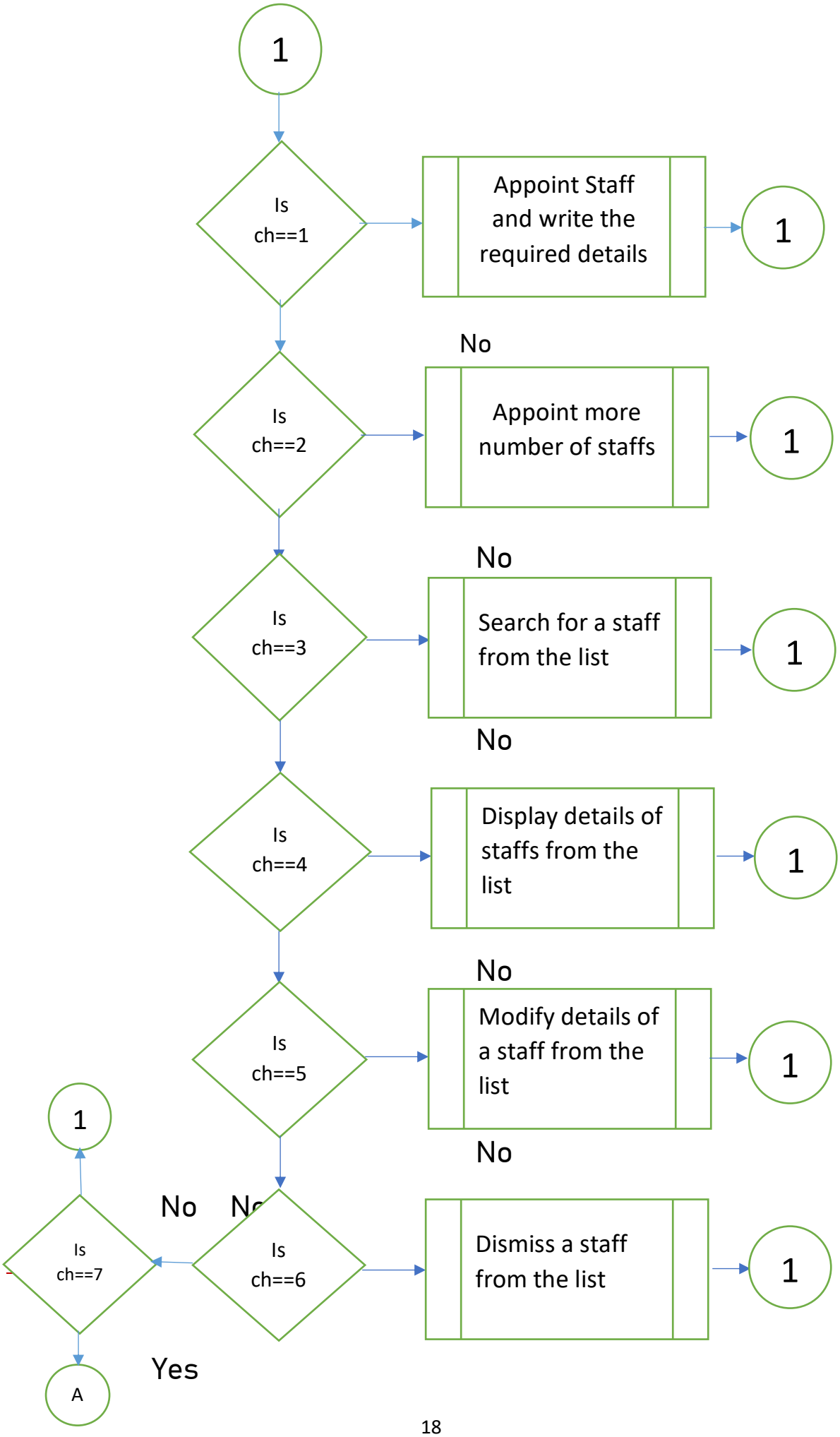
This module is used by a customer who wishes to book online. Hence here, there is no username/password to log into the system. This menu is accessed by selecting option ‘2’ of the main menu. The customer menu has the following options:

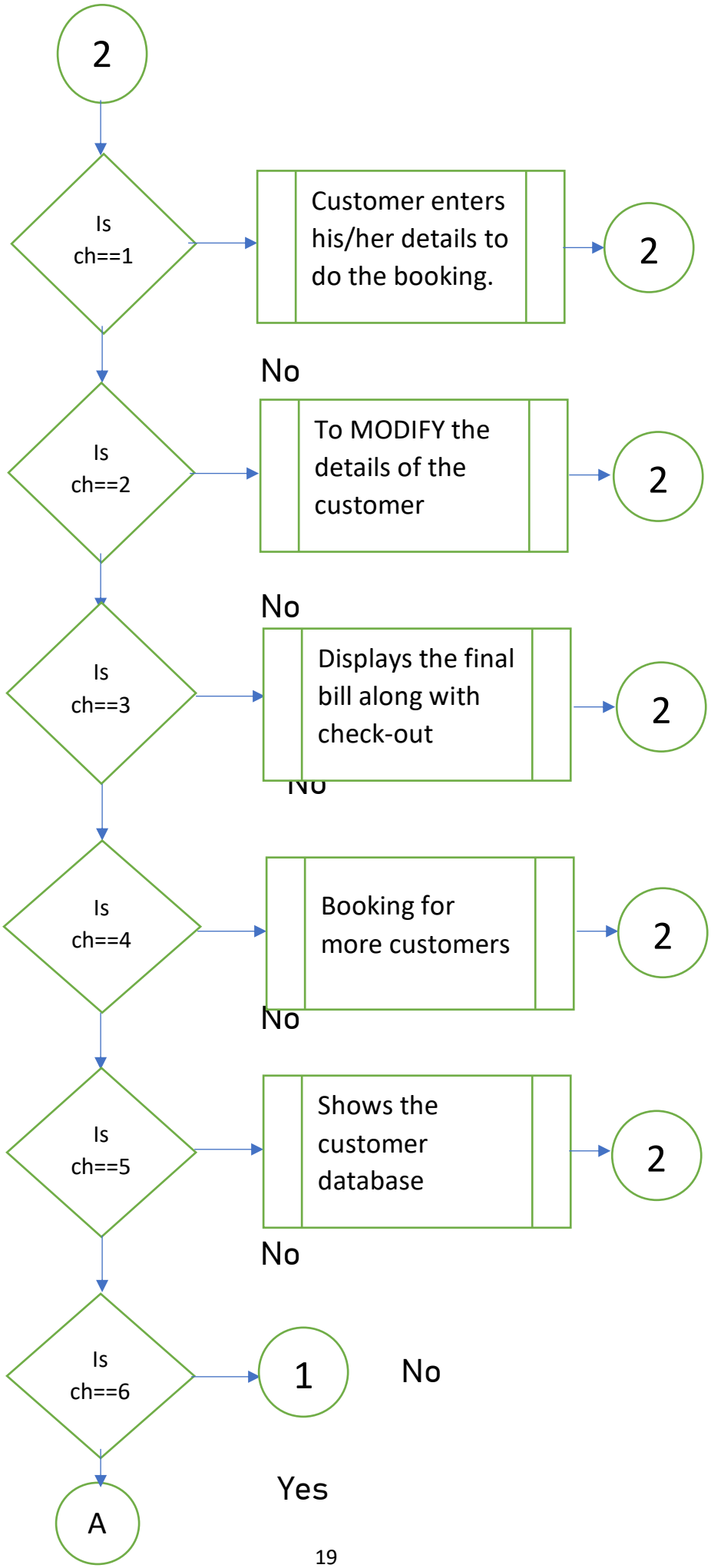
- If the customer wishes to make a new booking, he/she must select option ‘1’. The user is asked to enter the National ID, No. of rooms and the type of room they want.
- If the customer wishes to modify his booking, he must select option ‘2’ from the customer menu. He must enter his National ID, which was generated when he did the booking using option ‘1’ above. He can now change the number of rooms and the type of room they want.
- If the customer wishes to display his booking details, he must select option ‘3’. He must enter his National ID, based on which all the details entered by him while booking will be displayed.
- If the user wishes to add more customers, he can do so using option ‘4’.
- To exit the customer menu and return to the main menu, the user must select option ‘5’.

To exit the main menu, the user must select option ‘3’.

FLOW CHART




1
Is ch==1
Appoint Staff and write the required details
1
No
Is ch==2
Appoint more number of staffs
1
No
Is ch==3
Search for a staff from the list
1
No
Is ch==4
Display details of staffs from the list
1
No
Is ch==5
Modify details of a staff from the list
1
No
Is ch==6
Dismiss a staff from the list
1
No
Is ch==7
1
Yes
A


2
Is ch==1
Customer enters his/her details to do the booking.
2
No
Is ch==2
To MODIFY the details of the customer
2
No
Is ch==3
Displays the final bill along with check-out
2
No
Is ch==4
Booking for more customers
2
No
Is ch==5
Shows the customer database
2
No
Is ch==6
1
No
Yes
A

SOURCE CODE

```
#include<iostream.h>
#include<conio.h>
#include<fstream.h>
#include<stdio.h>
#include<string.h>
#include<process.h>
#include<time.h>
float tnoofrooms=100;
class staff
{
        public:
        float id;
        char name[30],role[20];
        int age;
                void enter();
                void display()
                {

        cout<<id<<"\t\t"<<name<<"\t\t"<<age<<"\t\t"<<role<<endl;
                }

} s;
void staff::enter()
                {

                        cout<<endl;
                        cout<<"ID: ";
                        cin>>id;
                        cout<<"Name: ";
                        cin>>name;
                        cout<<"Age: ";
                        cin>>age;
                        cout<<"Position: ";
                        cin>>role;
                }
class customer
{
        int id,noofrooms,noofdays;
```

```
        char name[30],roomtype[10],chkin[20],chkout[20];
        float amount,rate,total;

        public:

                int returnid()
                {
                        return id;
                }
                float returnrate()
                {
                return rate;
                }
                char* returnname()
                {
                return name;
                }
                int returnnoofrooms()
                {
                return noofrooms;
                }
                int returnnoofdays()
                {
                return noofdays;
                }
void Calc_amt()
  {
if(strcmpi(roomtype,"standard")==0)
   rate=1000;
else if(strcmpi(roomtype,"deluxe")==0)
rate=2000;
else if(strcmpi(roomtype,"suite")==0)
rate=4000;
amount=noofrooms*rate;
  }
        float amt()
        {
        return amount;
        }
        char* returnchkout()
```

```
        {
        return chkout;
        }
void enter()
{int id1;
cout<<"\nNAME:"<<endl;
cin>>name;
cout<<"\nNATIONAL ID: "<<endl;
cin>>id;
cout<<"Enter Check-In Date:"<<endl;
cin>>chkin;
cout<<"Enter Check-Out Date:"<<endl;
cin>>chkout;
cout<<"Enter Number of Days of Stay :"<<endl;
cin>>noofdays;
cout<<"No of rooms: "<<endl;
cin>>noofrooms;
if(noofrooms<=tnoofrooms)
{
tnoofrooms=tnoofrooms-noofrooms;
cout<<"\nEnter type of room :"<<endl;
cin>>roomtype;
if(strcmpi(roomtype,"deluxe")==0||strcmpi(roomtype,"standard")==0||strcm
pi(roomtype,"suite")==0)
        cout<<"Booking successful"<<endl;
else
        {
        cout<<"Booking Unsuccessful"<<endl;
        cout<<"Enter type of room again :"<<endl;
        cin>>roomtype;
        if(strcmpi(roomtype,"deluxe")==0||strcmpi(roomtype,"standard")==0||
strcmpi(roomtype,"suite")==0)
        cout<<"Booking successful"<<endl;
        else
if(strcmpi(roomtype,"deluxe")!=0||strcmpi(roomtype,"standard")!=0||strcmpi
(roomtype,"suite")!=0)
        cout<<"Go back and try again from the beginning"<<endl;
        cout<<"Enter your NATIONAL ID again :"<<endl;
        cin>>id1;
        fstream f,temp;
```

```
        f.open("list.dat",ios::in|ios::binary);
        temp.open("temp.dat",ios::out|ios::binary);
        while(strcmpi(roomtype,"deluxe")!=0||strcmpi(roomtype,"standard")!=
0||strcmpi(roomtype,"suite")!=0)
                {
                if(cus.returnid()!=id1)
                  temp.write((char*)&cus,sizeof(cus));
                  break;
                }
                remove("list.dat");
                rename("temp.dat","list.dat");
        }
Calc_amt();
}
else
{
cout<<"No of rooms not available"<<endl;
cout<<"Booking Unsuccessful go back and try again"<<endl;
}
}

                void display()
                {
                        cout<<"NATIONAL ID :"<<id<<endl;
                        cout<<"NAME :"<<name<<endl;
                        cout<<"RATE :"<<rate<<endl;
                        cout<<"NO.OF ROOMS :"<<noofrooms<<endl;
                        cout<<"NO.OF DAYS :"<<noofdays<<endl;
                        cout<<"CHECK-IN DATE :"<<chkin<<endl;
                        cout<<"CHECK-OUT DATE :"<<chkout<<endl;
                        cout<<"ROOM TYPE :"<<roomtype<<endl;
                }

}cus;
void create_staff()
{
        clrscr();

        int n;
        cout<<"Enter the number of staffs to add to list = ";
```

```
	cin>>n;
	ofstream f;
	f.open("masterfile.dat",ios::out|ios::binary);
	cout<<"\nEnter the details"<<":"<<endl;
	for(int i=1;i<=n;i++)
	{

		s.enter();
		f.write((char*)&s,sizeof(s));
	}
	cout<<"\nStaff(s) successfully appointed!!\n";
	f.close();
	getch();
}
void append_staff()
{
	clrscr();

	int n;
	cout<<"Enter the number of staffs to appoint = ";
	cin>>n;
	ofstream f;
	f.open("masterfile.dat",ios::app|ios::binary);
	cout<<"\nEnter the details"<<":"<<endl;
	for(int i=1;i<=n;i++)
	{

		s.enter();
		f.write((char*)&s,sizeof(s));
	}
	cout<<"\nStaff(s) successfully appointed!!\n";
	f.close();
	getch();
}
void display_staff()
{
	clrscr();

	ifstream f;
	cout<<"\t\t\t\tStaff List\n";
```

```
	f.open("masterfile.dat",ios::binary);
	cout<<endl;
	cout<<"_____
_____\n";
	cout<<"ID\t\tName\t\tAge\t\tPosition"<<endl;
	cout<<"_____
_____\n";
	while(f.read((char*)&s,sizeof(s)))
		s.display();
	f.close();
	getch();
}
void search_staff()
{
	clrscr();
	int id;
	cout<<"Enter the ID of the staff to search = ";
	cin>>id;

	ifstream f("masterfile.dat",ios::binary);
	while(f.read((char*)&s,sizeof(s)))
		if(s.id==id)
		{
			cout<<"\nStaff found!!\n\n";
			cout<<"Details:\n";
			cout<<"ID = "<<s.id<<endl;
			cout<<"Name = "<<s.name<<endl;
			cout<<"Age = "<<s.age<<endl;
			cout<<"Position = "<<s.role<<endl;
		}
		else
		cout<<"\nStaff not found!!\n";
	f.close();
	getch();
}
void modify_staff()
{
	clrscr();
	fstream f1,f2;
	f1.open("masterfile.dat",ios::in|ios::binary);
```

```
	f2.open("temp.dat",ios::out|ios::binary);

	int id;
	cout<<"\nEnter the ID of the staff to modify = ";
	cin>>id;
	while(f1.read((char*)&s,sizeof(s)))
	{
		if(s.id==id)
		{
			cout<<"\nEnter the new details:\n";
			s.enter();
			cout<<"\nDetails modified!!\n";
		}
		f2.write((char*)&s,sizeof(s));
	}
	if(s.id!=id)
		cout<<"\nStaff not found";

	f1.close();f2.close();
	remove("masterfile.dat");
	rename("temp.dat","masterfile.dat");
	getch();
}
void delete_staff()
{
	clrscr();
	fstream f1,f2;
	f1.open("masterfile.dat",ios::in|ios::binary);
	f2.open("temp.dat",ios::out|ios::binary);
	int id;
	cout<<"\nEnter the ID of the staff to dismiss = ";
	cin>>id;
	while(f1.read((char*)&s,sizeof(s)))
	{
		if(s.id!=id)
		{
		f2.write((char*)&(s),sizeof(s));
		cout<<"\nStaff Dismissed!";
		}
	}
```

```
        f1.close();f2.close();
        remove("masterfile.dat");
        rename("temp.dat","masterfile.dat");
        getch();
}


void create_customer()
{
        clrscr();
        fstream f,db;
        db.open("datab.dat",ios::out|ios::binary);
        f.open("list.dat",ios::out|ios::binary);
        cout<<" Number of rooms available="<<tnoofrooms<<endl;
        {
        cout<<"\n\n\t\t\t\tCustomer Booking\n";
        cout<<"\nEnter the details of the customer(s)"<<"\n";
        cus.enter();
        db.write((char*)&cus,sizeof(cus));
        f.write((char*)&cus,sizeof(cus));
        }
        f.close();
        db.close();
        getch();
}
void datab()
{
int n;
cout<<"How many previous customers detail do you want to view-"<<endl;
cin>>n;
fstream db;
db.open("datab.dat",ios::in|ios::binary);
          clrscr();
          db.seekg(0,ios::beg);
          for(int i=0;i<n;i++)
                cus.display();
                getch();
db.close();
```

```
}
void append_customer()
{
clrscr();
        fstream f,db;
        db.open("datab.dat",ios::app|ios::binary);
        f.open("list.dat",ios::app|ios::binary);
        cout<<"\n\n\t\t\t\tCustomer Booking\n";
        cout<<" Number of rooms available="<<tnoofrooms<<endl;
        cout<<"\nEnter the details of the customer(s)"<<"\n";
        cus.enter();
        f.write((char*)&cus,sizeof(cus));
        db.write((char*)&cus,sizeof(cus));
        f.close();
        getch();
}
void modify_customer()
{
        clrscr();
        fstream f1,f2;
        f1.open("list.dat",ios::in|ios::binary);
        f2.open("temp.dat",ios::out|ios::binary);

        int id;
        cout<<"\nEnter the ID of the customer to modify = ";
        cin>>id;
        while(f1.read((char*)&cus,sizeof(cus)))
        {
                if(cus.returnid()==id)
                {
                        cout<<"Enter the new details:\n";
                        cus.enter();
                        cout<<"\nDetails modified!\n";
                }
                else
                cout<<"\nCustomer not found!!\n";
                f2.write((char*)&cus,sizeof(cus));
        }
```

```
        f1.close();f2.close();
        remove("list.dat");
        rename("temp.dat","list.dat");
        getch();
}

void display_bill()
{      float total,amount1,amount2,vat;
        int noofdays;
        time_t now=time(0);
        char* dt = ctime(&now);
        fstream f,temp;
                f.open("list.dat",ios::in|ios::binary);
                temp.open("temp.dat",ios :: out|ios::binary);
        {      int id;
                clrscr();
                cout<<"Enter the ID of the person checking out-"<<endl;
                cin>>id;

        cout<<"==================================================
======================\n";
                cout<<"\t\t\t\tBILL\n";

        cout<<"==================================================
======================\n";
                cout<<endl<<"DATE: "<<dt<<'\n'<<endl;
                while(f.read((char*)&cus,sizeof(cus)))
                {if(cus.returnid()==id)
                   {   tnoofrooms=tnoofrooms+cus.returnnoofrooms();
                        cus.display();

        cout<<"_____________________________________________________
_____________________________\n";
                cout<<"VAT = 5%\n";
                noofdays=cus.returnnoofdays();
                amount1=cus.amt();
                amount2=amount1*noofdays;
                vat=0.05*amount2;
                cout<<"VAT ="<<vat<<endl;
                total=amount2+vat;
```

```
                cout<<"Total = "<<total<<endl;

        cout<<"**********************************************************
************************\n";
                cout<<"\t\tThank You For The Stay. Visit Again!!\n";

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

                while(cus.returnid()!=id)
                {
                temp.write((char*)&cus,sizeof(cus));
                }
                        getch();
                f.close();
                temp.close();
                }
        }
        remove("list.dat");
        rename("temp.dat","list.dat");
                }
                }
                ;

void main()
{

        int ch1,ch2,ch3;
        char user[30],pass[30];

        while(1)
        {
                clrscr();

        cout<<"**********************************************************
************************\n";
                cout<<"\t\t\t\t HOTEL REGENCY\n";

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

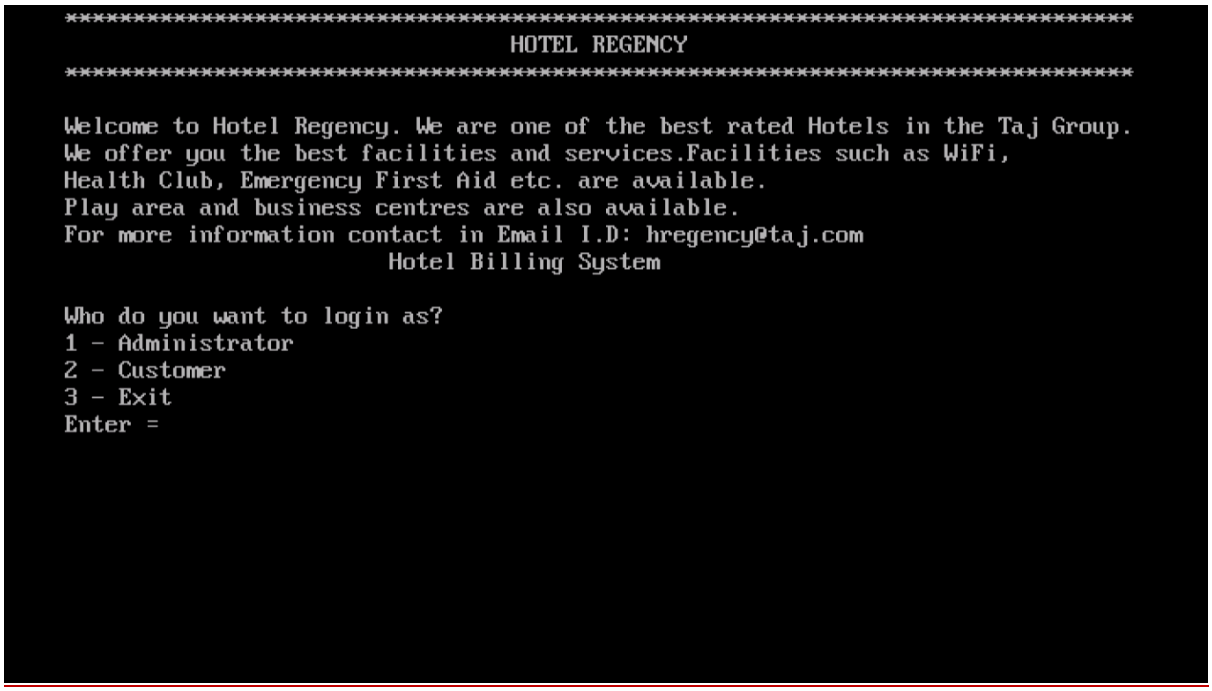
```
cout<<"Welcome to Hotel Regency. We are a branch of the Taj
Group and is given a 5-star rating."<<endl;
cout<<"We offer 3 various types of rooms and we also offer
different facilities such as Wifi,"<<endl;
cout<<"Play Area, Health Club, Emergency First Aid etc."<<endl;
cout<<"For more contact in email address:
hregency@taj.com"<<endl;
cout<<"\t\t\tHotel Billing System\n\n";
cout<<"Who do you want to login as?\n";
cout<<"1 - Administrator\n2 - Customer\n3 - Exit\nEnter = ";
cin>>ch1;
switch(ch1)
{
        case 1: clrscr();
                cout<<"\nEnter the username and password:-\n";

                cout<<"Username: ";
                cin>>user;
                if(strcmpi(user,"gfjz")!=0)
                {
                        cout<<"\nUsername does not match!\n";
                        getch();
                        break;
                }
                else
                        cout<<"Password: ";
                        gets(pass);

                if(strcmpi(pass,"hotel123")!=0)
                {
                        cout<<"\nPassword does not match!\n";
                        getch();
                        break;
                }
                else
                {
                        clrscr();
                        cout<<"\t\t\tMENU\n\n";
```

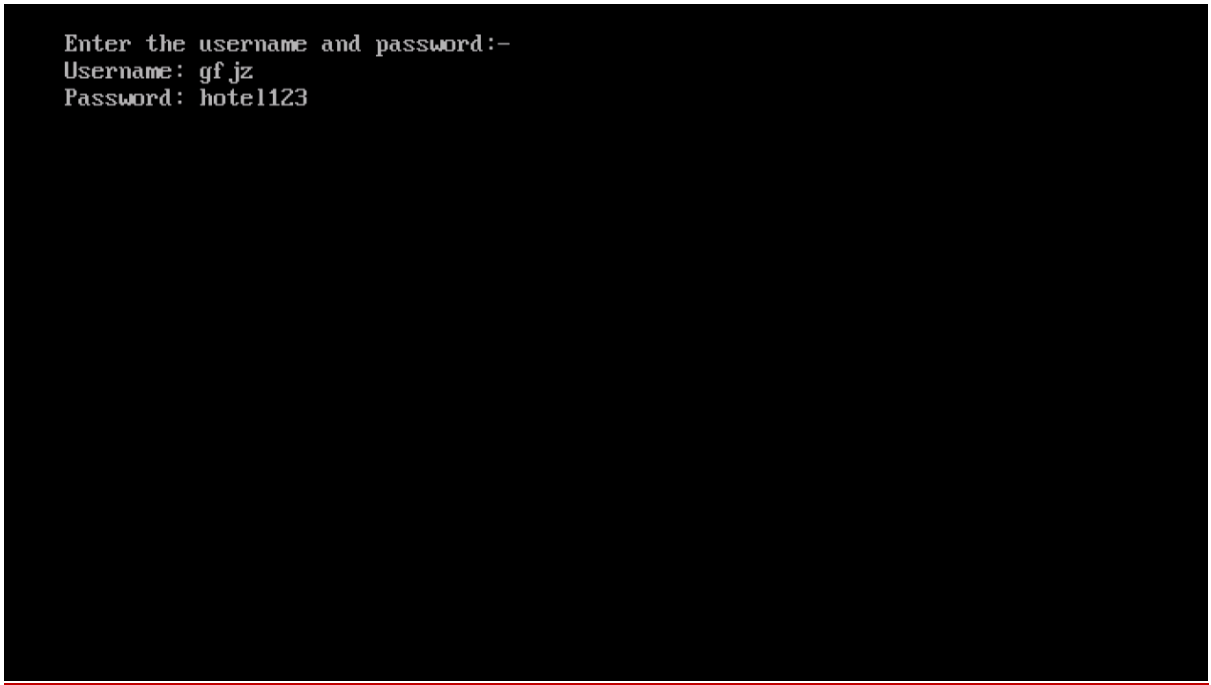
```
                                cout<<"1 - Create staff list\n2 - Append staff
list\n3 - Search for a particlular staff\n4 - Display staff list\n5 - Modify staff
details\n6 - Dismiss a staff\n7 - Back to login page\n";
                                cout<<"Enter = ";
                                cin>>ch2;
                                switch(ch2)
                                {
                                        case 1:create_staff();break;
                                        case 2:append_staff();break;
                                        case 3:search_staff();break;
                                        case 4:display_staff();break;
                                        case 5:modify_staff();break;
                                        case 6:delete_staff();break;
                                        case 7:break;
                                        default:cout<<"\nInvalid option!!!\n";
                                        getch();
                                }

                                while(ch2!=7)
                                {
                                        clrscr();
                                        cout<<"\t\t\tMENU\n\n";
                                        cout<<"1 - Create staff list\n2 - Append
staff list\n3 - Search for a particular staff\n4 - Display staff list\n5 - Modify staff
details\n6 - Dismiss a staff\n7 - Back to login page\n";
                                        cout<<"Enter = ";
                                        cin>>ch2;
                                        switch(ch2)
                                        {
                                        case 1:create_staff();break;
                                        case 2:append_staff();break;
                                        case 3:search_staff();break;
                                        case 4:display_staff();break;
                                        case 5:modify_staff();break;
                                        case 6:delete_staff();break;
                                        case 7:break;
                                        default:cout<<"\nInvalid
option!!!\n";getch();
                                        }
                                }
```

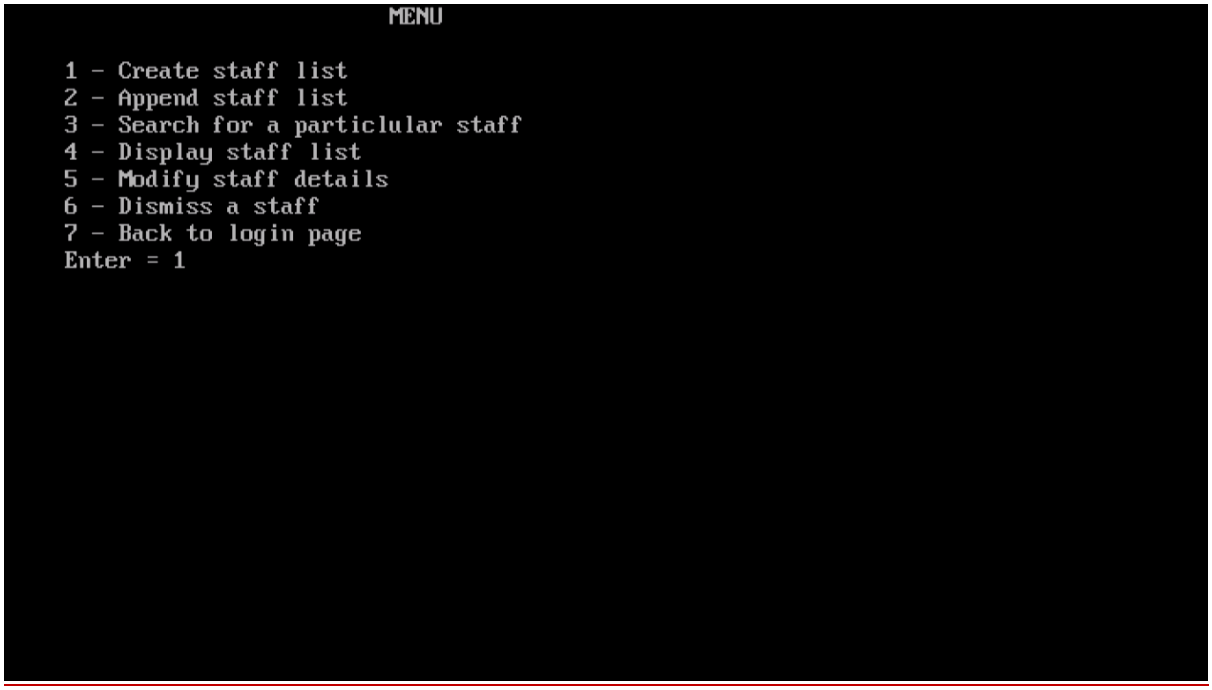
```
                        }
                        case 2:
                        clrscr();
                        cout<<"\t\t\tMENU\n\n";
                        cout<<"1 - Create customer details\n2 - Modify
list\n3 - Display the bill\n4- Add more customers\n5- Show Database\n6 - Back
to login page\nEnter = ";
                        cin>>ch3;

                        switch(ch3)
                        {
                                case 1:create_customer();break;
                                case 2:modify_customer();break;
                                case 3:display_bill();break;
                                case 4:append_customer();break;
                                case 5:datab();break;
                                case 6:break;
                                default:cout<<"\nInvalid option!!!\n";
                                getch();
                        }
                        while(ch3!=5)
                        {
                                clrscr();

                                cout<<"\t\t\tMENU\n\n";
                                cout<<"1 - Create customer details\n2 - Modify
list\n3 - Display the bill\n4- Add more customers\n5- Show Database\n6 - Back
to login page\nEnter = ";
                                cin>>ch3;

                                switch(ch3)
                                {
                                case 1:create_customer();break;
                                case 2:modify_customer();break;
                                case 3:display_bill();break;
                                case 4:append_customer();break;
                                case 5:datab();break;
                                case 6:break;
                                default:cout<<"\nInvalid option!!!\n";
                                getch();
```

```
                        }
                    }


                case 3: exit(0);
                default:cout<<"\nInvalid option!!!\n";
                    getch();
            }

    }
```

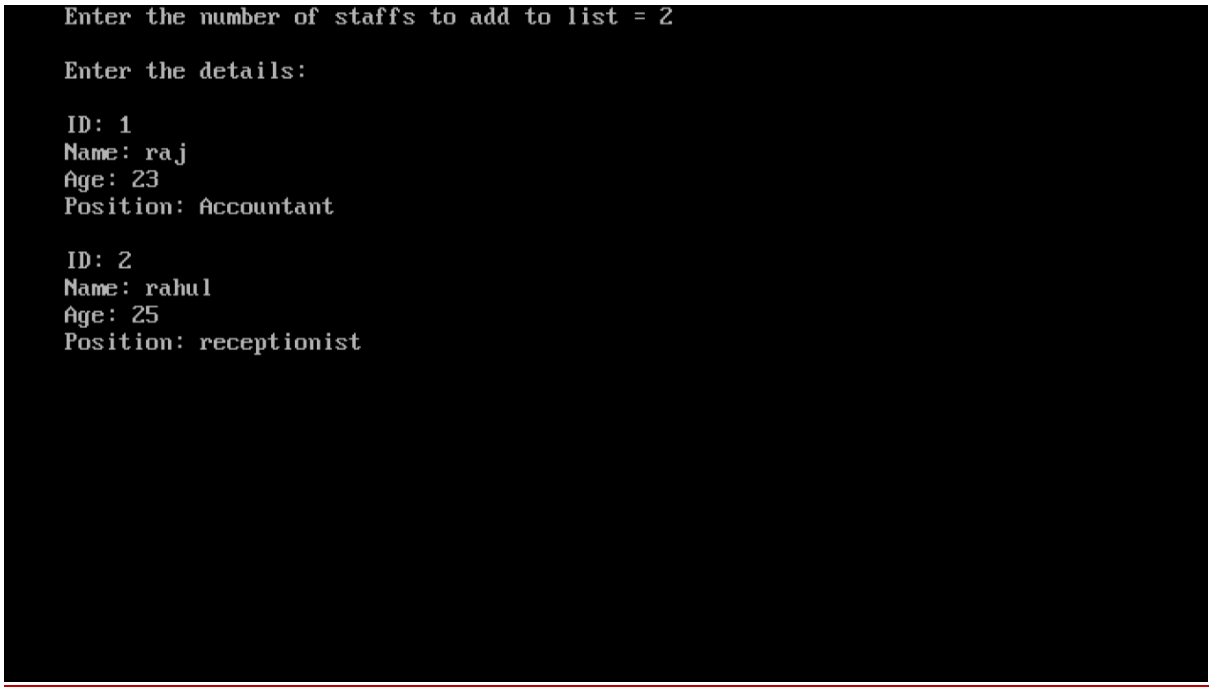
SCREENSHOTS OF THE PROGRAM

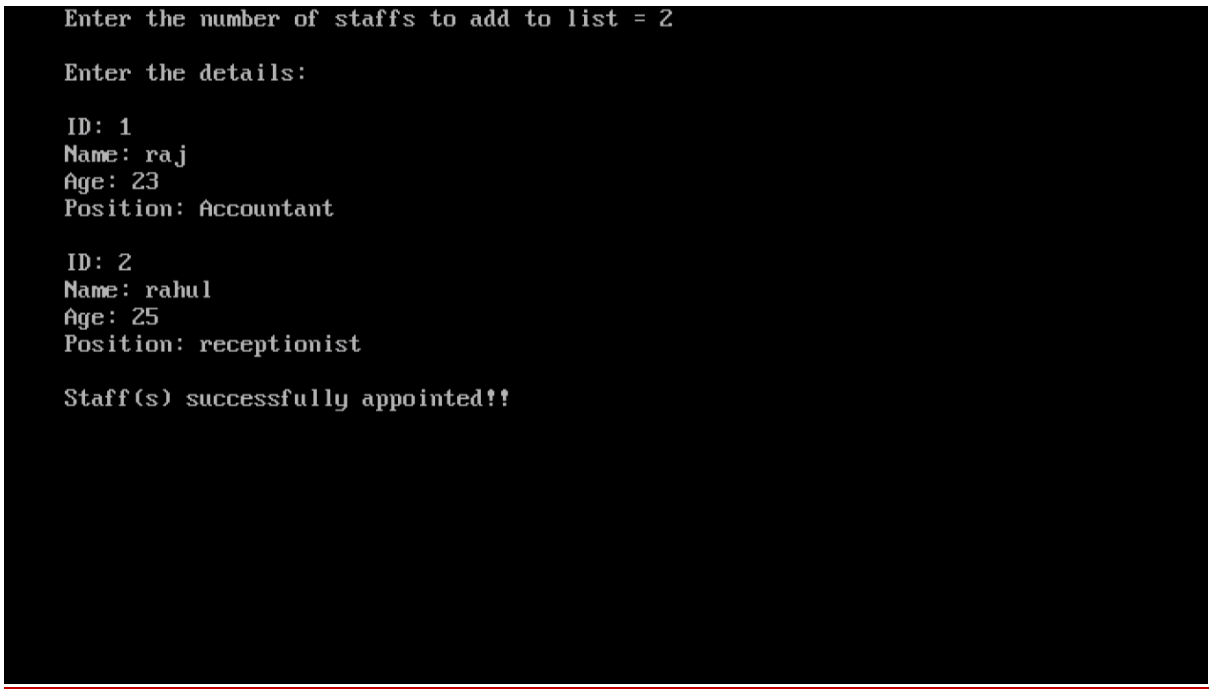





MENU
1 - Create staff list
2 - Append staff list
3 - Search for a particlular staff
4 - Display staff list
5 - Modify staff details
6 - Dismiss a staff
7 - Back to login page
Enter = 1


Enter the number of staffs to add to list = 2
Enter the details:
ID: _


Enter the number of staffs to add to list = 2
Enter the details:
ID: 1
Name: raj
Age: 23
Position: Accountant
ID: 2
Name: rahul
Age: 25
Position: receptionist

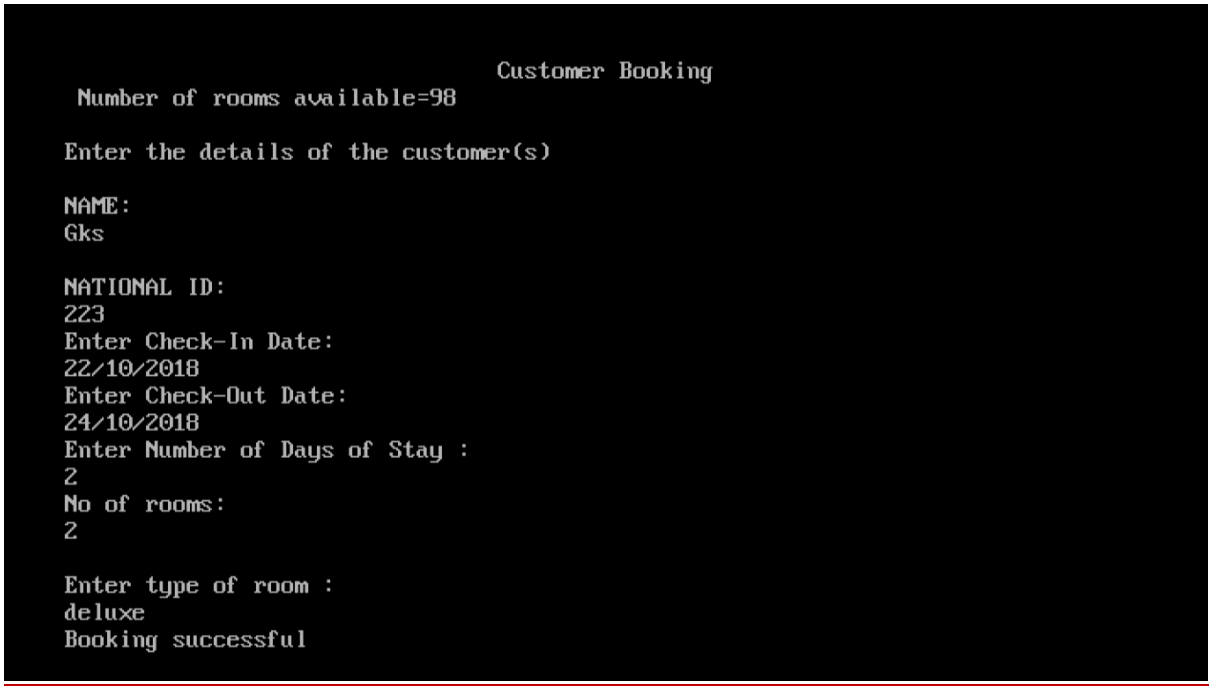

Enter the number of staffs to add to list = 2
Enter the details:
ID: 1
Name: raj
Age: 23
Position: Accountant
ID: 2
Name: rahul
Age: 25
Position: receptionist
Staff(s) successfully appointed!!

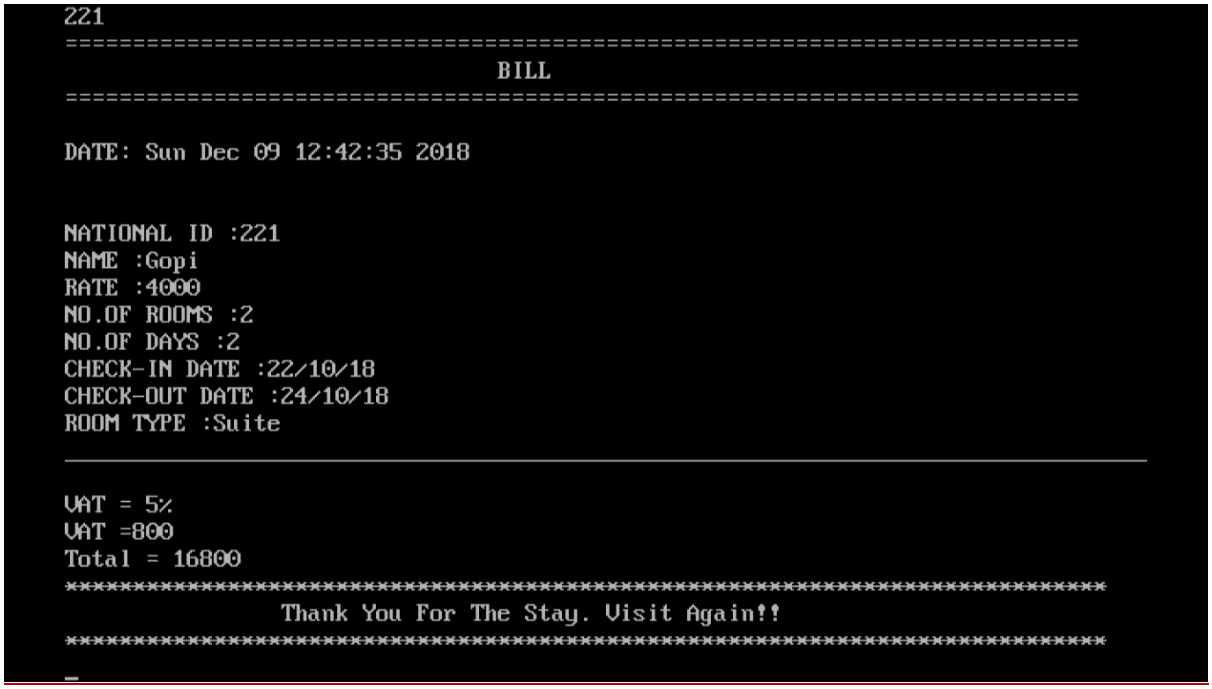
```
                              Staff List

-------------------------------------------------------------------------------
ID              Name            Age             Position
-------------------------------------------------------------------------------

1               raj             23              Accountant
2               rahul           25              Receptionist
_
```

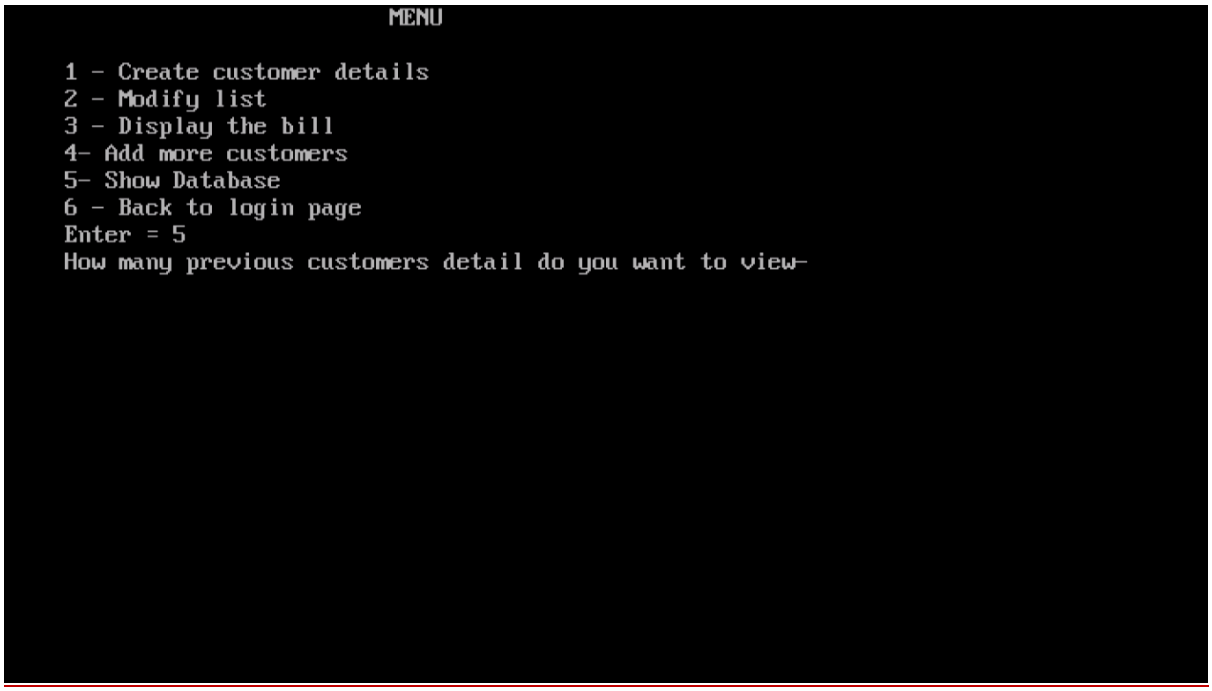
```
Enter the ID of the staff to search = 2

Staff found!!

Details:
ID = 2
Name = rahul
Age = 25
Position = Receptionist
_
```

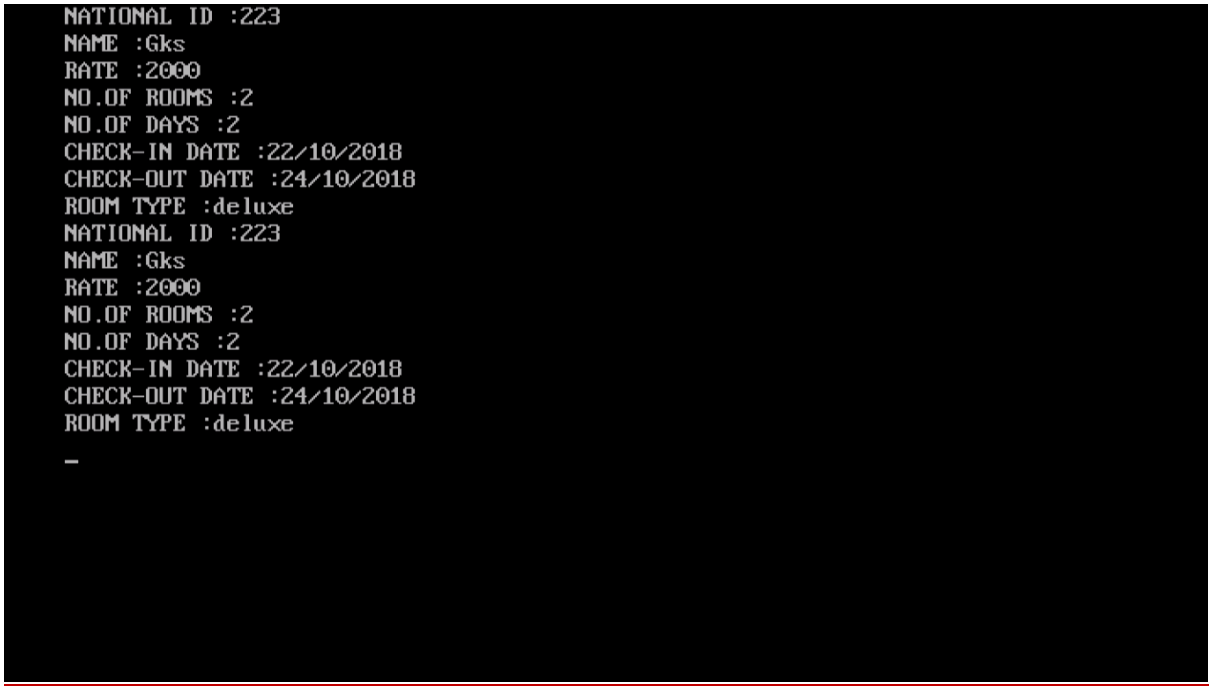
```
Enter the ID of the staff to dismiss = 2

Staff Dismissed!
```

```
 Number of rooms available=100


                                Customer Booking

Enter the details of the customer(s)

NAME:
Gopi

NATIONAL ID:
221
Enter Check-In Date:
22/10/18
Enter Check-Out Date:
24/10/18
Enter Number of Days of Stay :
2
No of rooms:
2

Enter type of room :
Suite
Booking successful
```


Customer Booking
Number of rooms available=98
Enter the details of the customer(s)
NAME:
Gks
NATIONAL ID:
223
Enter Check-In Date:
22/10/2018
Enter Check-Out Date:
24/10/2018
Enter Number of Days of Stay :
2
No of rooms:
2
Enter type of room :
deluxe
Booking successful


221
BILL
DATE: Sun Dec 09 12:42:35 2018
NATIONAL ID :221
NAME :Gopi
RATE :4000
NO.OF ROOMS :2
NO.OF DAYS :2
CHECK-IN DATE :22/10/18
CHECK-OUT DATE :24/10/18
ROOM TYPE :Suite
VAT = 5%
VAT =800
Total = 16800
Thank You For The Stay. Visit Again!!


MENU
1 - Create customer details
2 - Modify list
3 - Display the bill
4- Add more customers
5- Show Database
6 - Back to login page
Enter = 5
How many previous customers detail do you want to view-


NATIONAL ID :223
NAME :Gks
RATE :2000
NO.OF ROOMS :2
NO.OF DAYS :2
CHECK-IN DATE :22/10/2018
CHECK-OUT DATE :24/10/2018
ROOM TYPE :deluxe
NATIONAL ID :223
NAME :Gks
RATE :2000
NO.OF ROOMS :2
NO.OF DAYS :2
CHECK-IN DATE :22/10/2018
CHECK-OUT DATE :24/10/2018
ROOM TYPE :deluxe

LIMITATIONS OF THE PROJECT

1. Cannot calculate the number of days from check-in and check-out date.
2. Cannot assign different type of room in one booking. Also does not show the number of rooms for each type individually,
3. The extras for a hotel(food and other facilities) is not added.

BIBLIOGRAPHY

- Computer Science Textbook Grade 11 and 12.
- https://en.wikipedia.org/wiki/C%2B%2B
- https://www.sitesbay.com/cpp/features-of-cpp