Hotel Management System

21CSC101T – Object Oriented Design and Programming

Mini Project Report

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Bonafide Certificate

This is to certify that 21CSC101T Object Oriented Design and Programming Mini Project Report titled “Hotel Management System” is the bonafide work of Team Members mentioned above who undertook the task of completing the project within the allotted time.

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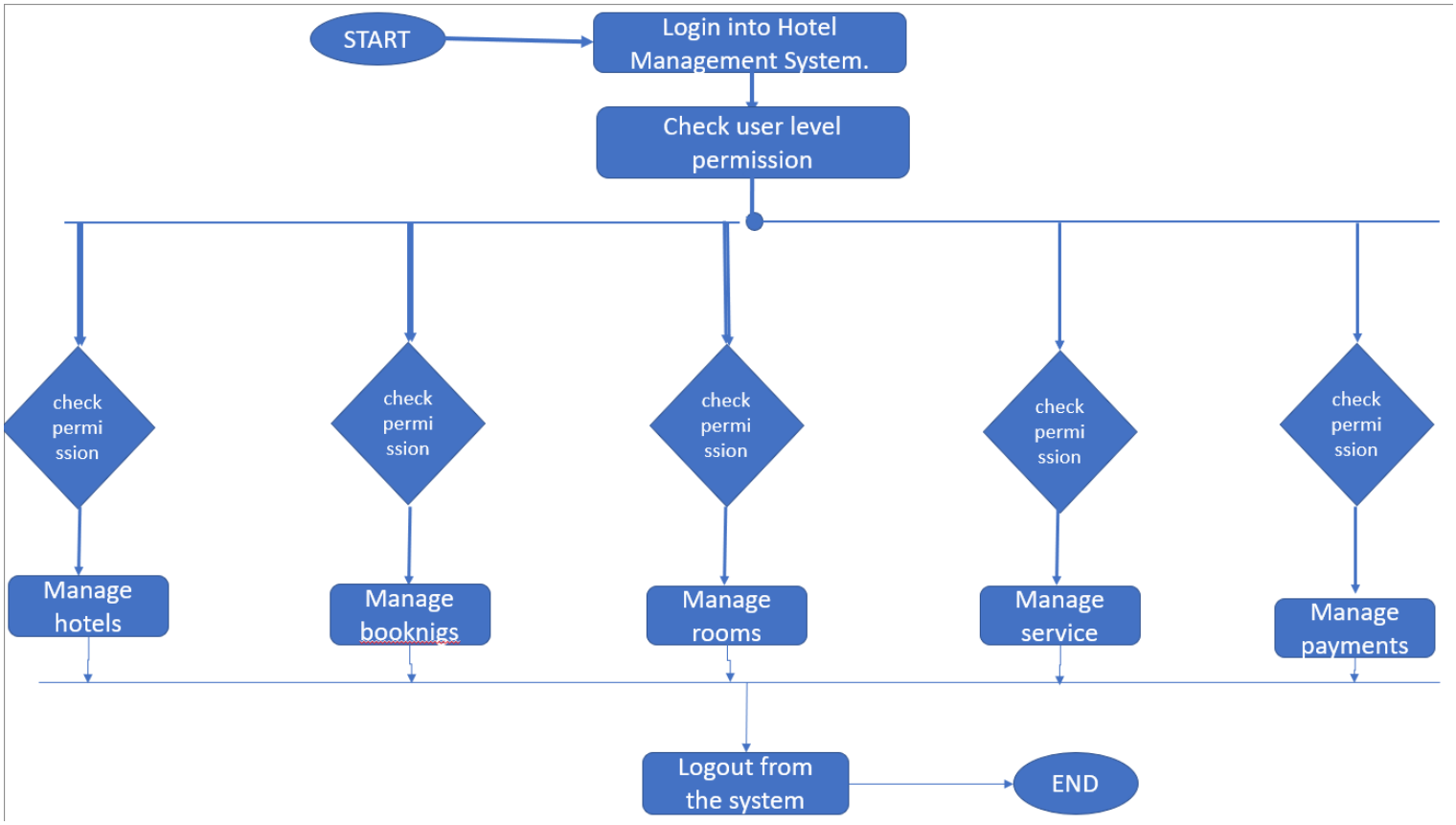
UML ACTIVITY DIAGRAM



SOURCE CODE

```
#include<iostream>
#include<string.h>
#include<conio.h>

#define max 100
using namespace std;

//Class Customer
class Customer
{
public:
char name[100];
char address[100];
char phone[12];
char from_date[20];
char to_date[20];
float payment_advance;
int booking_id;
};


class Room
{
public:
char type;
char stype;
char ac;
int roomNumber;
int rent;
int status;
```

```
class Customer cust;
class Room addRoom(int);
void searchRoom(int);
void deleteRoom(int);
void displayRoom(Room);
};

//Global Declarations
class Room rooms[max];
int count=0;


Room Room::addRoom(int rno)
{
class Room room;
room.roomNumber=rno;
cout<<"\nType AC/Non-AC (A/N) : ";
cin>>room.ac;
cout<<"\nType Comfort (S/N) : ";
cin>>room.type;
cout<<"\nType Size (B/S) : ";
cin>>room.stype;
cout<<"\nDaily Rent : ";
cin>>room.rent;
room.status=0;

cout<<"\n Room Added Successfully!";
getch();
return room;
}


void Room::searchRoom(int rno)
{
int i,found=0;
for(i=0;i<count;i++)
```

```
{
if(rooms[i].roomNumber==rno)
{
found=1;
break;
}
}
if(found==1)
{
cout<<"Room Details\n";
if(rooms[i].status==1)
{
cout<<"\nRoom is Reserved";
}
else
{
cout<<"\nRoom is available";
}
displayRoom(rooms[i]);
getch();
}
else
{
cout<<"\nRoom not found";
getch();
}
}

void Room::displayRoom(Room tempRoom)
{
cout<<"\nRoom Number: \t"<<tempRoom.roomNumber;
cout<<"\nType AC/Non-AC (A/N) "<<tempRoom.ac;
cout<<"\nType Comfort (S/N) "<<tempRoom.type;
cout<<"\nType Size (B/S) "<<tempRoom.stype;
cout<<"\nRent: "<<tempRoom.rent;
}
```

```
//hotel management class
class HotelMgnt:protected Room
{
public:
void checkIn();
void getAvailRoom();
void searchCustomer(char *);
void checkOut(int);
void guestSummaryReport();
};


void HotelMgnt::guestSummaryReport(){

if(count==0){
        cout<<"\n No Guest in Hotel !!";
}
for(int i=0;i<count;i++)
{
if(rooms[i].status==1)
{
cout<<"\n Customer First Name : "<<rooms[i].cust.name;
cout<<"\n Room Number : "<<rooms[i].roomNumber;
cout<<"\n Address (only city) : "<<rooms[i].cust.address;
cout<<"\n Phone : "<<rooms[i].cust.phone;
cout<<"\n--------------------------------------";
}

}

getch();
}

//hotel management reservation of room
void HotelMgnt::checkIn()
{
int i,found=0,rno;
```

```
class Room room;
cout<<"\nEnter Room number : ";
cin>>rno;
for(i=0;i<count;i++)
{
if(rooms[i].roomNumber==rno)
{
found=1;
break;
}
}
if(found==1)
{
if(rooms[i].status==1)
{
cout<<"\nRoom is already Booked";
getch();
return;
}

cout<<"\nEnter booking id: ";
cin>>rooms[i].cust.booking_id;

cout<<"\nEnter Customer Name (First Name): ";
cin>>rooms[i].cust.name;

cout<<"\nEnter Address (only city): ";
cin>>rooms[i].cust.address;

cout<<"\nEnter Phone: ";
cin>>rooms[i].cust.phone;

cout<<"\nEnter From Date: ";
cin>>rooms[i].cust.from_date;

cout<<"\nEnter to  Date: ";
```

```
cin>>rooms[i].cust.to_date;


cout<<"\nEnter Advance Payment: ";
cin>>rooms[i].cust.payment_advance;

rooms[i].status=1;

cout<<"\n Customer Checked-in Successfully..";
getch();
}
}


//hotel management shows available rooms
void HotelMgnt::getAvailRoom()
{
int i,found=0;
for(i=0;i<count;i++)
{
if(rooms[i].status==0)
{
displayRoom(rooms[i]);
cout<<"\n\nPress enter for next room";
found=1;
getch();
}
}
if(found==0)
{
cout<<"\nAll rooms are reserved";
getch();
}
}


//hotel management shows all persons that have booked room
```

```
void HotelMgnt::searchCustomer(char *pname)
{
int i,found=0;
for(i=0;i<count;i++)
{
if(rooms[i].status==1 && stricmp(rooms[i].cust.name,pname)==0)
{
cout<<"\nCustomer Name: "<<rooms[i].cust.name;
cout<<"\nRoom Number: "<<rooms[i].roomNumber;

cout<<"\n\nPress enter for next record";
found=1;
getch();
}
}
if(found==0)
{
cout<<"\nPerson not found.";
getch();
}
}


//hotel managemt generates the bill of the expenses
void HotelMgnt::checkOut(int roomNum)
{
int i,found=0,days,rno;
float billAmount=0;
for(i=0;i<count;i++)
{
if(rooms[i].status==1 && rooms[i].roomNumber==roomNum)
{
//rno = rooms[i].roomNumber;
found=1;
//getch();
break;
}
```

```
}
if(found==1)
{
cout<<"\nEnter Number of Days:\t";
cin>>days;
billAmount=days * rooms[i].rent;

cout<<"\n\t######## CheckOut Details ########\n";
cout<<"\nCustomer Name : "<<rooms[i].cust.name;
cout<<"\nRoom Number : "<<rooms[i].roomNumber;
cout<<"\nAddress : "<<rooms[i].cust.address;
cout<<"\nPhone : "<<rooms[i].cust.phone;
cout<<"\nTotal Amount Due : "<<billAmount<<" /";
cout<<"\nAdvance Paid: "<<rooms[i].cust.payment_advance<<" /";
cout<<"\n*** Total Payable: "<<billAmount-rooms[i].cust.payment_advance<<"/ only";

rooms[i].status=0;
}
getch();
}


//managing rooms (adding and searching available rooms)
void manageRooms()
{
class Room room;
int opt,rno,i,flag=0;
char ch;
do
{
system("cls");
cout<<"\n### Manage Rooms ###";
cout<<"\n1. Add Room";
cout<<"\n2. Search Room";
cout<<"\n3. Back to Main Menu";
cout<<"\n\nEnter Option: ";
cin>>opt;
```

```
//switch statement
switch(opt)
{
case 1:
cout<<"\nEnter Room Number: ";
cin>>rno;
i=0;
for(i=0;i<count;i++)
{
if(rooms[i].roomNumber==rno)
{
flag=1;
}
}
if(flag==1)
{
cout<<"\nRoom Number is Present.\nPlease enter unique Number";
flag=0;
getch();
}
else
{
rooms[count]=room.addRoom(rno);
count++;
}
break;
case 2:
cout<<"\nEnter room number: ";
cin>>rno;
room.searchRoom(rno);
break;
case 3:
//nothing to do
break;
default:
```

```
cout<<"\nPlease Enter correct option";
break;
}
}while(opt!=3);
}
using namespace std;
int main()
{
class HotelMgnt hm;
int i,j,opt,rno;
char ch;
char pname[100];

system("cls");

do
{
system("cls");
cout<<"######## Hotel Management #########\n";
cout<<"\n1. Manage Rooms";
cout<<"\n2. Check-In Room";
cout<<"\n3. Available Rooms";
cout<<"\n4. Search Customer";
cout<<"\n5. Check-Out Room";
cout<<"\n6. Guest Summary Report";
cout<<"\n7. Exit";
cout<<"\n\nEnter Option: ";
cin>>opt;
switch(opt)
{
case 1:
manageRooms();
break;
case 2:
if(count==0)
{
cout<<"\nRooms data is not available.\nPlease add the rooms first.";
```

```
getch();
}
else
hm.checkIn();
break;
case 3:
if(count==0)
{
cout<<"\nRooms data is not available.\nPlease add the rooms first.";
getch();
}
else
hm.getAvailRoom();
break;
case 4:
if(count==0)
{
cout<<"\nRooms are not available.\nPlease add the rooms first.";
getch();
}
else
{
cout<<"Enter Customer Name: ";
cin>>pname;
hm.searchCustomer(pname);
}
break;
case 5:
if(count==0)
{
cout<<"\nRooms are not available.\nPlease add the rooms first.";
getch();
}
else
{
cout<<"Enter Room Number : ";
cin>>rno;
```

```
hm.checkOut(rno);
}
break;
case 6:
hm.guestSummaryReport();
break;
case 7:
cout<<"\nTHANK YOU! FOR USING SOFTWARE";
break;
default:
cout<<"\nPlease Enter correct option";
break;
}
}while(opt!=7);

getch();
```

OUTPUT

```
######### Hotel Management ##########

1. Manage Rooms
2. Check-In Room
3. Available Rooms
4. Search Customer
5. Check-Out Room
6. Guest Summary Report
7. Exit

Enter Option:
```

```
### Manage Rooms ###
1. Add Room
2. Search Room
3. Back to Main Menu

Enter Option: 1

Enter Room Number: 416

Type AC/Non-AC (A/N) : A

Type Comfort (S/N) : S

Type Size (B/S) : B

Daily Rent : 1000
```

```
1. Manage Rooms
2. Check-In Room
3. Available Rooms
4. Search Customer
5. Check-Out Room
6. Guest Summary Report
7. Exit

Enter Option: 3

Room Number:     416
Type AC/Non-AC (A/N) A
Type Comfort (S/N) S
Type Size (B/S) B
Rent: 1000

Press enter for next room
```

```
### Manage Rooms ###
1. Add Room
2. Search Room
3. Back to Main Menu

Enter Option:
```

Conclusion

A program to manage bank systems was successfully written (in C++) and executed.

Bibliography

1. www.geeksforgeeks.org/
2. www.github.com
3. www.programiz.com