Hotel room management system

This program has two sub functions that works differ tasks and it uses the if else statements, do while loop, for loops and arrays to build the program. It clears the console after every inputs. The program allows the guest to book several rooms if the rooms is not booked. The guest has the options to choose the room types. The first half parts of the rooms are Single rooms and the other half rooms are double room. It asks the guest to book the room again if the room is occupied and if they choose room numbers less than 1 and above the hotel room capacity. It gives three discount options depends on the number of rooms the guest wants to book. If the customers book 10 room and less, it has 0% discount. If they book room between 11 and 15 rooms, it gives 10% discount and if they book more than 15 rooms it gives 20% discount.

```cpp
//Hotel room management system. it alows the user to book rooms from the available rooms.
#include <iostream>
#include <string>
using namespace std;
void display()
{
        cout << "\t\tHotel management"<<endl;
}
int choose_number_of_rooms(int number_of_rooms, int rooms)
{
        do
        {
        cout << " How many rooms you want to book ?"<<endl; // get how many rooms the guest wish to book?
                cin >> rooms;
                system("cls");
                if (rooms<0 || rooms>number_of_rooms) //the number of rooms must be greater than 0 and less than total number of rooms the hotel has.
                {
                        cout << "\t Please enter the number between 1 and 60 \n";
                }
```

```cpp
        } while (rooms<0 || rooms>number_of_rooms);

        return rooms;

}

int determine_price(int choice, int number_of_rooms,int rooms)

{

        int price = 100;  // price of Single room of the first half parts of the hotel rooms.

        int discount = 0; //if the guest book  less than 11 rooms doesn't get any discount.

        if (choice > number_of_rooms / 2) // price of double rooms the other half parts of the hotel.

        {

                price = 150;

        }

        if (rooms > 10 && rooms <= 15) // book rooms more than 10 and less than 16 get 10% discount.

        {

                discount = price / 10;

        }

        else if(rooms > 15) //book rooms more than 15 and get 20% discount.

        {

                discount = price / 5;

        }

        price = price - discount;

        return price;

}

int main()

{

        const int number_of_rooms = 60;//constant for the array size and its total number of rooms the
hotel has.

        int roomchoice[number_of_rooms];// user room choice;

        int rooms = 0;// user amount of rooms;

        int numberofnights;// number ofnights the guest want to stay.

        int price = 100;// price of a single room.
```

```cpp
int totalprice = 0; //initialize the total price.

string name;

display();

rooms = choose_number_of_rooms(number_of_rooms, rooms);

for (int i = 0; i < rooms; i++)

{

        int j = 0;

        do

        {

        cout << "Book your room ";// Get the rooms from the guest.

        cin >> roomchoice[i];

                for (j; j < i; j++)

                {

                        if (roomchoice[i] == roomchoice[j])

                        {

                                cout << "Room " <<roomchoice[i] << " is occupied please book
your room again \n";

                                break;

                        }

                }

        } while (i > j);

        cout << "How many nights you want to stay ?"; //get the number of night guests want to
stay.

        cin >> numberofnights;

        price = determine_price(roomchoice[i], number_of_rooms, rooms);

        totalprice = price * numberofnights;

        {

                cout << " you have booked room number. " << roomchoice[i] << endl;


        cout << "Total price for room " << roomchoice[i] <<" for "<< numberofnights << " nights is " <<
totalprice <<" € "<< endl;
```

```cpp
        }
        cout << endl;
    }

        return 0;
    }
```