SOURCE CODE

#include <iostream>

#include <vector>

#include <string>

using namespace std;

//user panel forward declaration

class User;

//Destination classes forward declaration

class Delhi;

class Mumbai;

//Delhi hotels

class skyview;

class parktown;

class greendale;

//Mumbai hotels

class stemfield;

class pridestar;

class galaxyinn;

//userpanel

class User

{

public:

    string username;

    string phoneNo;

    int numGuests;

    string paymentMode;

    static int nextUserID;

    int userID;

    User() {}

    void enterDetails() {

        cout << "Name: ";

        cin.ignore();

        getline(cin, username);

        cout << "Phone Number: ";

        getline(cin, phoneNo);

        cout << "Number of Guests: ";

        cin >> numGuests;

        cin.ignore();

    }

    void selectPaymentMode() {

        int choice;

        cout << "Select Payment Mode:" << endl;

        cout << "1. Credit Card" << endl;

        cout << "2. Debit Card" << endl;

        cout << "3. Cash" << endl;

        cout << "Enter your choice: ";

        cin >> choice;

        switch (choice) {

            case 1:

                paymentMode = "Credit Card";

                break;

            case 2:

                paymentMode = "Debit Card";

                break;

            case 3:

                paymentMode = "Cash";

                break;

            default:

                cout << "Invalid choice. Defaulting to Cash." << endl;

                paymentMode = "Cash";

                break;

        }

        cin.ignore();

    }

    int getNextUserID()

    {

        return nextUserID++;

    }

};

int User::nextUserID=1;

// Delhi hotel 1 class

class skyview:public User

{

    int rating = 3;

    double hotel\_id = 1003;

    int room\_no;

    vector<int> room\_1;

    vector<int> room\_2;

    vector<int> room\_3;

    int room\_fare1 = 2000;

    int room\_fare2 = 4000;

    int room\_fare3 = 7000;

    int totalrooms1 = 20;

    int totalrooms2 = 10;

    int totalrooms3 = 5;

    int n;//for room category preference

    int numDaysTrip=0;

public:

    void smenu()

    {

        cout << "\t\*\*\*\*\*\*\*\*\*\*WELCOME TO SKYVIEW HOTEL\*\*\*\*\*\*\*\*\*\*\t" << endl;

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

        cout << "\*\*\*\*\*category 1------------category 2---------------category 3\*\*\*\*\*" << endl;

        cout << " room-price:2000    |   room-price:3000       |   room-price:4000   " << endl;

        cout << "                    |       food&drink        |     food&drinks     " << endl;

        cout << "                    |                         | Access to spa & gym " << endl;

    }

    void sbook\_room()

    {

        // press 1 for category 1,2 for category 2 and 3 for category 3

        cout<<"\t\*\*\*\*\*\*\*\*\*\*ROOM BOOKING PANEL\*\*\*\*\*\*\*\*\*\*\t"<<endl;

        cout << "Enter your preference of room category for room booking" << endl;

        cin >> n;

        cout << "Number of Days of Trip: ";

        cin >> numDaysTrip;

        switch (n)

        {

        case 1:

        {

            cout << "\*\*\*\*\*Category 1 selected\*\*\*\*\*"<<endl;

            User ob1;

            ob1.enterDetails();

            ob1.selectPaymentMode();

            userID=ob1.getNextUserID();

            cout << "\*\*\*\*\*Enter no. of rooms to be booked\*\*\*\*\*"<<endl;

            cin >> room\_no;

            int count = room\_1.size();

            if (count + room\_no < totalrooms1)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_1.push\_back(userID+i); // pushing room id

                }

                cout<<"Room booked sucessfully"<<endl;

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*"<< endl;

            }

            break;

        }

        case 2:

        {

            cout << "\*\*\*\*\*Category 2 selected\*\*\*\*\*" << endl;

            User ob2;

            ob2.enterDetails();

            ob2.selectPaymentMode();

            userID=ob2.getNextUserID();

            cout << "\*\*\*\*\*Enter no. of rooms to be booked\*\*\*\*\*" << endl;

            cin >> room\_no;

            int count = room\_2.size();

            if (count + room\_no < totalrooms2)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_2.push\_back(userID+i); // pushing room id

                }

                cout<<"Room booked sucessfully"<<endl;

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        case 3:

        {

            cout << "\*\*\*\*\*Category 3 selected\*\*\*\*\*" << endl;

            User ob3;

            ob3.enterDetails();

            ob3.selectPaymentMode();

            userID=ob3.getNextUserID();

            cout << "\*\*\*\*\*Enter no. of rooms to be booked\*\*\*\*\*" << endl;

            cin >> room\_no;

            int count = room\_3.size();

            if (count + room\_no < totalrooms3)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_3.push\_back(userID+i);

                }

                cout<<"Room booked sucessfully"<<endl;

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        }

    }

    void sfinal\_bill(int n, int numDaysTrip, int room\_no)

{

    cout<<"\t\*\*\*\*\*FINAL BILL\t\*\*\*\*\*"<<endl;

    if(n==1)

    {   cout<<"userid: "<<userID<<endl;

        double final\_bill = numDaysTrip \* room\_fare1 \* room\_no; // when using category 1 room fare for final bill

        cout << "The total bill of customer is:" << final\_bill << endl;

    }

    else if(n==2)

    {

        double final\_bill = numDaysTrip \* room\_fare2 \* room\_no; // when using category 2 room fare for final bill

        cout << "The total bill of customer is:" << final\_bill << endl;

    }

    else if(n==3)

    {

        double final\_bill = numDaysTrip \* room\_fare3 \* room\_no; // when using category 2 room fare for final bill

        cout << "The total bill of customer is:" << final\_bill << endl;

    }

}

     skyview()

    {

        cout << "\t\*\*\*\*\*Your budget lies in the range of " << rating << " star hotel\*\*\*\*\*\t" << endl;

        smenu();

        sbook\_room();

        sfinal\_bill(n, numDaysTrip, room\_no);

    }

};

// Delhi hotel 2 class

class parktown:public User

{

    int rating = 5;

    double hotel\_id = 1005;

    int room\_no;

    vector<int> room\_1;

    vector<int> room\_2;

    vector<int> room\_3;

    int room\_fare1 = 4000;

    int room\_fare2 = 5000;

    int room\_fare3 = 7000;

    int totalrooms1 = 20;

    int totalrooms2 = 10;

    int totalrooms3 = 10;

    int n;//for room category preference

    int numDaysTrip;

public:

    void pmenu()

    {

        cout << "\t\*\*\*\*\*\*\*\*\*\*WELCOME TO PARKTOWN HOTEL\*\*\*\*\*\*\*\*\*\*\t" << endl;

        cout<<"\t\*\*\*\*\*\*\*\*\*\*MAIN MENU FOR ROOM BOOKING\*\*\*\*\*\*\*\*\*\*\t"<<endl;

        cout << "category 1---------category 2---------category 3" << endl;

        cout << " room-price:4000    |     room-price:5000     |   room-price:7000   " << endl;

        cout << "  food&drink        |      Gamezone acces     |     food&drinks     " << endl;

        cout << "                    |        food&drink       |     Gamezone access " << endl;

        cout << "                    |                         | Access to spa & gym " << endl;

    }

    void pbook\_room()

    {

        // press 1 for category 1,2 for category 2 and 3 for category 3

        cout << "Enter your preference of room category for room booking" << endl;

        cin >> n;

        cout << "Number of Days of Trip: ";

        cin >> numDaysTrip;

        switch (n)

        {

        case 1:

        {

            cout << "\*\*\*\*\*Category 1 selected\*\*\*\*\*" << endl;

            User ob1;

            ob1.enterDetails();

            ob1.selectPaymentMode();

            userID=ob1.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_1.size();

            if (count + room\_no < totalrooms1)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_1.push\_back(userID+i); // Assuming you're pushing room numbers

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        case 2:

        {

            cout << "\*\*\*\*\*Category 2 selected\*\*\*\*\*" << endl;

            User ob2;

            ob2.enterDetails();

            ob2.selectPaymentMode();

            userID=ob2.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_2.size();

            if (count + room\_no < totalrooms2)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_2.push\_back(userID+i); //  pushing id

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        case 3:

        {

            cout << "\*\*\*\*\*Category 3 selected\*\*\*\*\*" << endl;

            User ob3;

            ob3.enterDetails();

            ob3.selectPaymentMode();

            userID=ob3.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_3.size();

            if (count + room\_no < totalrooms3)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_3.push\_back(userID+i); //  pushing id

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        }

    }

    void pfinal\_bill(int n, int numDaysTrip, int room\_no)

    {

         if(n==1)

         {

            double final\_bill = numDaysTrip\* room\_fare1\*room\_no; // when using category 1 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;}

        else if(n==2)

        {

            double final\_bill = numDaysTrip\* room\_fare2\*room\_no; // when using category 2 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;

        }

        else if(n==3)

        {

            double final\_bill = numDaysTrip\* room\_fare3\*room\_no; // when using category 2 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;

        }

    }

    parktown()

    {

        cout << "\t\*\*\*\*\*\*\*\*\*\*Your budget lies in the range of " << rating << " star hotel\*\*\*\*\*\*\*\*\*\*\t" << endl;

        pmenu();

        pbook\_room();

       pfinal\_bill( n, numDaysTrip, room\_no);

    }

};

//Delhi hotel 3 class

class greendale:public User

{

    int rating = 7;

    double hotel\_id = 1007;

    int room\_no;

    vector<int> room\_1;

    vector<int> room\_2;

    vector<int> room\_3;

    int room\_fare1 = 4000;

    int room\_fare2 = 5000;

    int room\_fare3 = 7000;

    int totalrooms1 = 20;

    int totalrooms2 = 30;

    int totalrooms3 = 30;

    int n;

    int numDaysTrip;

public:

    void gmenu()

    {

        cout << "\t\*\*\*\*\*\*\*\*\*\*WELCOME TO GREENDALE HOTEL\*\*\*\*\*\*\*\*\*\*\t" << endl;

        cout << "\*\*\*\*\*category 1--------------category 2---------------category 3\*\*\*\*\*" << endl;

        cout << " room-price:4000    |     room-price:5000     |   room-price:7000   " << endl;

        cout << "  Food&Drinks       |       food&drink        |     food&drinks     " << endl;

        cout << "  Gamezone access   |    Gamezone access      |     Gamezone access " << endl;

        cout << "                    |     Spa & Gym access    |  Spa & Gym access   " << endl;

        cout << "                    |                         |      zoom car       " << endl;

        cout << "                    |                         |      Home theatre   " << endl;

    }

    void gbook\_room()

    {

        // press 1 for category 1,2 for category 2 and 3 for category 3

        cout << "Enter your preference of room category for room booking" << endl;

        cin >> n;

        cout << "Number of Days of Trip: ";

        cin >> numDaysTrip;

        switch (n)

        {

        case 1:

        {

            cout << "\*\*\*\*\*Category 1 selected\*\*\*\*\*" << endl;

            User ob1;

            ob1.enterDetails();

            ob1.selectPaymentMode();

            userID=ob1.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_1.size();

            if (count + room\_no < totalrooms1)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_1.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        case 2:

        {

            cout << "\*\*\*\*\*Category 2 selected\*\*\*\*\*" << endl;

            User ob2;

            ob2.enterDetails();

            ob2.selectPaymentMode();

            userID=ob2.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_2.size();

            if (count + room\_no < totalrooms2)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_2.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        case 3:

        {

            cout << "\*\*\*\*\*Category 3 selected\*\*\*\*\*"<<endl;

            User ob3;

            ob3.enterDetails();

            ob3.selectPaymentMode();

            userID=ob3.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_3.size();

            if (count + room\_no < totalrooms3)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_3.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        }

    }

    void gfinal\_bill(int n, int numDaysTrip, int room\_no)

    {

        if(n==1)

        {

            double final\_bill = numDaysTrip\* room\_fare1\*room\_no; // when using category 1 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;}

        else if(n==2)

        {

            double final\_bill = numDaysTrip\* room\_fare2\*room\_no; // when using category 2 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;

        }

        else if(n==3)

        {

            double final\_bill = numDaysTrip\* room\_fare3\*room\_no; // when using category 2 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;

        }

     }

    greendale()

    {

        cout << "Your budget lies in the range of " << rating << " star hotel" << endl;

        gmenu();

        gbook\_room();

        gfinal\_bill( n,  numDaysTrip, room\_no);

    }

};

// Mumbai hotel 1 class

class stemfield:public User

{

    int rating = 3;

    double hotel\_id = 1103;

    int room\_no;

    vector<int> room\_1;

    vector<int> room\_2;

    vector<int> room\_3;

    int room\_fare1 = 2000;

    int room\_fare2 = 4000;

    int room\_fare3 = 7000;

    int totalrooms1 = 20;

    int totalrooms2 = 10;

    int totalrooms3 = 5;

    int n;//for room category preference

    int numDaysTrip;

public:

    void smenu()

    {

        cout << "\t\*\*\*\*\*\*\*\*\*\*WELCOME TO STEMFIELD HOTEL\*\*\*\*\*\*\*\*\*\*\t" << endl;

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

        cout << "\*\*\*\*\*category 1------------category 2---------------category 3\*\*\*\*\*" << endl;

        cout << " room-price:2000    |   room-price:3000       |   room-price:4000   " << endl;

        cout << "                    |       food&drink        |     food&drinks     " << endl;

        cout << "                    |                         | Access to spa & gym " << endl;

    }

    void sbook\_room()

    {

        // press 1 for category 1,2 for category 2 and 3 for category 3

        cout<<"\t\*\*\*\*\*\*\*\*\*\*ROOM BOOKING PANEL\*\*\*\*\*\*\*\*\*\*\t"<<endl;

        cout << "Enter your preference of room category for room booking" << endl;

        cin >> n;

        cout << "Number of Days of Trip: ";

        cin >> numDaysTrip;

        switch (n)

        {

        case 1:

        {

            cout << "\*\*\*\*\*Category 1 selected\*\*\*\*\*"<<endl;

            User ob1;

            ob1.enterDetails();

            ob1.selectPaymentMode();

            userID=ob1.getNextUserID();

            cout << "\*\*\*\*\*Enter no. of rooms to be booked\*\*\*\*\*"<<endl;

            cin >> room\_no;

            int count = room\_1.size();

            if (count + room\_no < totalrooms1)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_1.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*"<< endl;

            }

            break;

        }

        case 2:

        {

            cout << "\*\*\*\*\*Category 2 selected\*\*\*\*\*" << endl;

            User ob2;

            ob2.enterDetails();

            ob2.selectPaymentMode();

            userID=ob2.getNextUserID();

            cout << "\*\*\*\*\*Enter no. of rooms to be booked\*\*\*\*\*" << endl;

            cin >> room\_no;

            int count = room\_2.size();

            if (count + room\_no < totalrooms2)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_2.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        case 3:

        {

            cout << "\*\*\*\*\*Category 3 selected\*\*\*\*\*" << endl;

            User ob3;

            ob3.enterDetails();

            ob3.selectPaymentMode();

            userID=ob3.getNextUserID();

            cout << "\*\*\*\*\*Enter no. of rooms to be booked\*\*\*\*\*" << endl;

            cin >> room\_no;

            int count = room\_3.size();

            if (count + room\_no < totalrooms3)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_3.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        }

    }

    void sfinal\_bill(int n, int numDaysTrip, int room\_no)

    {

        if(n==1)

        {

            double final\_bill = numDaysTrip\* room\_fare1\*room\_no; // when using category 1 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;}

        else if(n==2)

        {

            double final\_bill = numDaysTrip\* room\_fare2\*room\_no; // when using category 2 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;

        }

        else if(n==3)

        {

            double final\_bill = numDaysTrip\* room\_fare3\*room\_no; // when using category 2 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;

        }

    }

     stemfield()

    {

        cout << "\t\*\*\*\*\*Your budget lies in the range of " << rating << " star hotel\*\*\*\*\*\t" << endl;

        smenu();

        sbook\_room();

       sfinal\_bill(n, numDaysTrip,  room\_no);

    }

};

// Mumbai hotel 2 class

class pridestar:public User

{

    int rating = 5;

    double hotel\_id = 1105;

    int room\_no;

    vector<int> room\_1;

    vector<int> room\_2;

    vector<int> room\_3;

    int room\_fare1 = 4000;

    int room\_fare2 = 5000;

    int room\_fare3 = 7000;

    int totalrooms1 = 20;

    int totalrooms2 = 10;

    int totalrooms3 = 10;

    int n;//for room category preference

    int numDaysTrip;

public:

    void pmenu()

    {

        cout << "\t\*\*\*\*\*\*\*\*\*\*WELCOME TO PRIDESTAR HOTEL\*\*\*\*\*\*\*\*\*\*\t" << endl;

        cout<<"\t\*\*\*\*\*\*\*\*\*\*MAIN MENU FOR ROOM BOOKING\*\*\*\*\*\*\*\*\*\*\t"<<endl;

        cout << "category 1---------category 2---------category 3" << endl;

        cout << " room-price:4000    |     room-price:5000     |   room-price:7000   " << endl;

        cout << "  food&drink        |      Gamezone acces     |     food&drinks     " << endl;

        cout << "                    |        food&drink       |     Gamezone access " << endl;

        cout << "                    |                         | Access to spa & gym " << endl;

    }

    void pbook\_room()

    {

        // press 1 for category 1,2 for category 2 and 3 for category 3

        cout << "Enter your preference of room category for room booking" << endl;

        cin >> n;

        cout << "Number of Days of Trip: ";

        cin >> numDaysTrip;

        switch (n)

        {

        case 1:

        {

            cout << "\*\*\*\*\*Category 1 selected\*\*\*\*\*" << endl;

            User ob1;

            ob1.enterDetails();

            ob1.selectPaymentMode();

            userID=ob1.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_1.size();

            if (count + room\_no < totalrooms1)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_1.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        case 2:

        {

            cout << "\*\*\*\*\*Category 2 selected\*\*\*\*\*" << endl;

            User ob2;

            ob2.enterDetails();

            ob2.selectPaymentMode();

            userID=ob2.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_2.size();

            if (count + room\_no < totalrooms2)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_2.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        case 3:

        {

            cout << "\*\*\*\*\*Category 3 selected\*\*\*\*\*" << endl;

            User ob3;

            ob3.enterDetails();

            ob3.selectPaymentMode();

            userID=ob3.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_3.size();

            if (count + room\_no < totalrooms3)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_3.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        }

    }

     void pfinal\_bill(int n, int numDaysTrip, int room\_no)

    {

         if(n==1)

         {

            double final\_bill = numDaysTrip\* room\_fare1\*room\_no; // when using category 1 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;}

        else if(n==2)

        {

            double final\_bill = numDaysTrip\* room\_fare2\*room\_no; // when using category 2 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;

        }

        else if(n==3)

        {

            double final\_bill = numDaysTrip\* room\_fare3\*room\_no; // when using category 2 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;

        }

    }

    pridestar()

    {

        cout << "\t\*\*\*\*\*\*\*\*\*\*Your budget lies in the range of " << rating << " star hotel\*\*\*\*\*\*\*\*\*\*\t" << endl;

        pmenu();

        pbook\_room();

        pfinal\_bill(n, numDaysTrip,room\_no);

    }

};

//Mumbai hotel 3 class

class galaxyinn:public User

{

    int rating = 7;

    double hotel\_id = 1107;

    int room\_no;

    vector<int> room\_1;

    vector<int> room\_2;

    vector<int> room\_3;

    int room\_fare1 = 4000;

    int room\_fare2 = 5000;

    int room\_fare3 = 7000;

    int totalrooms1 = 20;

    int totalrooms2 = 30;

    int totalrooms3 = 30;

    int n;

    int numDaysTrip;

public:

    void gmenu()

    {

        cout << "\t\*\*\*\*\*\*\*\*\*\*WELCOME TO Galaxyinn HOTEL\*\*\*\*\*\*\*\*\*\*\t" << endl;

        cout << "\*\*\*\*\*category 1--------------category 2---------------category 3\*\*\*\*\*" << endl;

        cout << " room-price:4000    |     room-price:5000     |   room-price:7000   " << endl;

        cout << "  Food&Drinks       |       food&drink        |     food&drinks     " << endl;

        cout << "  Gamezone access   |    Gamezone access      |     Gamezone access " << endl;

        cout << "                    |     Spa & Gym access    |  Spa & Gym access   " << endl;

        cout << "                    |                         |      zoom car       " << endl;

        cout << "                    |                         |      Home theatre   " << endl;

    }

    void gbook\_room()

    {

        // press 1 for category 1,2 for category 2 and 3 for category 3

        cout << "Enter your preference of room category for room booking" << endl;

        cin >> n;

        cout << "Number of Days of Trip: ";

        cin >> numDaysTrip;

        switch (n)

        {

        case 1:

        {

            cout << "\*\*\*\*\*Category 1 selected\*\*\*\*\*" << endl;

            User ob1;

            ob1.enterDetails();

            ob1.selectPaymentMode();

            userID=ob1.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_1.size();

            if (count + room\_no < totalrooms1)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_1.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        case 2:

        {

            cout << "\*\*\*\*\*Category 2 selected\*\*\*\*\*" << endl;

            User ob2;

            ob2.enterDetails();

            ob2.selectPaymentMode();

            userID=ob2.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_2.size();

            if (count + room\_no < totalrooms2)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_2.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        case 3:

        {

            cout << "\*\*\*\*\*Category 3 selected\*\*\*\*\*"<<endl;

            User ob3;

            ob3.enterDetails();

            ob3.selectPaymentMode();

            userID=ob3.getNextUserID();

            cout << "Enter no. of rooms to be booked" << endl;

            cin >> room\_no;

            int count = room\_3.size();

            if (count + room\_no < totalrooms3)

            {

                for (int i = 0; i < room\_no; i++)

                {

                    room\_3.push\_back(userID+i);

                }

            }

            else

            {

                cout << "\*\*\*\*\*Sorry! Rooms not available\*\*\*\*\*" << endl;

            }

            break;

        }

        }

    }

    void gfinal\_bill(int n, int numDaysTrip, int room\_no)

    {

        if(n==1)

        {

            double final\_bill = numDaysTrip\* room\_fare1\*room\_no; // when using category 1 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;}

        else if(n==2)

        {

            double final\_bill = numDaysTrip\* room\_fare2\*room\_no; // when using category 2 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;

        }

        else if(n==3)

        {

            double final\_bill = numDaysTrip\* room\_fare3\*room\_no; // when using category 2 room fare for final bill

            cout << "The total bill of customer is:" << final\_bill << endl;

        }

     }

        galaxyinn()

    {

        cout << "Your budget lies in the range of " << rating << " star hotel" << endl;

        gmenu();

        gbook\_room();

       gfinal\_bill( n,numDaysTrip, room\_no);

    }

};

//place class

class Delhi

{

    int days;

    double price;

    public:

    Delhi()

    {

        cout << "\t\*\*\*\*\*\*\*\*\*\*THANK YOU FOR CHOOSING DELHI AS DESTINATION\*\*\*\*\*\*\*\*\*\*\t" << endl;

        budget();

    }

    void budget()

    {

        cout << "\tEnter no of days for your trip\t" << endl;

        cin >> days;

        cout << "\tKindly enter budget for your hotel stay\t" << endl;

        cin >> price;

        try {

        if (price < days \* 5000) {

            throw runtime\_error("Budget too low");

        }

        if (price >= days \* 5000 && price < days \* 10000)

        {

             skyview obj1;

        }

        else if (price >= days \* 10000 && price < days \* 15000)

        {

             parktown obj2;

        }

        else if (price >= days \* 15000)

        {

             greendale obj3;

        }

    }

    catch (const runtime\_error& e) {

        cerr << "Exception caught: " << e.what() << endl;

    }}

};

//place class

class Mumbai

{

    int days;

    double price;

    public:

    Mumbai()

    {

        cout << "\t\*\*\*\*\*\*\*\*\*\*THANK YOU FOR CHOOSING MUMBAI AS DESTINATION\*\*\*\*\*\*\*\*\*\*\t" << endl;

        budget();

    }

    void budget()

    {

        cout << "\tEnter no of days for your trip\t" << endl;

        cin >> days;

        cout << "\tKindly enter budget for your hotel stay\t" << endl;

        cin >> price;

        try {

        if (price < days \* 5000) {

            throw runtime\_error("Budget too low");

        }

        if (price >= days \* 5000 && price < days \* 10000)

        {

             stemfield obj1;

        }

        else if (price >= days \* 10000 && price < days \* 15000)

        {

             pridestar obj2;

        }

        else if (price >= days \* 15000)

        {

             galaxyinn obj3;

        }

    }

    catch (const runtime\_error& e) {

        cerr << "Exception caught: " << e.what() << endl;

    }}

};

int main()

{

    cout<<"\t\tWELCOME TO EASE MY TRIP\t\t"<<endl;

    Delhi d1;

    cout<<"----------THANK YOU FOR CHOOSING OUR SERVICES WE HOPE YOU ENJOYED YOUR TRIP----------"<<endl;

    Mumbai m1;

    cout<<"----------THANK YOU FOR CHOOSING OUR SERVICES WE HOPE YOU ENJOYED YOUR TRIP----------"<<endl;

    return 0;

}