```cpp
//this program enables a customer to book for a  tour to some defined destinations.
#include<iostream>     //header files used..
#include<cstdio>
#include<cstring>
#include<stdlib.h>
using namespace std;

void booking();   //function used for booking
void cancel();    //function used for canceling the booked ticket.
void complain();  //function enables a customer to give feedback.
void admin();     //function defined for administrative purpose.
  //function defined for various destinations.
void Goa();
void Ooty();
void Ujjain();
void Delhi();
void Jabalpur();

double basecost,vat,stax,totalcost;
    //the following array holds the price of vehicles for Goa.
double GoaPriceofvehicle[]={0,2500,4500};
    //price of different accommodation types are stored for Goa tour.
double GoaPriceofacco[]={0,1000,1500,2300,3750,4100,5500,6600};
    //price of vehicle for Ooty.//
double OotyPriceofvehicle[]={0,4500,8000};
    //price of different accommodation types for Ooty.
double OotyPriceofacco[]={0,1300,1800,3000,4600,6300,7200,9500};
    //price of vehicle for Ujjain.//
double UjjainPriceofvehicle[]={0,4500,8000};
    //price of accommodation modes for Ujjain//
double UjjainPriceofacco[]={0,1500,2500,3300,4800,6300,7200,9500};
    //price of vehicle for Jabalpur.//
double JabalpurPriceofvehicle[]={0,4500,8000};
    //price of accommodation modes for//
double JabalpurPriceofacco[]={0,1500,2500,3300,4800,6300,7200,9500};
    //price of vehicle for Delhi.//
double DelhiPriceofvehicle[]={0,4500,8000};
    //price of accommodation modes for Delhi.//
double DelhiPriceofacco[]={0,1500,2500,3300,4800,6300,7200,9500};




char ca,ch,m, pass[10];   //declaration and initializing the variables of character and integer type.
int choice,i=0,exit1=0;
struct eachcustomer{

char name[50];

char phone[20];
char address[100];
```

```cpp
int desti;          //declaration of variable to store the information
int date;           //about a customer.
int vehicle;
int acco;
int ppl;
int days;
int status=0;
double bill;
long ID;
char complain[51];
int com=0;

};


struct eachcustomer customer[1000];  //declaration of structure..

int main(){
do{

    cout<<"************************EARTHED TRAVEL
AGENCY************************"<<endl;
    cout<<"\t\t(: Hello and Welcome :)"<<endl;
cout<<"If you are a customer, press 'C'"<<endl;
cout<<"If you are an admin, press 'A'"<<endl;
cin>>ca;
if(ca=='A')
{
cout<<"Enter password:"<<endl;
cin.ignore(); //asking for password from admin...
gets(pass);
if(strcmp(pass,"1309")==0)
admin();
else{
cout<<"Wrong password"<<endl;
cout<<"Press '0' to go back to the main menu:"<<endl;
cin>>m;
system("CLS"); //  for clearing the screen..
}
}
else if(ca=='C'){
cout<<"Press 'B' for booking, 'C' for cancellation, 'D' for registering complain"<<endl;
cin>>ch;
if(ch=='B')
booking();
else if(ch=='C')     //codes for differentiating between admin and customer..
cancel();
else if(ch=='D')
   complain();
else
cout<<"wrong input"<<endl;
}
else{
   cout<<"Wrong input"<<endl;
}
```

```cpp
}while(!exit1);
return 0;}
void booking(){
    char cont='y';
do{
        cout<<"1.Goa  2.Ooty  3.Ujjain  4.Delhi  5.Jabalpur"<<endl;//destination lists.
cin>>choice;

switch(choice){
case 1: {Goa();break;}
case 2: {Ooty();break;}     //function called according to choice..
case 3: {Ujjain();break;}
case 4: {Delhi();break;}
case 5: {Jabalpur();break;}
}

cout<<"Press 'Y' to check for other destinations"<<endl;
cout<<"Press 'C' to continue with the booking"<<endl;
cout<<"Press any other alphabet to go back to the main menu"<<endl;
cin>>cont;
}while(cont=='Y');
if(cont=='C'){
cout<<"Enter your name:"<<endl;
cin.ignore();
gets(customer[i].name);
//stores the name of customer
cout<<"Enter your phone number:"<<endl;
cin.ignore();
gets(customer[i].phone);        //store mobile no. of customer..
cout<<"Enter your address:"<<endl;
cin.ignore();
gets(customer[i].address);
//scanf("%s",customer[i].address);  //store the address..

cout<<"Enter the number of people accompanying you: (Must be less than 10)"<<endl;
cin>>customer[i].ppl;
while(true){                              //stores the name of all people in a group..
cout<<"Enter the destination code (1- Goa, 2- Ooty, 3- Ujjain, 4- Delhi, 5- Jabalpur):"<<endl;
cin>>customer[i].desti;
if(customer[i].desti<1 || customer[i].desti>5)
   {cout<<"Wrong input"<<endl;
   continue;}
   else break;
   }//destination is selected by customer
   int xo=0;
do{
    cout<<"Enter the date of journey (DDMMYY):"<<endl;
cin>>customer[i].date;
xo=0;
int date=customer[i].date;
if(date<999999 && date>100000)
{
int day=date/10000;
```

```cpp
int mon=(date%10000)/100;


int year=date%100;

if(year>14){
    if(mon<13&&mon>00){
        if(mon==02){
            if(year%4==0)
            {
                if(day<=29)
                 xo=1 ;
            }
            else
            {if(day<=28)
                xo=1 ;
                }
        }
        else if(mon==1 || mon==3 || mon==5 || mon== 7 || mon==8 || mon==10|| mon==12)
            if(day<=31)
            xo=1 ;

        else if(mon==4 || mon==6 || mon==9 || mon==11){
            if(day<=30)
                xo=1;
            }
        }
    } }
    if(xo==0)
        cout<<"Wrong input"<<endl;
}while(xo!=1);
//date of journey is given..
cout<<"Enter the duration of the tour(days):"<<endl;
cin>>customer[i].days;   //duration of journey is given by customer..
do{
    xo=0;
    cout<<"Enter the choice of vehicle (1- four seater, 2- nine seater):"<<endl;
cin>>customer[i].vehicle;
if(customer[i].vehicle==1||customer[i].vehicle==2)
    xo=1;
    if(xo==0)
        cout<<"wrong choice"<<endl;
}while(xo==0);
//choice for vehicle by customer
do{
    xo=1;
cout<<"The accomodation options:"<<endl;
cout<<"(1- single bed"<<endl;
cout<<"2- double bed"<<endl;
cout<<"3- 1 single bed + 1 double bed"<<endl;
cout<<"4- 2 double bed+ 1 single bed"<<endl;
cout<<"5- 3 double bed"<<endl;
cout<<"6- 4 double bed)"<<endl;
cout<<"Enter your accomodation choice:"<<endl;
cin>>customer[i].acco;  //choice for accommodation..
```

```cpp
if(customer[i].acco<=6 && customer[i].acco>=1)
{
    int choice=customer[i].desti;
if(choice==1)        //calculation of total cost for different destination..
        basecost=(GoaPriceofvehicle[customer[i].vehicle]+
GoaPriceofacco[customer[i].acco])*(customer[i].days);

    else if(choice==2)
        basecost=(OotyPriceofvehicle[(customer[i].vehicle)-1]+ OotyPriceofacco[(customer[i].acco)-
1])*customer[i].days;

    else if(choice==3)
        basecost=(UjjainPriceofvehicle[(customer[i].vehicle)-1]+ UjjainPriceofacco[(customer[i].acco)-
1])*customer[i].days;

    else if(choice==4)
        basecost=(JabalpurPriceofvehicle[(customer[i].vehicle)-1]+
JabalpurPriceofacco[(customer[i].acco)-1])*customer[i].days;
    else if(choice==5)
        basecost=(DelhiPriceofvehicle[(customer[i].vehicle)-1]+ DelhiPriceofacco[(customer[i].acco)-
1])*customer[i].days;

}
else
    {cout<<"wrong input"<<endl;
    xo=0;}
}while(xo==0);

    vat=15.5/100*basecost;
    stax=12.5/100*basecost;
    cout<<"The base cost is:\n";
    cout<<basecost<<endl;;
    cout<<"\nVat:\n";
    cout<<vat<<endl;
    cout<<"\nService Tax:\n";            //displaying the travel expenses of the customer
  cout<<stax<<endl;
  cout<<"The total cost:\n";
totalcost=basecost+vat+stax;
    cout<<totalcost<<endl;

    char conti;
    cout<<"Do you want to continue? (Y or N)"<<endl;
    cin>>conti;
    if(conti=='Y')
      {
        customer[i].bill=totalcost;  //generating the bill and customer ID..
    customer[i].ID=1450+i; customer[i].status=1;
    cout<<"\nYour booking has been confirmed."<<endl;
    cout<<"BILL"<<endl;
    cout<<"Customer ID:";
    cout<<customer[i].ID<<endl;
    cout<<"Name: "<<customer[i].name<<endl;
    cout<<"Destination: ";
    if(customer[i].desti==1)
```

```cpp
            cout<<"Goa";
            if(customer[i].desti==2)
            cout<<"Ooty";
            if(customer[i].desti==3)
            cout<<"Ujjain";
            if(customer[i].desti==4)
            cout<<"Jabalpur";
            if(customer[i].desti==5)
            cout<<"Delhi";
            cout<<endl;
        cout<<"Date: "<<customer[i].date<<endl;
        cout<<"Duration: "<<customer[i].days<<endl;   //displaying available information about customer
and journey..
        cout<<"Totalcost: "<<customer[i].bill<<endl<<endl;

cout<<"Thank you"<<endl<<endl<<endl;

cout<<"Press any alpha/numeric key to return to the main menu"<<endl;
char x[5];
cin.ignore();
gets(x);          //returning to main menu..
system("CLS");
    i++;
        }}
else
   system("CLS");
}        //function for canceling ticket...
void cancel(){
    int ID;char can;
cout<<"Enter your customer ID: (you need to enter only numerals)  ";
cin>>ID;
for(int a=0;a<i;a++)
        if(ID==customer[a].ID)//checking the ID of customer given at the time of booking..
        {
            cout<<"Name: "<<customer[a].name<<endl;
               cout<<"Destination: "<<customer[a].desti<<endl;//obtaining data from database..
               cout<<"Date: "<<customer[a].date<<endl;
        cout<<" Are you sure you want to cancel the booking? (Y/N): ";
        cin>>can;
        if(can=='Y')
    {customer[a].status=0;
    cout<<"Your booking has been successfully cancelled"<<endl;}}

    else
        cout<<"The customer ID does not exist"<<endl;
    cout<<"Press '0' to return to the main menu"<<endl;
    int ret;
    cin>>ret;
    system("CLS");
}
     //function used for complain..
void complain()
{
    int id,k=0;
    cout<<"Enter you customer ID:"<<endl;
```

```cpp
    cin>>id;
    for(int a=0;a<i;a++)
    {
       if(customer[a].ID==id)

          {
             cout<<"Name: "<<customer[a].name<<endl;
             cout<<"Destination: "<<customer[a].desti<<endl;      //displays a brief detail of the
customer
             cout<<"Date: "<<customer[a].date<<endl;
             cout<<"Enter the complain (Within 50 words):"<<endl;
       scanf("%s",customer[a].complain);              //stores the feedback given by customer..
       customer[a].com=1;
       cout<<"Your complain has been successfully registered"<<endl;
       k++;break;}
    }
    if(k==0)
       cout<<"The ID does not exist"<<endl;

    cout<<"Press '0' to go back to the main menu"<<endl;
    cin>>m;
    system("CLS");
}
void admin(){
char choc;
int adch;
do{
     choc='k';
cout<<endl<<endl;
cout<<"1. Display personal details of all customer"<<endl;
cout<<"2: Display by date"<<endl;
cout<<"3: Display by vehicle"<<endl;
cout<<"4: Display by destination"<<endl;                  //work options of admin..
cout<<"5: Search by ID:"<<endl;
cout<<"6: Search by name:"<<endl;
cout<<"7: View the complains:"<<endl;
cout<<"8: Terminate:"<<endl;


cout<<"Enter your choice: ";
cin>>adch;

cin.ignore();
char ex;

if (adch==1){
     int m=0;
     if(i==0)
     cout<<"Nothing to display"<<endl;
     else{
   for(int a=0;a<i;a++)
{
   if(customer[a].status==1) //checking for a booked ID
 {cout<<"\nCustomer Id:"<<customer[a].ID<<endl;
 cout<<"Name:"<<customer[a].name<<endl;
```

```cpp
            cout<<"Phone No.:"<<customer[a].phone<<endl;
            cout<<"Address:"<<customer[a].address<<endl;
            cout<<"Company:"<<customer[a].ppl<<endl<<endl;    //displaying details
            m++;
}}
if(m==0)
    cout<<"Nothing to display"<<endl;
}}

else if(adch==2)
{cout<<"Enter the date(DDMMYY): ";
int date,b=0;
cin>>date;
for(int a=0;a<i;a++)
{
    if(customer[a].date==date)// checking the data for the same date
    {
        cout<<"\nCustomer Id:"<<customer[a].ID<<endl;
        cout<<"Name:"<<customer[a].name<<endl;
    cout<<"Phone No.:"<<customer[a].phone<<endl;
    cout<<"Address:"<<customer[a].address<<endl;
    cout<<"Company:"<<customer[a].ppl<<endl<<endl;
    b++;
    }}
    if(b==0)
        cout<<"No match found"<<endl; //if no match is found
}
else if(adch==3){

cout<<"Enter the vehicle type: ";
int veh;
int b=0;
cin>>veh;
for(int a=0;a<i;a++)
{
    if(customer[a].vehicle==veh)// checking for the match in vehicle type
    {
            cout<<"\nCustomer Id:"<<customer[a].ID<<endl;
        cout<<"Name:"<<customer[a].name<<endl;
    cout<<"Phone No.:"<<customer[a].phone<<endl;
    cout<<"Address:"<<customer[a].address<<endl;
    cout<<"Company:"<<customer[a].ppl<<endl<<endl;
    b++;
    }
    if(b==0)
        cout<<"No match found"<<endl;
}
}

else if(adch==4)
{

    cout<<"Enter the destination: ";
int desti,b=0;
cin>>desti;
```

```cpp
for(int a=0;a<i;a++)
{
    if(customer[a].desti==desti) //checking for destination match
    {
            cout<<"\nCustomer Id:"<<customer[a].ID<<endl;
        cout<<"Name:"<<customer[a].name<<endl;
cout<<"Phone No.:"<<customer[a].phone<<endl;
cout<<"Address:"<<customer[a].address<<endl;
cout<<"Company:"<<customer[a].ppl<<endl<<endl;
b++;
    }
    if(b==0)
        cout<<"No match found"<<endl;
}
 }

else if(adch==5)
    {cout<<"Enter the customer ID: ";
    int ID,b=0;
    cin>>ID;
    cin.ignore();
    for(int a=0;a<i;a++)
{
    if(customer[a].ID==ID) //searching for the given Id in the data
    {

        cout<<"Name:"<<customer[a].name<<endl;
cout<<"Phone No.:"<<customer[a].phone<<endl;
cout<<"Address:"<<customer[a].address<<endl;
cout<<"Company:"<<customer[a].ppl<<endl;
cout<<"Destination:"<<customer[a].desti<<endl<<endl;
  b++; }
}
if(b==0)
    cout<<"Not found"<<endl;
    }

    else if(adch==6)
{
    cout<<"Enter the name: ";
    char name[20],b=0;
    scanf("%s",name);

    for(int a=0;a<i;a++)
{
    if(strcmp(customer[a].name,name)==0) //searching by name
    {
            cout<<"\nCustomer Id:"<<customer[a].ID<<endl;
cout<<"Phone No.:"<<customer[a].phone<<endl;
cout<<"Address:"<<customer[a].address<<endl;
cout<<"Company:"<<customer[a].ppl<<endl<<endl;
  b++; }
}
if(b==0)
    cout<<"Not found"<<endl;
```

```cpp
}
else if(adch==7)
{ int j=0;
cout<<endl;
    for(int a=0;a<i;a++)
    {
        if(customer[a].com==1) //looking into the data whether a complain is registered
        {cout<<customer[a].ID<<"\t"<<customer[a].complain<<endl;j++;} //displaying the complain
    }
    if(j==0)
        cout<<"No complains to display"<<endl;
}
else if(adch==8)
{   cout<<"[THIS WILL LEAD TO LOSS OF ALL DATA RELATED TO CUSTOMER]"<<endl;
    cout<<"Do you still want to terminate the program?"<<endl;
    cout<<"If yes: press 'y', or press 'e' to go to the admin menu"<<endl;
    cout<<"Press any other alpha/numeric key to go back to the main menu"<<endl;
    cin>>choc;
    if(choc=='y')
    exit1=1;
}
else{
    cout<<"wrong input"<<endl;
}
if(adch!=8)
{
    cout<<"Press 'e' to perform other admin operation"<<endl;
cout<<"Press any other alpha/numeric key to go back to the main menu"<<endl;
cin>>choc;
}system("CLS");
}while (choc=='e');
}
    //definition of various function of destinations which displays the destination details..
void Goa()
{
cout<<"\t\t**GOA**"<<endl;
 cout<<"Distance - 750km"<<endl;

 cout<<"What type of mode of travel do you want?\n"<<endl;
 cout<<"1.four seater.   ";
 cout<<GoaPriceofvehicle[1];
 cout<<"\n2.nine seater.   ";
 cout<<GoaPriceofvehicle[2];

 cout<<"\navailable motels:\n";
 cout<<"1.NORTH16 GOA .          \n";
 cout<<"2.RIVERSIDE REGENCY RESORT.          \n";
 cout<<"3.ESTRELA DO MAR BEACH RESORT.           \n";

 cout<<"\naccommodation facilities:\n";
 cout<<"1.single bed:Rs.";
 cout<<GoaPriceofacco[1];
 cout<<"\n2.double bed: Rs.";
```

```cpp
cout<<GoaPriceofacco[2];
cout<<"\n3.one single + one double bed:Rs. ";
cout<<GoaPriceofacco[3];
cout<<"\n4.two double + one single bed:Rs.  ";
cout<<GoaPriceofacco[4];
cout<<"\n5.three double bed:Rs.";
cout<<GoaPriceofacco[5];
cout<<"\n6.four double bed:";
cout<<GoaPriceofacco[6]<<endl<<endl;



}

void Ooty()
{   cout<<"\t\t**OOty**"<<endl;
    cout<<"distance- 1161km"<<endl;

cout<<"what type of mode of travel do you want?\n"<<endl;
cout<<"1.four seater =Rs.";
cout<<OotyPriceofvehicle[1];
cout<<"\n2.nine seater=Rs.";
cout<<OotyPriceofvehicle[2];

cout<<"\navailable motels:\n";
cout<<"1.GEMS PARK RESORT    \n";
cout<<"2. ZEST RESORT          \n";
cout<<"3.FORTUNE RESORT            \n";

cout<<"accommodation facilities:\n";
cout<<"\n1.single bed=Rs.";
cout<<OotyPriceofacco[1];
cout<<"\n2.double bed=Rs.";
cout<<OotyPriceofacco[2];

cout<<"\nspecial accommodating facilities:-you save as your choice:\n";

cout<<"1.one single + one double bed:Rs.";
cout<<OotyPriceofacco[3];
cout<<"\n2.one double bed= Rs.";
cout<<OotyPriceofacco[4];
cout<<"\n3.two double + one single bed=Rs.";
cout<<OotyPriceofacco[5];
cout<<"\n4.three double bed=Rs.";
cout<<OotyPriceofacco[6];
cout<<"\n5.four double bed=Rs.";
cout<<OotyPriceofacco[7]<<endl<<endl;



}


void Ujjain(){   cout<<"\t\t**UJJAIN**"<<endl;
    cout<<"distance - 640km"<<endl;
```

```cpp
cout<<"what type of mode of travel do you want?\n"<<endl;
cout<<"1.four seater Rs.";
cout<<UjjainPriceofvehicle[1];
cout<<"\n2.nine seater Rs.";
cout<<UjjainPriceofvehicle[2];

cout<<"\navailable motels:\n";
cout<<"1.MEGHDOOT HOTEL .          \n";
cout<<"2.RAMKRISHNA RESORT.         \n";
cout<<"3.GRAND TOWER RESORT.            \n";

cout<<"accommodation facilities:\n";
cout<<"\n1.single bed=Rs.";
cout<<UjjainPriceofacco[1];
cout<<"\n2.double bed=Rs.";
cout<<UjjainPriceofacco[2];

cout<<"\nspecial accommodating facilities:-you save as your choice:\n";

cout<<"1.one single + one double bed=Rs.";
cout<<UjjainPriceofacco[3];
cout<<"\n2.one double bed=Rs.";
cout<<UjjainPriceofacco[4];
cout<<"\n3.two double + one single bed=Rs.";
cout<<UjjainPriceofacco[5];
cout<<"\n4.three double bed=Rs.";
cout<<UjjainPriceofacco[6];
cout<<"\n5.four double bed=Rs.";
cout<<UjjainPriceofacco[7]<<endl<<endl;

}

void Delhi(){  cout<<"\t\t**delhi**"<<endl;
   cout<<"distance - 1195km"<<endl;

cout<<"what type of mode of travel do you want?\n"<<endl;
cout<<"1.four seater-Rs.";
cout<<DelhiPriceofvehicle[1]<<endl;
cout<<"2.nine seater-Rs.";
cout<<DelhiPriceofvehicle[2]<<endl;

cout<<"\navailable motels:\n";
cout<<"1.WYNDHAN GRAND RESORT.          \n";
cout<<"2.RAY OF MAYA RESORT.         \n";
cout<<"3.HOTEL ARYAN TAJ.            \n";

cout<<"accommodation facilities:\n";
cout<<"1.single bed-Rs.";
cout<<DelhiPriceofacco[1]<<endl;
cout<<"2.double bed-Rs.";
cout<<DelhiPriceofacco[2]<<endl;

cout<<"special accommodating facilities:-you save as your choice:\n";

cout<<"1.one single + one double bed:Rs.";
```

```cpp
    cout<<DelhiPriceofacco[3]<<endl;
    cout<<"\n2.one double bed=Rs.";
    cout<<DelhiPriceofacco[4]<<endl;
    cout<<"\n3.two double + one single bed=Rs.";
    cout<<DelhiPriceofacco[5]<<endl;
    cout<<"\n4.three double bed=Rs.";
    cout<<DelhiPriceofacco[6]<<endl;
    cout<<"\n5.four double bed=Rs.";
    cout<<DelhiPriceofacco[7]<<endl<<endl;


}
void Jabalpur(){  cout<<"\t\t**JABALPUR**"<<endl;
cout<<"distance - 1036km"<<endl;

 cout<<"what type of mode of travel do you want?\n"<<endl;
 cout<<"1.four seater.   ";
 cout<<JabalpurPriceofvehicle[1];
 cout<<"\n2.nine seater.   ";
 cout<<JabalpurPriceofvehicle[2];

 cout<<"\navailable motels:\n";
 cout<<"1.HOTEL SATYA ASHOKA .          \n";
 cout<<"2.KANAK RESORT.          \n";
 cout<<"3.HOTEL KRISHNA.           \n";

 cout<<"accommodation facilities:\n";
 cout<<"\n1.single bed-Rs. ";
 cout<<JabalpurPriceofacco[1];
 cout<<"\n2.double bed=Rs.";
cout<<JabalpurPriceofacco[2];

 cout<<"\nspecial accommodating facilities:-you save as your choice:\n";

 cout<<"\n1.one single + one double bed:Rs.";
 cout<<JabalpurPriceofacco[3];
 cout<<"\n2.one double bed=Rs.";
 cout<<JabalpurPriceofacco[4];
 cout<<"\n3.two double + one single bed=Rs.";
 cout<<JabalpurPriceofacco[5];
 cout<<"\n4.three double bed=Rs.";
 cout<<JabalpurPriceofacco[6];
 cout<<"\n5.four double bed=Rs.";
 cout<<JabalpurPriceofacco[7]<<endl<<endl;
}
```