PROJECT PROPOSAL

PROGRAMMING TECHNIQUE 2

‘Airline Ticketing System’

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SECTION: SECTION 05

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**INTRODUCTION**

We will be implementing a project on ticketing system for airlines by using C++. Our coding is about how customers can book their tickets online. Thus, this system will ease the booking process. Our coding consists of:-

* Details of user
* Ask user for the date they would like to book for a flight
* Choice of place for departure and arrival
* Class for Airlines (Business, First Class, Economy)
* Display of payment for each airline class
* Number of person for different age groups (Adult, child, infant)
* Display of payment details
* Display of all details

**UML diagram**

Class Details

# ic, name, phone, email : string

+Details()

+setDetails : void

+printDetails : void

class Ticket

# kelas, adult, child, infant : int

# total1, total2, total : double

+ askTicket() : int

+ totalPay() : double

+ askPeople() : int

+ PrintTicket() : void

class Book

# date, month, year : int

# d1, m1, y1 : int

+ BookingDate() : void

+ PrintBook() : void

class Place

# arrive, depart : string

+ Destination : string

+ PrintPlace() : void

**C ++ CODING**

//Shakirah Arina

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#include <iostream>

#include <string>

#include <cstdlib>

#include <fstream>

using namespace std;

class Details {

protected :

string name, ic, phone, email;

public :

Details ()

{

name = ic = phone = email = "";

}

void setDetails (); //ask user about his/her personal details

void printDetails(); //print personal details

}; //end of class Details

void Details :: setDetails ()

{

string Array [5];

ofstream outfile("Details.txt"); //create file names Details.txt

cout << "IC number : ";

cin >> ic ;

cout << "Name : " ;

cin.ignore();

getline (cin, name) ;

cout << "Email : " ;

getline (cin, email);

cout << "Number Phone : ";

cin >> phone;

cout << endl;

//put into the fille

outfile << "NAME " << "\t\t\t" << "IC NUMBER" << "\t\t\t" << "EMAIL" <<endl;

outfile << name << "\t\t" << ic << "\t\t\t" << email << endl << endl;

outfile<<endl<<endl<<endl;

outfile.close();

}

void Details :: printDetails ()

{

string s;

string array[5];

ifstream infile("Details.txt"); //read file names Details.txt

cout << "\n\nHere is passenger personal details :- " << endl << endl;

cout << "===============================================================" << endl;

cout << "User Details " ;

//print the Details of passenger

for(int i=0;i<5;i++)

{

getline(infile,s);

array[i]=s;

s=" ";

cout<<endl;

cout<<array[i];

}

}

//start of class Place

class Place

{

private :

string arrive, depart;

Details detail; // composition

public :

string Destination ()

{

string Dest [5];

ofstream outfile("Destination.txt"); //create outputfile named Destination.txt

cout << "Depart from : ";

cin.ignore();

getline (cin, depart);

cout << "Arrive at : ";

getline (cin, arrive);

cout << endl;

//check condition for arrive and depart

while (depart == arrive)

{

//cin.ignore();

cout << "Departure and Arriving cannot be same!" << endl;

cout << "Depart from : ";

cin.ignore();

getline (cin, depart);

cout << "Arrive at : ";

getline (cin, arrive);

cout << endl;

}

//put the data into file

outfile << "DEPART" << "\t\t\t" << "ARRIVING" << endl;

outfile << depart << "\t\t\t" << arrive << endl ;

outfile.close();

}

//to print the destination

void PrintPlace ()

{

string d;

string array1[5];

ifstream inf ("Destination.txt"); //read the file named Destination.txt

detail.printDetails(); //call printTicket() in class Details by using a compostion

for (int i= 0; i<5; i++)

{

getline (inf, d);

array1[i] = d;

d = " ";

cout << endl;

cout << array1[i];

}

}

};//end of class Place

//start of class Book inherted from classDetails

class Book : public Details {

protected :

int date, month, year;

int d1, m1, y1;

public :

//ask user when they want to book

void BookingDate ()

{

int Ticket[5];

ofstream outfile ("Booking.txt"); //create outputfile name Booking.txt

cout << "Today's Day (DD) : " ;

cin >> d1;

cout << "Month (MM) : " ;

cin >> m1 ;

cout << "Year (YYYY) : " ;

cin >> y1;

cout << endl;

cout << "\nWhat date do you want to book? " << endl;

cout << "Date (DD) : ";

cin >> date ;

cout << "Month (MM) : ";

cin >> month;

cout << "Year (YYYY) : ";

cin >> year;

cout << endl;

while ((year <= y1 && month <= m1 && date <= d1 )) //check condition for year, month and date

{

cout << "Invalid date" << endl;

cout << "\nWhat date do you want to book? " << endl;

cout << "Date (DD) : ";

cin >> date ;

cout << "Month (MM) : ";

cin >> month;

cout << "Year (YYYY) : ";

cin >> year;

cout << endl;

}

setDetails();

outfile << "DATE BOOKING : " << date << " / " << month << " / " << year << endl << endl; //put into the file

outfile.close();

}

//to display the data for booking date

void PrintBook()

{

string b;

string array3 [5];

ifstream file("Booking.txt"); //read the file named Booking.txt

for (int i=0; i<5; i++)

{

getline(file, b);

array3[i] = b;

b = " ";

cout << endl;

cout << array3[i];

}

}

}; //end of class Book

//start of class Ticket inherited from class Book

class Ticket : public Book {

protected :

int kelas;

int adult;

int child;

int infant;

double total1, total2, total;

Place place; //composition

public :

//ask the user to choose which class they want to sit

int askTicket ()

{

cout << "\nPlease choose class:- " << endl;

cout << "1. BUSINESS CLASS" << endl;

cout << "2. FIRST CLASS" << endl;

cout << "3. ECONOMY CLASS" << endl;

cout << "Your choice : ";

cin >> kelas;

cout << endl;

if ( kelas == 1)

{

cout << "The Price Details" << endl;

cout << "Adult is RM 1000.OO" << endl;

cout << "Child is RM 500.00" << endl;

cout << "Infant is free" << endl;

}

else if (kelas == 2)

{

cout << "The Price Details" << endl;

cout << "Adult is RM 600.00" << endl;

cout << "Child is RM 250.00" << endl;

cout << "Infant is free" << endl;

}

else if (kelas == 3)

{

cout << "The Price Details" << endl;

cout << "Adult is RM 300.00" << endl;

cout << "Child is RM 150.00" << endl;

cout << "Infant is free" << endl;

}

else

{

cout << "Oppsss. You choose a wrong option" << endl;

}

return kelas;

}

//calculate all the cost for adult and child

double totalPay ()

{

string arr[5];

ofstream out("People.txt"); //create a file name People.txt

if ( kelas == 1 )

{

total1 = 1000\*adult;

total2 = 500\*child;

total = total1 + total2;

//cout << "Total : RM " << total << endl;

out << "TOTAL : RM " << total << endl;

}

else if ( kelas == 2 )

{

total1 = 600\*adult;

total2 = 250\*child;

total = total1 + total2;

//cout << "Total : RM " << total << endl;

out << "TOTAL : RM " << total << endl;

return total;

}

else

{

total1 = 300\*adult;

total2 = 150\*child;

total = total1 + total2;

out << "TOTAL : RM " << total << endl;

return total;

}

out.close(); //close People.txt file

}

//ask user how many adults, children and infants

int askPeople ()

{

int Peep[5];

ofstream ofile ("People.txt");//create output file named People.txt

cout << endl;

cout << "How many people? " << endl;

cout << "Adult (13 years old and above): " ;

cin >> adult;

cout << "Child (6-12 years old): " ;

cin >> child;

cout << "Infant (0-5 years old): ";

cin >> infant;

ofile << "ADULT" << "\t\t" << "CHILD" << "\t\t" << "INFANT" << endl;

ofile << adult << "\t\t" << child << "\t\t" << infant << endl;

ofile.close(); //close file

}

//print the booking date, place for depart and arrive, and print total cost

void PrintTicket()

{

string a;

string array2 [5];

ifstream input("People.txt"); //read the inputfile name People.txt

place.PrintPlace(); //call a function in class Place by using a composition

PrintBook(); //call a funtion in class Book by using an inheritance

for (int i=3; i>0; i--)

{

getline (input, a);

array2[i] = a;

a = " ";

cout << endl;

cout << array2[i];

}

}

};

//to give the user option

int menu ()

{

int choice;

cout << endl << endl << endl;

cout << "==========Menu============" << endl;

cout << "1. Booking Ticket" << endl;

cout << "2. Print Ticket" << endl;

cout << "3. Exit" << endl;

cout << endl;

cout << "Enter your choice => " ;

cin >> choice;

cout << endl;

return choice;

} //end of int menu()

int main()

{

cout << "----------------------" << endl;

cout << "| WELCOME TO |" << endl;

cout << "| ARISHAKHAN AIRLINE|" << endl;

cout << "| TICKETING SYSTEM |" << endl;

cout << "----------------------" << endl;

Details det;

Book bk;

Place pl;

Ticket t;

int choice=0;

while (choice !=3)

{

choice = menu();

switch (choice)

{

case 1: bk.BookingDate();

pl.Destination();

t.askTicket();

t.askPeople();

t.totalPay();

t.PrintTicket();

break;

case 2: cout << "^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^" << endl;

cout << "^ The confirmation ticket has been sent to your email. ^" << endl;

cout << "^ Please check your email ^" << endl;

cout << "^ You need to download the confirmation ticket through your email ^" << endl;

cout << "^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^";

break;

}

}

cout << "Thank you for using our system!" << endl;

return 0;

}

These are the output of the program when we run it



