Maira Soomro | Section 1003 | Assignment 3

This program makes use of the concept of inheritance to create a program that calculates the total cost of a trip depending on the number of nights, people and whether airfare is included or not.

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| --- |
| Vacation |
| #destination: string  #hotel: string  #numPeople: int  #numNights: int  #perNight: double |
| +Vacation()  +Vacation(string, string, int, int, double)  +getDestination(): string  +getHotel(): int  +getNights(): int  +getPerNight(): double  +totalCost(): double  +perPersonCost(): double |

|  |
| --- |
| VacationWithPlane |
| -airline: string  -airfare: double |
| +VacationWithPlane()  +VacationWithPlane(string, string, int, int, double, string, double)  +getAirline(): string  +getAirfarel(): double  +totalCost(): double  +perPersonCost(): double |

**Vacation.h**

Vacation();

// Default constructor

// Post: dollars, cents have been set to blanks

Vacation(string, string, int, int, double);

// Parameterized constructor

// Post: Data fields have been set to parameters

string getDestination();

// Post: Return value is the city name

string getHotel();

// Post: Return value is the hotel name

int getPeople();

// Post: Return value is the number of people

int getNights();

// Post: Return value is the number of nights

double getPerNight();

// Post: Return value is the cost per night

double totalCost();

// Post: return value is the total cost of the trip

double perPersonCost();

// Post: return value is the cost per person

**VacationWithPlane.h**

VacationWithPlane();

// Default constructor

// Post: destination, hotel, number of people, number

// of nights, cost per night are initialized

VacationWithPlane(string, string, int, int, double, string, double);

// Parameterized constructor

// Post: Data fields have been set to parameters

string getAirline();

// Post: Return value is the airline name

double getAirfare();

// Post: Return value is this airfare amount

double totalCost();

// Post: Return value is the total cost of the

// whole trip

double perPersonCost();

// Post: Return value is the total cost of the

// trip divided by the number of people on the

// trip