LAHORE GARRISON UNIVERSITY
LAHORE, PAKISTAN
Department of Computer Science
Assignment 1: Spring 2021

Subject: Object Oriented Programming (Lab)   Posted Date: 27 March, 2021

Due Date: **31 March, 2020**   Total Marks: 40

NOTE: Do as directed don't go into extra detail. Only crisp and concise answers will earn you credit

---

Question 1. Create a class called Invoice that an AL-Jannat Store might use to represent an invoice for an item sold at the store. An Invoice should include six data members: a item number (string) , a item description (string), a quantity of the item being purchased (int), a price per item (int) a value-added tax (VAT) rate as a decimal (double), and a discount rate as a decimal (double).

Your class should have a constructor that initializes the six data members. The constructor should initialize the first four data members with values from parameters and the last two data members to default values of 0.20 per cent and zero respectively.

Provide a set and a get functions for each data members. In addition, provide a member function named Get_Invoice_Amount that calculates the invoice amount (i.e., multiplies the quantity by the price per item and applies the text and discount amounts), then returns the amount.

Write a test program to demonstrate Invoice's capabilities.

Question 2. Create a class called MotorVehicle that represents a motor vehicle using: make (string), fuelType (type string), yearOfManufacture (int), color (string), and engineCapacity (int). Your class should have a constructor that initializes the three data members. Provide a set and a get function for each data member. Add a member function called displayCardDetails that displays the five data members in five separate lines in the form "member name: member value".

Write a test program to demonstrate MotorVehicle's capabilities.

Question 3. Create a class called Date that includes three data members: a month (int), a day (int), and a year (int). Your class should have a constructor with three parameters that uses the parameters to initialize the three data members. For the purpose of this question, assume that the values provided for the year and day are correct, but ensure that the month value in the range 1-12; if it isn't, set the month to 1.

Provide a set and a get function for each data member. Provide a member function displayDate that displays the month, day and year separated by forward slashes (/).

Write a test program that demonstrates class Date's capabilities.

Question 4. Create a class called Distance that includes two pieces of information as data members---feet (int), inches (int). Your class should have a constructor which initializes the two data members.

Provide a set and a get function for each data member. Provide a member function Display_Distance that displays the feet and inches in the form of 5'6''.

Write a test program that demonstrates class Distance's capabilities.

…………………………………………….Best of Luck……………………………………………