Lab Assignment 1

Date:27 September 2022

Duration: 60 minutes

Description

Date

Date class contains three encapsulated attributes, day, month, and year. Provide a three-argument constructor and setters and getters. Constructor should initialize the variables according to the rules of *month*, *day*. *The Year* should be any positive number and ignore the leap year for February.

Person

This class should contain *firstName*, lastName, and dob of Date type. All attributes should be encapsulated. Then, create a parameterized constructor with three arguments, firstName, lastName and Date. Inside the body of the constructor, initialize all three instance variables.

Driver

In the Driver, class, you must create a static array of a Person type of length 10. Initilize all ten elements of a person's list with some random values. Create two methods *displayList* and *countPersons* to display the details of each person and count list elements, respectively.

Instructions:

Use proper access modifiers for a specific member of a class.

Use proper names as suggested in UML class diagram

The code should be indented.

The timiley runnable code will have a maximum weightage.

Person

-firstName: String
-lastName: String
-dob: Date

«constructor»+Person(firstName: String, lastName: String, dob: Date)
+setFirstName(firstName: String)
+setLastName(lastName: String)
+setDOB(dob: Date)
+getFirstName(): String
+getLastName(): String
+getDOB(): Date
+toString(): String

Date

-day: int
-month: int
-year: int

«constructor»+Date(day: int, month: int, year: int)
+setDay(day: int)
+setMonth(month: int)
+setYear(year: int)
+getDay(): int
+getMonth(): int
+getYear(): int
+toString(): String

+uses

Driver

-list[]: Person

«static»+displayList(list[]: Person)
«static»+countPerson(list[]: Person)