Java SE 8 Programming Language

Training Assignments

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RECORD OF CHANGES

No	Effective Date	Change Description	Reason	Reviewer	Approver
1	01/Oct/2018	Add the new labs	Create new	DieuNT1	VinhNV
2	12/May/2019	Update exercise	Update	DieuNT1	VinhNV
3	01/Jun/2019	Fsoft Template	Update	DieuNT1	VinhNV

Contents

CODE:	JPL.S.A101
TYPE:	SHORT
LOC:	
DURATION:	60 MINUTES

Assignment 1 – Option 1: Basic OOP

Objectives:

After finishing the following exercises, trainees will:

- ✓ Understand and practice with Classes, Object, Access Modifier, Constructors, Super, this keyword.
- ✓ Practice with control-of-flow statements
- ✓ Understand the interface and inheritance
- ✓ Practice with interface and inheritance

Working Environments:

- JDK 1.8
- Eclipse Java IDE for Developer

Assignment Descriptions:

Create a super abstract class called **Car**. The Car class has the following fields and methods.

- int speed;
- double regularPrice;
- String color;
- abstract double getSalePrice();

Create a subclass of Car class and name it as **Truck**. The Truck class has the following fields and methods.

- int weight;
- double getSalePrice(); //If weight > 2000,10% discount. Otherwise, 20% discount.

Create a subclass of Car class and name it as **Ford**. The Ford class has the following fields and methods.

- int year;
- int manufacturerDiscount;
- double getSalePrice();
- //From the sale price computed from Car class, subtract the manufacturer Discount

Create a subclass of Car class and name it as **Sedan**. The Sedan class has the following fields and methods.

- int length;
- double getSalePrice(); // If length > 20 feet, 5% discount. Otherwise, 10% discount.

Create **MyOwnAutoShop** class which contains the main() method. Perform the following within the main() method.

- Create some instances of **Sedan** class and initialize all the fields with appropriate values. Use super(...) method in the constructor for initializing the fields of the superclass.

- Create two instances of the **Ford** class and initialize all the fields with appropriate values. Use super(...) method in the constructor for initializing the fields of the super class.
- Create two instances of **Truck** class and input all the fields with appropriate values.

Create an array of cars and display the sale prices of all instances.

Functional Requirements:

- Write a java console program to resolve this assignment.

Guidelines:

- Create a project named **JPL.S.A101**, create package ***fa.training.entities*** that contains the above classes.
- Create a new package named ***fa.training.main*** contains **MyOwnAutoShop** class.

-- THE END --