

**Module 2**  
**Java Development**

Assignment 6- MADP202- June 14, 2017

Due: Friday June 16, 6:00 pm

**Problem 1: Programming**

- a) Define a Java class called Product which inherits from class Object.
- b) Add the following states to the class:

Properties	Type
ProductID	Integer
productName	String
productPrice	Float
productMadeInCountry	String

- c) Define and implement a constructor for this class.
- d) Inside the ApplicationDriver class, create one object from this class with the following values for the properties:

Properties	Type
ProductID	110
productName	"Diet Pepsi"
productPrice	2
productMadeInCountry	USA



## Problem 2: Programming

- a) Define a Java class for each of the following entities using the Product class you have defined in Problem 1. (Use inheritance!)

Class: Drink	Type
drinkID	Integer
drinkName	String
drinkPrice	Float
drinkMadeInCountry	String
isDrinkDiet	Boolean
drinkSize	Integer

Class: Food	Type
foodID	Integer
foodName	String
foodPrice	Float
foodMadeInCountry	String
foodCalorie	Integer
foodSize	Integer
foodIngredients	Array of String

Class: Cloth	Type
ClothID	Integer
ClothName	String
ClothPrice	Float
ClothMadeInCountry	String
ClothMaterials	Array of Material

Class: Material	Type
MaterialCode	Integer
MaterialName	String

- b) Define and implement one constructor for each of the above classes.  
c) Define the properties of the classes.  
d) In the ApplicationDriver class create one object from each of these classes with some arbitrary values.



## **Problem 3: Programming**

- a) Define a java class called ShoppingCart. The shoppingCart class works like a container for your shopping. Imagine you have bought the following items:

<b>Drinks</b>	<b>Amount: 3</b>
drinkID	412
drinkName	Pepsi
drinkPrice	2\$
drinkMadeInCountry	USA
isDrinkDiet	NO
drinkSize	150

<b>Drinks</b>	<b>Amount: 1</b>
drinkID	183
drinkName	Ginger Zero
drinkPrice	3\$
drinkMadeInCountry	Canada
isDrinkDiet	Yes
drinkSize	200

<b>Food</b>	<b>Amount: 2</b>
foodID	100
foodName	Chicken
foodPrice	8\$/lb
foodMadeInCountry	Canada
foodCalorie	350
foodSize	4lb
foodIngredients	chicken, oil, chees

<b>Food</b>	<b>Amount: 2</b>
foodID	101
foodName	Pasta
foodPrice	18\$ / lb
foodMadeInCountry	Canada
foodCalorie	250
foodSize	3lb
foodIngredients	pasta, meet, spinach



# CORNERSTONE

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<b>Cloth</b>	<b>Amount: 1</b>
ClothID	701
ClothName	T-shirt
ClothPrice	15\$
ClothMadeInCountry	China
ClothMaterials	cotton (code: 10), Nylon (code: 11)

- b) Define appropriate states for the ShoppingCart class.
- c) Define (specify the signature of the method) and implement the following APIs to the class ShoppingCart:
- d) An API using which you can add your purchases items (listed above) to your shopping cart.
- e) An API using which you can calculate the total amount you need to pay for your entire purchase.
- f) An API using which you can print just the name of the items you have purchases.
- g) Now in your ApplicationDriver class, create an instance (object) from class ShoppingCart with some arbitrary values.
- h) Call all APIs of the ShoppingCart and provide the methods (apis) with their appropriate input.