**Java Assignment-4 MM:10**

**Important Instruction:-**

**Assignment-4 Q1 should be shown in class in execution mode on your laptop otherwise 50% marks would be deducted.**

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| **Question 1: Create Solution to Problem:- (7)**  **Description**  You'll need these details in order to write the program:   * Any pizza is only allowed 10 toppings on it. * We have Small, Medium, and Large pizzas only. We usually use numbers to identify each one: small = 1, medium = 2, and large = 3. * When we display the order details, we are only concerned with the size of the pizza and the number of toppings it has. The rest of the information would be a different program that you can do in the new year. * Small pizzas cost $8, Medium pizzas cost $10, and Large pizzas cost $12. * Regardless of the size of the pizza, each topping costs $1.75.   Create the order system for Pizza. You will require two classes:  **1.**The Pizza class. This class models a single pizza that is ordered. An order can consist of multiple pizza objects, as you will see when you complete the order system program.  **2.**The Order System program should have main method to process order through pizza class.  **The Pizza Class**  Do this task first, since the Order System won't work without it.  Your Pizza class has the following members:   |  | | --- | | **Class: Pizza** | | Data: +TOPPING\_COST : double = 1.75 +MAX\_TOPPINGS : int = 10 +SMALL : int = 1 +MEDIUM : int = 2 +LARGE : int = 3 +SMALL\_COST : double = 8.0 +MED\_COST : double = 10.0 +LARGE\_COST : double = 12.0 -size : int -toppings : int | | Methods +Pizza() +Pizza(size : int, toppings : int) +getSize() : int +setSize(size : int) : void +getToppings() : int +setToppings(toppings : int) : void +calcPrice() : double +toString() : String |   **Details:**   * SMALL, MEDIUM, and LARGE are used to identify the pizza size; this is what the clerk will enter at the keyboard to identify the customer's desired pizza size. * The default constructor should be empty. * The mutator method for the toppings data member must make sure the specified toppings value is valid (between 1 and 10, inclusive) * The mutator method for the size data member must make sure the specified size value is valid (between SMALL and LARGE, inclusive) * The calcPrice() method must calculate and return the price of this pizza object. The price is equal to the cost for the size of the pizza, plus the topping cost multiplied by the number of toppings on the pizza. * The Display() method will return this pizza object as a String in the following form: * Medium Pizza * 2 Toppings   Total Price: $13.50 |  |
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| **Question: 2:**  **Create UML diagram for Student class with appropriate variables and methods as well. Make sure UML diagram follows proper syntax of UML diagrams as discussed in class (3)** |  |
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