



Session: Session 2022/2nd Semester/Spring 2022

Exam: Quiz 1

Time: 60 min

Subject: Object Oriented Programming

Total Weightage: 10

Total Marks: 10

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### Question # 1:

Create a function which takes a List of *instances* from the class **IceCream** and returns **the sweetness value of the sweetest ice cream**.

Sweetness is calculated from the *flavor* and *number of sprinkles*. Each sprinkle has a *sweetness value of 1*, and the sweetness values for the flavors are as follows:

Flavors	Sweetness Value
Plain	0
Vanilla	5
ChocolateChip	5
Strawberry	10
Chocolate	10

You'll be given instance properties in the order flavor, numSprinkles.

### Test Case:

```
IceCream ice1 = new  
IceCream("Chocolate", 13);  
// value of 23  
IceCream ice2 = new  
IceCream("Vanilla", 0);  
// value of 5  
IceCream ice3 = new  
IceCream("Strawberry", 7);  
// value of 17  
IceCream ice4 = new  
IceCream("Plain", 18);  
// value of 18  
IceCream ice5 = new  
IceCream("ChocolateChip", 3);  
// value of 8  
  
sweetestIcecream([ice1, ice2, ice3,  
ice4, ice5]) → 23  
  
sweetestIcecream([ice3, ice1]) → 23  
  
sweetestIcecream([ice3, ice5]) → 17
```

### Question # 2:

Create a class **Smoothie** and do the following:

- Create a property for list of **Ingredients**.
- Create a **GetCost** method which calculates the total cost of the *ingredients used* to make the smoothie.
- Create a **GetPrice** method which returns the number from **GetCost** plus the number from **GetCost** multiplied by **1.5**. Round to **two decimal places**.
- Create a **GetName** method which gets the ingredients and puts them in **alphabetical order** into a nice descriptive sentence. If there are multiple ingredients, add the word **"Fusion"** to the end but otherwise, add **"Smoothie"**. Remember to change **"berries"** to **"berry"**. See the examples below.

Ingredient	Price
Strawberries	£1.50
Banana	£0.50
Mango	£2.50
Blueberries	£1.00
Raspberries	£1.00
Apple	£1.75
Pineapple	£3.50

### Test Case:

```
Smoothie s1 = new Smoothie({ "Banana" });  
s1.Ingredients → { "Banana" }  
s1.GetCost() → "£0.50"  
s1.GetPrice() → "£1.25"  
s1.GetName() → "Banana Smoothie"
```

```
Smoothie s2 = new Smoothie({ "Raspberries",  
"Strawberries", "Blueberries" });  
s2.ingredients → { "Raspberries",  
"Strawberries", "Blueberries" }  
s2.GetCost() → "£3.50"  
s2.GetPrice() → "£8.75"  
s2.GetName() → "Blueberry Raspberry  
Strawberry Fusion"
```