

## Lab - 6

### Task:

Write a program that creates a class **Apple** and a tester to make sure the Apple class is crisp and delicious.

### Instructions:

First create a class called **Apple**

- The class **Apple** DOES NOT HAVE a main method
- Some of the attributes of Apple are
  - Type: A string that describes the apple. It may only be of the following types:
    - Red Delicious
    - Golden Delicious
    - Gala
    - Granny Smith
  - Weight: A decimal value representing the apple's weight in kilograms. The weight must be between 0 kg and 2 kg
  - Price: The price per apple. This must be a non-negative decimal value.
- Create the Default Constructor – sets everything to default values and has no parameters.
- Create Accessors and Mutators for each instance variable
  - MAKE SURE THE MUTATORS CHECK FOR VALID VALUES!
- Create the following Methods
  - writeOutput() : Displays the values of the instance variables on the console.

Finally, create a class called **AppleTester**

## CSCE 145: Algorithmic Design

- This class DOES HAVE a main method
- Create at least 3 different types of apples
- Test if the accessors, mutators, and other methods work as intended.

### Sample Output:

Welcome to the apple tester!!!

Creating the first apple!

Default values of the first apple object:

Type: Gala

Weight: 0.5 kg

Price: \$0.88

Creating the second apple object!

Enter the type of the second apple object:

**Granny Smith**

Enter the weight of the second apple object:

**0.7**

Enter the price of the second apple object:

**1.45**

Values of the second apple object:

Type: Granny Smith

Weight: 0.7 kg

Price: \$1.45

CSCE 145: Algorithmic Design

Creating the third apple object!

Enter the type of the third apple object:

**Banana**

Invalid value for type!

Enter the weight of the third apple object:

**3.5**

Invalid value for weight!

Enter the price of the third apple object:

**-2.22**

Invalid value for price!

Printing the third apple's values which should have not changed from the default values

Retrieving the third apple object's type:Gala

Retrieving the third apple object's weight:0.5 kg

Retrieving the third apple object's price:\$0.88

### **Lab Submission:**

- At the beginning of your program, insert your full name as a comment.
- Make sure to include comments within your code.
- Compress all .java files into a single folder.
- Upload the compressed folder on Dropbox by **11:59 pm** on **Wednesday, 19<sup>th</sup>**

**October 2022.**

## CSCE 145: Algorithmic Design

### **Lab Report Submission:**

- Use the *Lab Report Template* to complete your lab report.
- **Lab Report Questions:**
  1. What is the purpose of an accessor?
  2. What is the purpose of a mutator?
- Upload *LabReport06.pdf* on Dropbox by **11:59 pm** on **Tuesday, 25<sup>th</sup> October 2022**.