COSC 351.101
Dr. Vincenti
Spring 2019

Assignment 3 – Individual Project

Assignment description

Interfaces and Abstract Classes (80% of the assignment's grade)

You will create an Interface named 'Stackable' with the following methods:

- isStackable (boolean data type)
- setStackable
- setMaxStackCount (integer data type, if an item is stackable then this must be at least 1)
- getMaxStackCount
- setStackDescription (String data type, contains instructions on how to stack the items)
- getStackDescription

The classes that will have to implement this interface are all those products that can be stacked, such as Protein and ProcessedFood. You will also turn the following classes intro Abstract ones:

- FoodItem
- FreshFood
- ProcessedFood

Then, you will modify your 'main' class so that you ask the user for the additional information associated with the implementation of the interface and remove any objects that are instances of abstract classes.

Unit testing (20% of the assignment's grade)

Then, you will create a series of JUnit test cases based on the examples I have given you for Assignment 2. For each new method that you will have to implement, you will create the appropriate tests to check for valid as well as invalid input. Part of your grade will depend on how thorough your JUnit tests will be for each method. Each test should have a brief description in the comments, outlining the reason of the test, the expected results, and the rationale for such expectation. For example, why are you testing for a null value? Where in the code do you make sure that such issue is prevented?

Documentation

Comment each relevant part of your code, and follow Javadoc guidelines where appropriate.

Notes

The name of the class containing your ***main*** function should be ***Assignment3***. The name of the package containing your project should be ***assignment3***.

Turn in

Turn in any .java files you have created for this assignment. Please make sure that you only turn in the files with the ".java" extension, and not the ".java~" or ".class" ones.