

Assignment #2  
Inheritance

Task 1.

Implement the enumeration FruitName that contains the following elements:

APPLE, BANANA, PLUM, PEACH, UNKNOWN.

The enumeration have to include the methods:

- public static getFruitName(String s) which converts a string into an appropriate value e.g. apple into APPLE. If the string is not a proper name of a fruit then use the UNKNOWN value. The method should work in case insensitive mode.
- public String getString that returns the name of the fruit starting with an upper case letter e.g. Apple for APPLE.

Task 2.

Implement the class ItemPlus inherits from Item and has an additional data number which is an enumeration FruitName. The constructors:

- public ItemPlus(String name, String fruitName, double weight)
- public ItemPlus(String s) // the name, fruit type and weight are separated by white spaces, commas or semicolons.
- Public ItemPlus(String name, FruitName fruitName, double weight)

and override the method toString.

Task 3.

Implement the class MyBagPlus which inherits from MyBag and contains the additional data Member double maxWeight.

The constructor:

- Public MyBagPlus(int size, double maxWeight)

Override the method putItem in such a way that it controls not only the number of elements but also their total weight so it does not exceed maximal allowed weight.

Task 4:

Implement the following classes that inherit from MyBagPlus:

- SmallBag – max. 4 items, max weight 2.0
- MediumBag – max. 7 items, max weight 5.0
- BigBag – max 15 items, max weight 15.0

Task 5:

Implement a program that test extensively the above classes.

Remark:

Reuse the code as much as it is possible!

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