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Einführung in die Softwareentwicklung II 367.028 Gruppe 1 – Hausübung 3

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24/03/2018

Dokumentation der Klassen in einem Textdokument:

So, we have 4 classes for our classes, and a „craftingApp" with our main. The classes are Item, Resource, ListCombinedItem and GridCombinedItem. Item is our superclass, it has the final atribute Name, the methods to print, print with indent, getPrice which are all abstract and the getName method. All the other 3 classes derive from item, and implement the abstract methods diferently. Resource just has a price and can be printed individually. ListCombined has an array of items which compose it. Its price is made of the sum of all the items + 10%, and the print gives 2 spaces for each „subitem" that composes it. GridCombined has two arrays of items, its price is the sum of all subitems * ((rownumbers + columnnumbers) * 0.05 + 1), and the print shows the position in the table that the element is. Both CombinedItem classes implement the Iterable<Item>, which allows it to iterate through the elements of the varargs given in the constructor. The variables are all private, but can be accessed through a getter and can only be set via the public constructor. The printing methods, getters and constructors are all public, so we can access it from the Main, except the constructor for item since it is an abstract class and we cant instantiate it from the main. All constructors from the derived classes then use the super to set the name and then use their own price calculation formula. On the printing method, the numbers are formatted to have only 2 numbers after the comma, as instructed.

Testfälle:

These Test demonstrations should cover all the important testcases:

```
Items mit Ident
 Brett - 3,30 Gold
   Holz - 1,00 Gold
   Holz - 1,00 Gold
   Holz - 1,00 Gold
  Schießpulver - 3,30 Gold
    Schwefel - 1,00 Gold
    Holzkohle - 1,00 Gold
    Salpeter - 1,00 Gold
  Kugel - 5,83 Gold
    Eisen - 2,00 Gold
    Schießpulver - 3,30 Gold
  Spitzhacke - 12,15 Gold
    [0,0]
    Eisen - 2,00 Gold
    [0,1]
    Eisen - 2,00 Gold
    [0,2]
    Eisen - 2,00 Gold
    [1,1]
    Holz - 1,00 Gold
    [2,1]
    Holz - 1,00 Gold
    [3,1]
    Holz - 1,00 Gold
   Schwert - 5,20 Gold
     [0,1]
     Bronze - 1,50 Gold
     [1,1]
     Bronze - 1,50 Gold
     [2,1]
     Holz - 1,00 Gold
```

```
Item die aus 12 anderen zusammensetzt:
Spartaner - 57,67 Gold
  [0,1]
  Helm - 9,38 Gold
  [1,0]
  Fleisch - 0,50 Gold
  [1,1]
  Fleisch - 0,50 Gold
  [1,2]
  Fleisch - 0,50 Gold
  [2,0]
  Armband - 3,30 Gold
  [2,1]
  Fleisch - 0,50 Gold
  [2,2]
  Armband - 3,30 Gold
  [3,0]
  Speer - 5,20 Gold
  [3,1]
  Fleisch - 0,50 Gold
  [3,2]
  Schwert - 5,20 Gold
  [4,0]
  Grieben - 4,95 Gold
  [4,2]
  Grieben - 4,95 Gold
  [5,0]
  Fleisch - 0,50 Gold
  [5,2]
  Fleisch - 0,50 Gold
```

```
Items ohne Ident
Brett - 3,30 Gold
   Holz - 1,00 Gold
   Holz - 1,00 Gold
   Holz - 1,00 Gold
Schießpulver - 3,30 Gold
   Schwefel - 1,00 Gold
   Holzkohle - 1,00 Gold
   Salpeter - 1,00 Gold
Kugel - 5,83 Gold
   Eisen - 2,00 Gold
   Schießpulver - 3,30 Gold
Spitzhacke - 12,15 Gold
   [0,0]
   Eisen - 2,00 Gold
   [0,1]
   Eisen - 2,00 Gold
   [0,2]
   Eisen - 2,00 Gold
   [1,1]
   Holz - 1,00 Gold
   [2,1]
   Holz - 1,00 Gold
   [3,1]
   Holz - 1,00 Gold
Schwert - 5,20 Gold
   [0,1]
   Bronze - 1,50 Gold
   [1,1]
   Bronze - 1,50 Gold
   [2,1]
   Holz - 1,00 Gold
Helm - 9,38 Gold
   [0,0]
   Bronze - 1,50 Gold
   [0,1]
   Bronze - 1,50 Gold
   [0,2]
   Bronze - 1,50 Gold
   [1,0]
   Bronze - 1,50 Gold
   [1,2]
   Bronze - 1,50 Gold
Speer - 5,20 Gold
   [0,1]
   Bronze - 1,50 Gold
   [1,1]
   Bronze - 1,50 Gold
   [2,1]
   Holz - 1,00 Gold
Grieben - 4,95 Gold
   Bronze - 1,50 Gold
   Bronze - 1,50 Gold
   Bronze - 1,50 Gold
Armband - 3,30 Gold
   Bronze - 1,50 Gold
   Bronze - 1,50 Gold
```