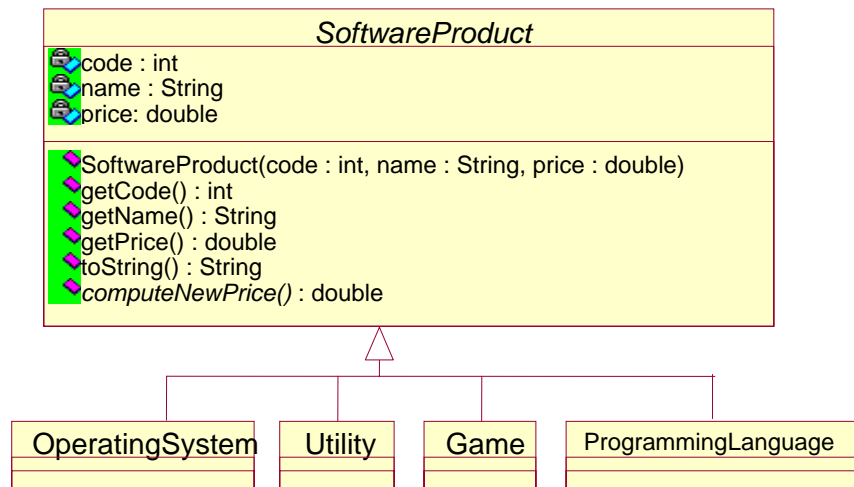


## Abstract classes. Object class.

### Problem 5.

A shop that sells software products has the following kinds of products: operating systems, utilities, games and programming languages. Each product has a cost price, but this month, the shop offers a discount with 4% to all the products. In addition, it already offered a discount by 30% to all operating systems and with 3% to programming languages.

Use the following UML class diagram associated to application:



We note that the class `SoftwareProduct` is abstract, with the abstract method `computeNewPrice()`.

### Requirements:

- A. Implement the class from the above diagram.
- B. In order to test the classes, implement the class `TestShop` with a method `main` that carries out the following tasks:
  - a. Create an array `SoftwareProduct[] products`, using the data from the file “`dataproducs.txt`”:  
1245 WindowsNT 5000  
2134 Pascal 3500  
56890 NortonCommander 1200  
789 Mahjong 23456
  - b. Compute the new price for each product from array.
  - c. Print the relevant information fro each object from array.
- C. Change the class `TestShop` to use an `ArrayList` rather a simple array.