

Algorithms and Data structures

wk4 – Exercise – Products Inventory

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In this exercise you practice with the use of functional interfaces and lambda expressions. The example code imports a list of products from a text file, and then you operate on this list using methods with functional parameters. You will use helper methods of the Product class, static methods of the Comparator interface and lambda expressions.

Please follow the following steps:

1. Unpack w4-exercise-ProductsInventory-v21.x.zip
2. Complete ProductsInventoryMain.importFromScanner to read and process all products from the input file.
3. Complete Product.fromLine to convert a text line into a Product instance
Complete Product.toString to be able to display Product information at the console
4. Run the main program and verify that products are imported and displayed
5. Complete the other steps in ProductsInventoryMain.main of sorting and updating the products. Some of them require additional helper methods in the Product class.
6. Below you find expected output.

Welcome to the HvA Products Inventory

Imported products:

[Pindakaas 600gr/4.95/25, Vruchtenhagel 400gr/2.75/35, Eieren 6st/1.45/15, Eieren 10st/2.10/15, Kaiser broodje/0.20/100, Roomboter/1.75/7]

Products by title:

[Eieren 10st/2.10/15, Eieren 6st/1.45/15, Kaiser broodje/0.20/100, Pindakaas 600gr/4.95/25, Roomboter/1.75/7, Vruchtenhagel 400gr/2.75/35]

Products by increasing price:

[Kaiser broodje/0.20/100, Eieren 6st/1.45/15, Roomboter/1.75/7, Eieren 10st/2.10/15, Vruchtenhagel 400gr/2.75/35, Pindakaas 600gr/4.95/25]

Products by decreasing price:

[Pindakaas 600gr/4.95/25, Vruchtenhagel 400gr/2.75/35, Eieren 10st/2.10/15, Roomboter/1.75/7, Eieren 6st/1.45/15, Kaiser broodje/0.20/100]

Products by increasing inventory value:

[Roomboter/1.75/7, Kaiser broodje/0.20/100, Eieren 6st/1.45/15, Eieren 10st/2.10/15, Vruchtenhagel 400gr/2.75/35, Pindakaas 600gr/4.95/25]

Products inventory reduced by half:

[Roomboter/1.75/3, Kaiser broodje/0.20/50, Eieren 6st/1.45/7, Eieren 10st/2.10/7, Vruchtenhagel 400gr/2.75/17, Pindakaas 600gr/4.95/12]

Products inventory reduced by 10 items:

[Roomboter/1.75/-7, Kaiser broodje/0.20/40, Eieren 6st/1.45/-3, Eieren 10st/2.10/-3, Vruchtenhagel 400gr/2.75/7, Pindakaas 600gr/4.95/2]

Products with positive inventory:

[Kaiser broodje/0.20/40, Vruchtenhagel 400gr/2.75/7, Pindakaas 600gr/4.95/2]

Products by increasing inventory value:

[Vruchtenhagel 400gr/2.75/7, Pindakaas 600gr/4.95/2, Kaiser broodje/0.20/40]

Process finished with exit code 0