

JAVA FUNDAMENTALS COURSE

FINAL EXERCISE



By the expert: Ubaldo Acosta



JAVA FUNDAMENTALS COURSE

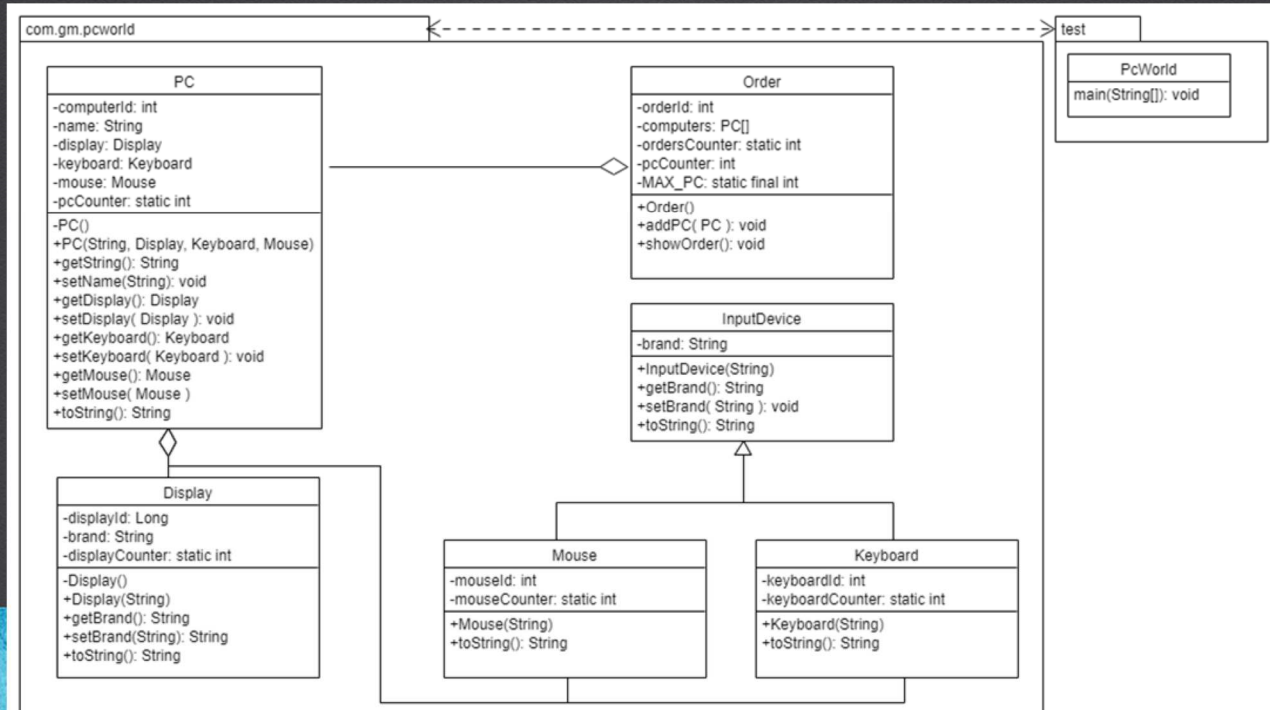
www.globalmentoring.com.mx

Hello, Ubaldo Acosta greets you again. I hope you're ready to start with this lesson.

This is the final exercise of the course that the student must develop.

Are you ready? Come on!

CLASS DIAGRAM OF THE FINAL EXERCISE



Similar to the last Order-Products exercise, now the final exercise called PcWorld is requested. The objective of this exercise is to create computer-like objects.

Each computer object is composed of 3 more objects, which are Display, Keyboard and Mouse. And at the same time the objects Keyboard and Mouse descend from the class Input Device, which abstracts some characteristics, which directly inherit the keyboard and mouse classes.

Finally, the Order class contains an array of computers as part of its attributes, and will be responsible for adding each computer to the array of computers.

The PcWorld class will be responsible for creating the respective objects to form both the Computer objects and adding them to an Order object.

In this final exercise all the subjects studied in this course will be put into practice, so if necessary you should review each topic with the aim of being able to carry out this final exercise.

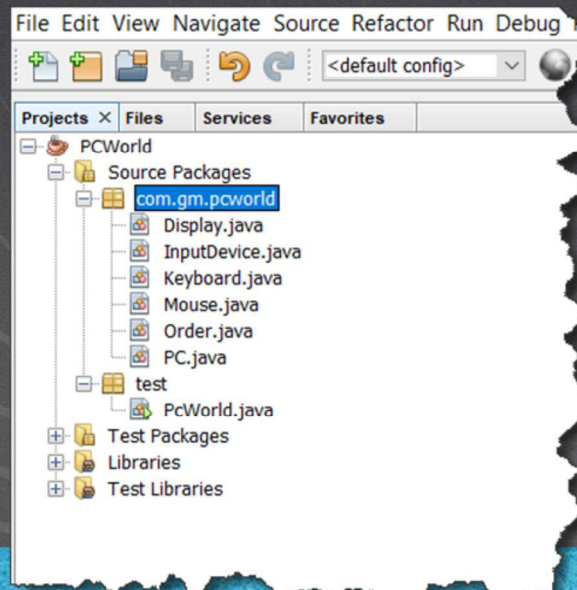
Some of the topics that should be applied are:

- Inheritance and calls to parent constructors by means of the word **super**.
- Use of static attributes, with the aim of having a counter that provides unique id for each object created, for the objects: Order, Computer, Monitor, Mouse and Keyboard.
- Encapsulation of attributes in each class.
- Private constructors called from other constructors by means of the word **this**
- Parameter passing by reference in the method `addComputer`
- Use of the `toString` method, and within this method `super.toString()` to complement the information inherited from the parent class
- Use of packages
- Using arrays that store Object types
- Among several other topics.

We give you a solution but just in case you have doubts after trying to complete this exercise.

We wish you success with the completion of your final exercise.

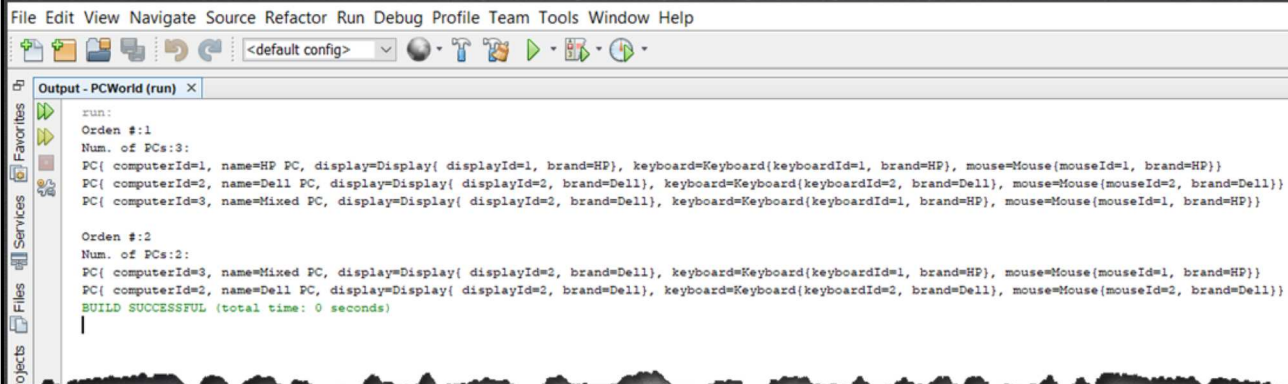
JAVA PROJECT STRUCTURE



www.globalmentoring.com.mx

In case you need it, there's a solution to this exercise, and the project structure is similar to this figure.

CONSOLE OUTPUT



The screenshot shows an IDE window titled "Output - PCWorld (run)". The console displays the following output:

```
run:
Orden #:1
Num. of PCs:3
PC( computerId=1, name=HP PC, display=Display( displayId=1, brand=HP), keyboard=Keyboard(keyboardId=1, brand=HP), mouse=Mouse(mouseId=1, brand=HP))
PC( computerId=2, name=Dell PC, display=Display( displayId=2, brand=Dell), keyboard=Keyboard(keyboardId=2, brand=Dell), mouse=Mouse(mouseId=2, brand=Dell))
PC( computerId=3, name=Mixed PC, display=Display( displayId=2, brand=Dell), keyboard=Keyboard(keyboardId=1, brand=HP), mouse=Mouse(mouseId=1, brand=HP))

Orden #:2
Num. of PCs:2:
PC( computerId=3, name=Mixed PC, display=Display( displayId=2, brand=Dell), keyboard=Keyboard(keyboardId=1, brand=HP), mouse=Mouse(mouseId=1, brand=HP))
PC( computerId=2, name=Dell PC, display=Display( displayId=2, brand=Dell), keyboard=Keyboard(keyboardId=2, brand=Dell), mouse=Mouse(mouseId=2, brand=Dell))
BUILD SUCCESSFUL (total time: 0 seconds)
```

JAVA FUNDAMENTALS COURSE

www.globalmentoring.com.mx

This is the output of the exercise. In case you need it, there's a solution to this exercise.

We wish you Good Luck!!!

ONLINE COURSE

JAVA FUNDAMENTALS

Author: Ubaldo Acosta



JAVA FUNDAMENTALS COURSE COURSE

www.globalmentoring.com.mx

