

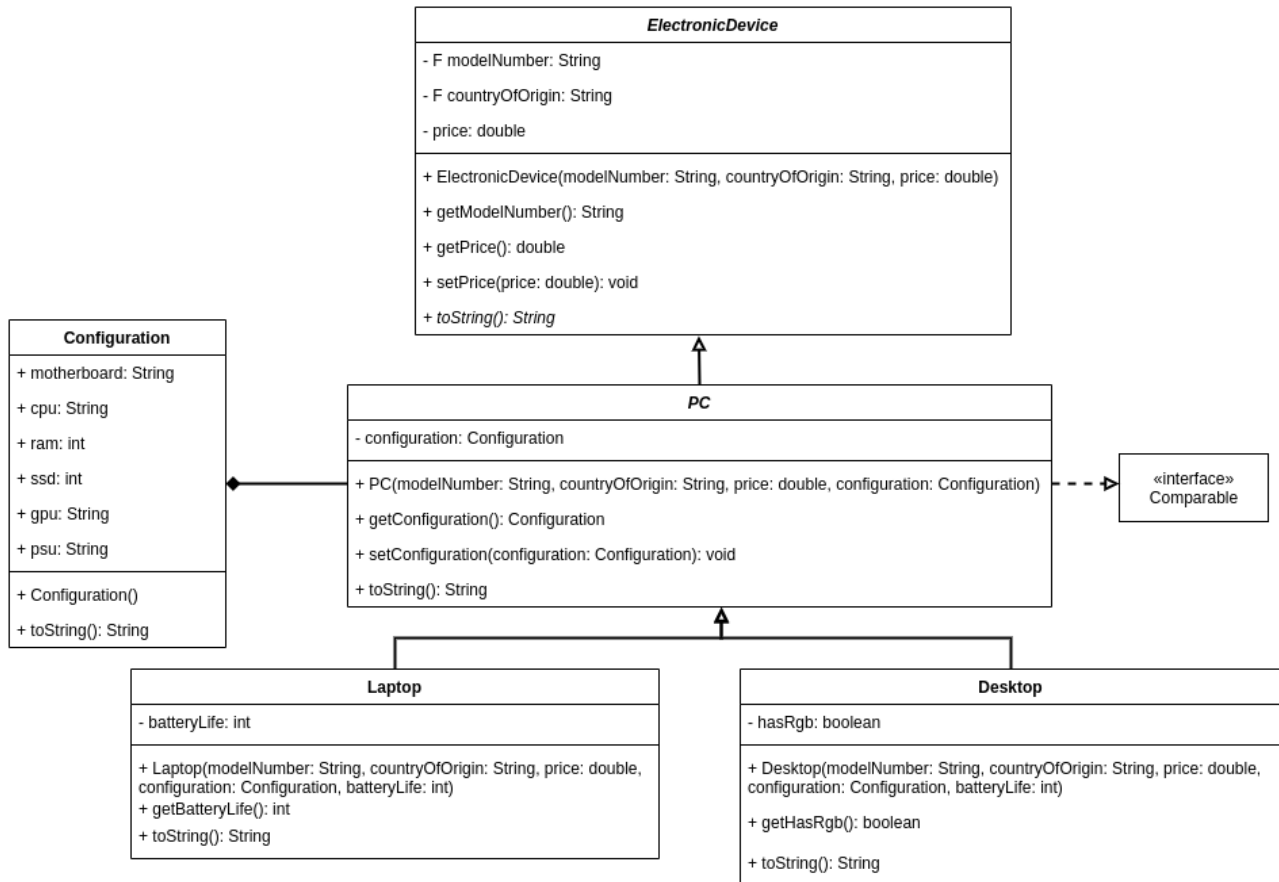


# CSE 215: Programming Language II Lab

## Coding Assignment 2

### Full Marks: 100

Consider and implement the following UML Diagram



Note: F means final in the UML Diagram.

For comparing two PCs, you should only consider:

- Their prices
- Their CPU and GPU models (assume lexicographical order)
- Their amount of RAM

Two PCs are considered equal if:

- Their prices are within BDT  $\pm 10,000$  of each other.
- Their CPU and GPU models are the same.
- They have the same amount of RAM.

For any toString() method, **all attributes in the class must be printed out on separate lines** in the following format:

*Attribute name: Attribute value*

Create a driver class called Driver and in the main method:

- Create a single array of length 10 that can contain both Laptop and Desktop objects. All data must be random. You can use information on PC part models from the internet.
- Randomly pick four objects from the array.
- For each object, compare it with the other three objects and display the output of the comparison (-1/0/+1). The format should be like this:



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Comparing *modelNumber1* with *modelNumber2*: -1/0/+1

A summary is given below:

<i>modelNumber1</i>		<i>modelNumber2</i>
<i>Price</i>		<i>Price</i>
<i>CPU</i>		<i>CPU</i>
<i>GPU</i>		<i>GPU</i>
<i>RAM</i>		<i>RAM</i>

- d. Call `toString()` method on all the objects in the array and display their data.

Hints:

- For all comparison operations, perform it the way you would compare two objects in real life. For example, keep comparing until one of the criteria attributes in one of the objects is different from the same attribute in the other object. Determine whether it is "<" or ">", and return the appropriate integer value from the `compareTo()` method.
- Print all decimal values (if any) upto two decimal places.