

CS 332/780: Object-Oriented Databases Fall 2015

PROJECT 4: JDOQL Queries

Due: 12/20/15, Sunday, 11 PM

No late submission will be accepted. This project must be completed individually – no group work permitted.

Use [ObjectDB version 2.6.4](#) for this project (this seems to be the most recent, stable version).

This project deals with the following classes for a laptop database: [Product](#), [Laptop](#), [Processor](#), [Memory](#), [Company](#). [Utility](#) has generic functions to print collections and to extract the element from a singleton collection; this class will be compiled with the above five but will not be transformed into a persistent class.

For each of the following functions, you are to provide code of its body correctly implementing the specification given in the comment:

1. Processor.installedOn
2. Memory.installedOn
3. Company.memoryProcessor
4. Company.differentCompanyProcessor
5. Laptop.find
6. Laptop.HDandHardDrive
7. Laptop.speedPrice
8. Laptop.hasProcessor
9. Laptop.laptopProcessorMadeBySameCompany
10. Laptop.sameProcessor
11. Laptop.groupByCompany

All these functions are to use JDOQL queries. It may be advantageous to start with relevant JDOQL queries in set form. For visualization, it may be helpful to draw a UML diagram of the database. **Do not change anything in the given class definitions and the function headers.** Place all the classes in one folder, the default package.

[Test1](#) and [Test2](#) are programmed to do some testing with example [laptop1.odb](#) and [laptop2.odb](#) database files, respectively. To test your function code by these, download them to the same folder that has your laptop class files, and run the main functions. The correct output should be identical to [Test1 output](#) and [Test2 output](#). The contents of these databases can be inspected by Explorer. You might do your own testing by adding test code to the main function.

Submission

The due date is 12/20/15, Sunday, 11 PM. No late submission will be accepted. Finishing the project before the final exam will greatly help your preparations for it.

Email to yukawa.qc@optimum.net all five .java files with your function code inserted, using the subject header:

CS 332, Project 4, Your Full Name.