

DIT948 Programming H16

Lecture 12

Instructor: Musard Balliu, musard@chalmers.se

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QUESTIONS?

Course objectives

- ▶ the basics of programming language concepts: lectures 1–5
- ▶ the basics of object-oriented programming: lectures 6–8
- ▶ using and understanding APIs: lectures 9–11

Examining course objectives

- ▶ problem solving and basics of programming:
two problems (10 + 20 pts): repairing a simple program (“your boss wrote this”), and a problem similar to CodingBat. Take a look at exercises in Logic-2, Array-2 and String-2 to train for this part.
- ▶ the basics of object-oriented programming:
two questions (10 + 10 pts), involving scope, “is a”, constructors, **super**, **this**, call by value (passing a primitive value vs passing an object reference to a method) etc.
- ▶ using and understanding APIs
two problems (30 + 20 pts): along the lines of assignment 2 and 3, filling in some implementation for a given set of classes, and using the classes in a small program.

Key points to prepare for the exam

- ▶ Static vs non-static methods and variables
- ▶ Blocks and scoping rules
- ▶ Calling a method/subroutine: primitive values (int, double ecc.) vs reference values (objects, arrays, Strings)
- ▶ Constructors (default vs with parameters), this, setter and getter methods, overloading
- ▶ equals and toString methods
- ▶ access modifiers: private, public, protected, no modifiers
- ▶ inheritance, super, overriding, constructor chains
- ▶ polymorphism, subtyping. Never forget: **Apples are Fruits**, but **NOT** all **Fruits are Apples**; some can be **Oranges**
- ▶ Casting objects and **instance of**
- ▶ Use of APIs

Important points

- ▶ READ THE QUESTIONS!
- ▶ Advice from a student: “Go through the previous exams repeatedly! Don’t get stuck on a hard question, skip it, and try again tomorrow.”
- ▶ That also holds for the actual exam: don’t spend too much time on hard questions! Try to answer those questions you can, and come back to the more difficult ones later: you have time (four hours!).
- ▶ **READ THE QUESTIONS!**

Material to use to prepare the exam

- ▶ The slides and code from the lectures (I go through them when I prepare the exams).
- ▶ Assignments 1, 2, 3: Make sure you understand every single line you have implemented.
- ▶ Original exam solutions, October 28, 2015
- ▶ First re-exam solutions, January 05, 2016
- ▶ Second re-exam solutions, August 22, 2016

Course evaluation

After the exam, the evaluation is open in the GUL. The evaluation has to be completed in a *few weeks*.

PLEASE PARTICIPATE!

Homework

- ▶ Read the solutions to previous exam questions, but try to solve them on your own first!

- ▶ Do the CodingBat exercises.