

Wrap-Up



EECS1021:
Object Oriented Programming:
from Sensors to Actuators
Winter 2019

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Why this Course?



- **Computational thinking (CT)** is a fundamental skill for **everyone**, not just for computer scientists.
 - Reference: Wing, J.M., 2006. *Computational thinking*. Communications of the ACM, 49(3), pp.33 – 35.
 - Thinking like a computer scientist means **more than being able to program** a computer. It requires **thinking at multiple levels of abstraction**.
 - **Level of Java Code:** How Programs Behave at Runtime
 - **Above the Level of Code:**
Logical rationale behind some *functioning/malfunctioning* code.
- Being able to think **abstractly** without seeing changes on a physical device is an important skill you are expected to acquire when graduating.
 - Think of programming interviews at Google: Given problems described in English, solve it on a whiteboard.

What You Learned (1)



- **Procedural Programming in Java**
 - primitive data types
 - assignments
 - casting vs. coercion for numbers
 - Boolean expressions, logical operators, short-circuit evaluation
 - `if`-statements
 - Solving problems *iteratively*: `for` vs. `while` loops
 - one-dimensional arrays

What You Learned (2)



- **Object-Oriented Programming in Java**
 - classes, attributes, objects, reference data types
 - methods: constructors, accessors, mutators, helper
 - dot notation, context objects, method calls
 - aliasing
 - Java API: `Math`, `Scanner`, `ArrayList`, `Hashtable`
- keywords: `final`, `this`, `static`

What You Learned (3)



- *Integrated Development Environment (IDE) for Java: Eclipse*
 - Compile Time vs. Runtime
 - Syntax Errors
 - Type Errors
 - Logical Errors
 - Creating Console App's via Classes with `main` method
 - User interactions
 - *Breakpoints and Debugger*

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Beyond this course...



- Java Tutorials
https://www.youtube.com/playlist?list=PL5dxAmCmju_5NRNPG30iWZWAqmvCjiLfg
- Two-Dimensional Arrays
https://www.eecs.yorku.ca/~jackie/teaching/lectures/index.html#EECS1022_W18
- Advanced Object-Oriented Programming
https://www.eecs.yorku.ca/~jackie/teaching/lectures/index.html#EECS2030_F18

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Wish You the Best



- What you have learned will be **assumed** in EECS2030.
- Do **not** abandon Java during the break!!

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Course Evaluation



courseevaluations.yorku.ca

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