

Wrap-Up



EECS2030 E&F: Advanced
Object Oriented Programming
Fall 2024

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What You Learned (1)



- **Procedural Programming in Java**
 - Exceptions
 - Recursion (thinking, implementation, tracing)
- **Data Structures**
 - Arrays

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What You Learned (2)



- **Object-Oriented Programming in Java**
 - classes, attributes, objects, reference data types
 - methods: constructors, accessors, mutators, helpers
 - dot notation, context objects
 - aliasing
 - inheritance:
 - code reuse, single-choice principle, cohesion
 - expectations
 - rules of substitutions
 - static vs. dynamic types
 - polymorphism, dynamic binding
 - polymorphic method parameters
 - polymorphic collections
 - polymorphic method return types
 - compilable casts, `ClassCastException`, instanceof checks
 - method overriding and dynamic binding: e.g., equals

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What You Learned (3)



- **Integrated Development Environment (IDE): Eclipse**
 - Break Point and Debugger
 - Unit Testing using JUnit
 - Test Driven Development (TDD), Regression Testing

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Optional Topics



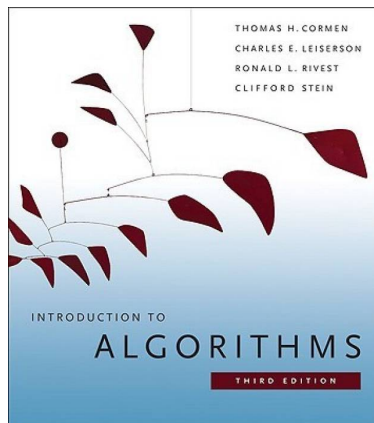
https://www.eecs.yorku.ca/~jackie/teaching/lectures/index.html#EECS2030_F21

- **Generics**

[Week 10 & 11]

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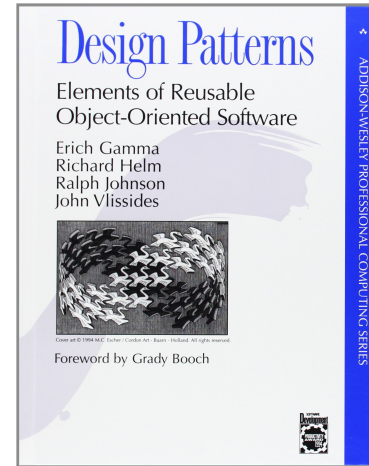
Beyond this course... (1)



- *Introduction to Algorithms (3rd Ed.)* by Cormen, etc.
- DS by DS, Algo. by Algo.:
 - **Understand** math analysis
 - **Read** pseudo code
 - **Translate** into Java code
 - **Write and pass** JUnit tests

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Beyond this course... (2)



- *Design Patterns: Elements of Reusable Object-Oriented Software* by Gamma, etc.
- Pattern by Pattern:
 - **Understand** the problem
 - **Read** the solution (not in Java)
 - **Translate** into Java code
 - **Write and pass** JUnit tests

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Wish You All the Best



- What you have learned will be **assumed** in EECS2101.
- Logic is your friend: Learn/Review EECS1019/EECS1090.
- Do **not** abandon Java during the break!!
- Feel free to get in touch and let me know how you're doing :D

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