

CS209 1st Midterm Prep

General Topics

Java

- Characteristics
 - o Statically typed, OO, compiled, ...
- Components
- Benefits
- How to write/run it
- Similarities to, differences from Python

Syntax, semantics of

- Comments, including Javadoc
- Variable declaration
- Using primitive types
- Arrays
- Control structures
- Loops
- Static fields, methods
- Final fields, methods, classes
- Overloaded methods
- Command-line arguments
- Equals method (vs ==)
- Parameter passing

Object oriented concepts

- Classes, objects, constructors, methods, state/instance variables/fields
- Inheritance – parent/child classes, abstract classes, interfaces
- Polymorphism, dynamic dispatch
- Overriding methods
- Encapsulation
- Access modifiers

Exceptions

- Types of exceptions
- Benefits, limitations

Streams

- Classifications of stream classes
- Reasons for design

Collections

- common interfaces, implementations
- generics
- how/when to use

Eclipse

Packages

UNIX

- basic Linux commands
- permissions; commands to change permissions, ownership

What I expect from you on the exam:

- To know Java/OO-programming terminology
 - o Need to be able to communicate with others about your design/implementation
- To be able to read, understand, and write Java programs, with or without documentation
- To know the appropriate Linux commands and how to use them, given a typical situation

What I do NOT expect from you on the exam:

- Knowledge of general (rather than the specific ones we've been talking about so far) software development concepts, *ilities
 - o next midterm

Suggestions on how to prepare:

- Exam is *terminology heavy*. Much of the terminology, you have been using for a long time; some is new. Make sure you know the terminology (much of it is in the list above).
- Practice reading through programs, tracing through them, and saying what the output should be
 - o Review your assignments
- Read through slides for vocabulary, review questions, exercises