Comp 132 -- Study Guide

The topics discussed throughout this term

Programming

- Problem Solving
- The Java Programming Language
- Comments
- Identifiers and Reserved Words
- White Space

Graphics

- Coordinate Systems
- Representing Color

Introduction to Objects

- String Literals
- String Concatenation
- Escape Sequences

Variables and Assignment

- Variables
- The Assignment Statement
- Constants

Primitive Data Types and Expressions

- Integers and Floating Points
- Characters
- Booleans
- Arithmetic Expressions
- Operator Precedence
- Data Conversion

Creating Objects

Class Libraries and Packages

- The import Declaration

Invoking Class Methods

- The Math Class

Drawing Shapes

- The Graphics Class
- The Color Class

Control Flow

The if Statement

- Equality and Relational Operators
- The if-else Statement
- Using Block Statements
- Nested if Statements

The switch Statement

Boolean Expressions

- Logical Operators
- Comparing Floating Point Values

More Operators

- Increment and Decrement Operators
- Assignment Operators
- The Conditional Operators

Loops

- Infinite Loops
- Nested Loops
- while
- do … while
- for

Writing Classes

Objects

Classes

Anatomy of a Class

- Instance Date
- Encapsulation and Visibility Modifiers

Anatomy of a Method

- The return Statement
- Parameters
- Constructors
- Local Data and Scope

Object Relationships

- The has-a Relationship
- Interaction Between Objects of the Same Class

Method Overloading

References

- Aliases
- Passing Objects as Parameters
- The this Reference

The static Modifier

- Static Variables
- Static Methods

Inheritance

Creating Subclasses

- Derived Classes
- The protected Modifier
- The super Reference

Overriding Methods

- Shadowing Variables

Class Hierarchies

- The Object Class