

Chapter 5: Enhancing Classes

Overview

This chapter explores the design and implementation of classes. First we review object references - what they are and how they affect our processing. Then we study the `static` modifier to see how it can be applied to variables and to methods. We also discuss the interface between classes.

Reading Assignment

Read pages 260-286, 288-291 and “summary of key concepts” on page 304 in Java Software Solutions textbook.

Textbook Assignment

Book problems are due at the beginning of the class period *before* the Chapter 5 test. Problems will be checked for completion. You are encouraged to correct your answers with the solutions key during class, break or lunch.

- Self-Review pg 305 (5.1-5.6)
- MC pg 305 (5.1-5.10)
- Short Ans. pg 309 (5.1, 5.2, 5.3, 5.5., 5.7)
- AP Style pg 311 (5.1, 5.3, 5.4)
- AP Style Free Res. pg 314 (5.1)

PracticeIt! Assignments

Complete the following PracticeIt! assignments. For each problem, *handwrite* the solution and attach with a printed copy of your “My Problems” page *sorted with newest on top*.

Chapter 4

- Exercise 4.9: evenSumMax
- Exercise 4.16: printPalindrome
- Exercise 4.18: wordCount

Chapter 5

- Self-Check 5.15: isVowel
- Exercise 5.14: hasMidpoint

Chapter 8

- Self-Check 8.2: whatIsAnObject
- Self-Check 8.3: StringObject
- Self-Check 8.8: accessorMutator
- Self-Check 8.9: methodCallSyntax
- Self-Check 8.13: printingObjects
- Exercise 8.1: quadrantPoint
- Exercise 8.3: manhattanDistance
- Exercise 8.4: isVertical

Labs

Download the Chapter 5 Lab Manual from GitHub. Create a \Chapter 5 folder in your \APCS folder. Follow the lab manual instructions for creating the .java files for the labs below.

Lab	Assignment	Completed
1	A Flexible Account Class folder: \AccountProject classes: Account.java, AccountTest.java	
2	Opening Accounts folder: \AccountProject2 classes: Account.java, AccountTest2.java	
3	Transferring Funds folder: \TransferProject classes: Account.java, TransferTest.java Demonstrate both versions of transfer method.	
4	Setting Priorities folder: \PriorityProject interface: Priority.java, classes: Task.java, TaskTest.java	
5	Finch on the Farm classes: FarmFinch.java	Extra Credit