

Chapter 7: Inheritance

Objectives

In this chapter, you will learn how to derive new classes from existing ones, understand the concept of inheritance, add and modify methods in child classes, design class hierarchies and define polymorphism.

Vocabulary

inheritance
polymorphism
super
child/parent classes

Reading Assignment

Read pages 391 - 435 and “summary of key concepts” on page 451 in Java Software Solutions textbook.

Textbook Assignment

Book problems are due at the beginning of the class period *before* the Chapter 7 test. Problems will be checked for completion. You are encouraged to correct your answers with the solutions key during class, break or lunch.

- Read Summary Pg. 451
- Self-Review Questions Pg. 452
- Multiple Choice # 7.1 - 7.10
- True False # 7.1 – 7.10
- AP Style pg 458 # 7.1 -7.6 (skip 7.5).
- AP Style Free Res. pg 461 #7.1ab

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 9: Inheritance and Interfaces

- Self-Check 9.3: subclassSyntax
- Self-Check 9.4: inheritanceVariableSyntax
- Self-Check 9.9: CarTruck
- Self-Check 9.10: CarTruck2

Labs

Download the Chapter 7 Lab Manual from GitHub. Create a \Chapter 7 folder in your \APCS folder. Follow the lab manual instructions for creating the .java files for the labs below.

Lab	Assignment	Completed
1	Exploring Inheritance <ul style="list-style-type: none">• Dog.java• Labrador.java• Yorkshire.java• DogTest.java	
2	Employee <ul style="list-style-type: none">• Employee.java• Executive.java• Hourly.java• Commission.java• Firm.java• Staff.java• StaffMember.java• Volunteer.java	
3	Text-based Adventure Game <ul style="list-style-type: none">• Design a text-based adventure game using a hierarchy diagram and submit with your finished program.• You may design and code the lab with a partner.	

Hierarchy Diagram for the Employee program (Lab #2):