

## Chapter 6: Arrays

### Overview

This chapter introduces arrays, which are a way of grouping data into lists. Arrays are basic to most high-level languages. We also explore `ArrayList` class in the Java standard class library.

### Objectives

- Define and use arrays.
- Pass arrays as parameters.
- Search and sort information in arrays.
- Use multidimensional arrays.
- Use the `ArrayList` class.

### Reading Assignment

Read pages 317 - 363 and “summary of key concepts” on page 376 in Java Software Solutions textbook.

### Textbook Assignment

Book problems are due at the beginning of the class period *before* the Chapter 6 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 377
- MC pg 378 (6.1-6.9, not 6.6)
- Short Ans. pg 381 (6.1, 6.3, 6.4)
- True/False pg 381 (6.1-6.6)
- AP Style pg 385 (6.1, 6.2, 6.3, 6.4, 6.5, 6.6)
- AP Style Free Res. pg 388 (6.1)

### 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 7: Arrays

- Self-Check 7.1: `arrayDeclarationSyntax`
- Self-Check 7.2: `numbersElements`
- Self-Check 7.3: `dataArray`
- Self-Check 7.4: `oddsArray`
- Self-Check 7.5: `numbersArray`
- Self-Check 7.10: `max`
- Self-Check 7.23: `arrayMystery4`
- Self-Check 7.29: `averageLength`
- Exercise 7.1: `lastIndexOf`
- Exercise 7.10: `percentEven`
- Exercise 7.20: `isMagicSquare`

## Labs

Download the Chapter 6 Lab Manual from GitHub. Create a \Chapter 6 folder in your \APCS folder. Follow the lab manual instructions for creating the .java files for the labs below.

Lab	Assignment	Completed
1	Tracking Sales <ul style="list-style-type: none"><li>• Sales.java</li></ul>	
2	A Shopping Cart <ul style="list-style-type: none"><li>• Item.java</li><li>• ShoppingCart.java</li><li>• ShopTest.java</li></ul>	
3	A Flexible Shopping Cart <ul style="list-style-type: none"><li>• Item.java</li><li>• ShoppingCart2.java</li><li>• ShopTest2.java</li></ul>	
4	A Shopping Cart Using the ArrayList Class <ul style="list-style-type: none"><li>• Item.java</li><li>• ShoppingCart3.java</li><li>• ShopTest3.java</li></ul>	
5	<p>Card Game</p> <ul style="list-style-type: none"><li>• Card.java</li><li>• DeckOfCards.java</li><li>• DeckOfCardsTest.java</li></ul> <p><b>Choose <i>only</i> 1 Card game listed below to implement or make up your own game!:</b></p> <p>Five-Card Poker</p> <ul style="list-style-type: none"><li>• FiveCardPoker.java</li></ul> <p>Blackjack</p> <ul style="list-style-type: none"><li>• Blackjack.java</li></ul> <p>High-Low</p> <ul style="list-style-type: none"><li>• HighLow.java</li></ul>	
6	Finch Plays Simon (may be completed with a partner) <ul style="list-style-type: none"><li>• FinchSimon.java</li></ul>	