**Chapter 3 Object-Oriented Programming, Part 1: Using Classes**

3.1 Class Basics and Benefits

3.2 Creating Objects Using Constructors

3.3 Calling Methods

3.4 Using Object References

3.5 Programming Activity 1: Calling Methods

3.6 The Java Class Library

3.7 The *String* Class

The *length* Method

The *toUpperCase* and *toLowerCase*

Methods

The *indexOf* Methods

The *charAt* and *substring* Methods

3.8 Formatting Output with the *DecimalFormat* Class

3.9 Generating Random Numbers with the *Random* Class

3.10 Input from the Console Using the *Scanner* Class

3.11 Calling *Static* Methods and Using *Static* Class Variables

3.12 Using *System.in* and *System.out*

3.13 The *Math* Class

The *pow* Method

The *round* Method

The *min* and *max* Methods

3.14 Formatting Output with the *NumberFormat* Class

3.15 The *Integer*, *Double*, and Other Wrapper Classes

3.16 Input and Output Using *JOptionPane* Dialog Boxes

3.17 Programming Activity 2: Using Predefined Classes