Chapter 6. BRANCHING STATEMENTS AND LOGICAL OPERATORS

In this chapter you learn

- The if Statement
- Logical Expressions
- The cctype Library of Character Functions
- The ?: Operator
- The switch Statement
- The break and continue Statements
- Number-Reading Loops
- Summary
- Review Questions
- Programming Exercises

One of the keys to designing intelligent programs is to give them the ability to make decisions. Chapter 5, "Loops and Relational Expressions," shows you one kind of decision making—looping—in which a program decides whether or not to continue looping. Now you investigate how C++ lets you use branching statements to decide among alternative actions. Which vampire-protection scheme (garlic or cross) should the program use? What menu choice has the user selected? Did the user enter a zero? C++ provides the if and switch statements to implement decisions, and they are this chapter's main topics. You also look at the conditional operator, which provides another way to make a choice, and the logical operators, which let you combine two tests into one.

The if Statement

When a C++ program must choose whether or not to take a particular action, you usually implement the choice with an if statement. The if comes in two forms: if and if else. Let's investigate the simple if first. It's modeled after ordinary English, as in "If you have a Captain Cookie card, you get a free cookie." The if statement directs a program to execute