

Key point: *The lottery program involves generating random numbers, comparing digits, and using Boolean operators.*

Consider a specification for a program to play lottery. The program randomly generates a lottery of a two-digit number, prompts the user to enter a two-digit number, and determines whether the user wins according to the following rules:

1. If the user input matches the lottery number in the exact order, the award is \$10,000.
2. If all digits in the user input match all digits in the lottery number, the award is \$3,000.
3. If one digit in the user input matches a digit in the lottery number, the award is \$1,000.

**Listing 3.8 Lottery.java**

```
1 import java.util.Scanner;
2
3 public class LeapYear {
4     public static void main(String[] args) {
5         //Generate a lottery number
6         int lottery = (int)(Math.random() * 100);
7
8         //Prompt the user to enter a guess
9         Scanner input = new Scanner(System.in);
10        int guess = input.nextInt();
11
12        //Get digits from lottery
13        int lotteryDigit1 = lottery / 10;
14        int lotteryDigit2 = lottery % 10;
15
16        //Get digits from guess
17        int guessDigit1 = guess / 10;
18        int guessDigit2 = guess % 10;
19
20        System.out.println("The lottery number is " + lottery);
21
22        //Check the guess
23        if (guess == lottery)
24            System.out.println("Exact match: you win $10,000");
25        else if (guessDigit2 == lotteryDigit1 && guessDigit1 == lotteryDigit2)
26            System.out.println("Match all digits: you win $3,000");
27        else if (guessDigit1 == lotteryDigit1
28                  || guessDigit1 == lotteryDigit2
29                  || guessDigit2 == lotteryDigit1
30                  || guessDigit2 == lotteryDigit2)
31            System.out.println("Match one digit: you win $1,000");
32        else
33            System.out.println("Sorry, no match");
34    }
35 }
```

```
run:  
Enter a positive integer value: 10  
The lottery number is 66  
Sorry, no match  
BUILD SUCCESSFUL (total time: 4 seconds)
```

```
run:  
Enter a positive integer value: 9  
The lottery number is 19  
Match one digit: you win $1,000  
BUILD SUCCESSFUL (total time: 1 second)
```

```
run:  
Enter a positive integer value: 9  
The lottery number is 90  
Match all digits: you win $3,000  
BUILD SUCCESSFUL (total time: 1 second)
```