

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 and 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)
```