Key point: *This section presents a program that breaks a large amount of money into smaller units.*

The program in this section prompts the user for amount, in dollars and cents, and outputs a report listing the monetary equivalent in the maximum number of dollars, quarters, dimes, nickels, and pennies in this order, to result in the minimum number of coins.

Here are the steps in developing the program:

1. Prompt the user to enter the amount as a decimal number, such as 11.56.

2. Convert the amount (e.g., **11.56**) into cents (**1156**).

3. Divide the cents by **100** to find the number of dollars. Obtain the remaining cents using the cents remainder **100**.

4. Divide the remaining cents by **25** to find the number of quarters. Obtain the remaining cents using the remaining cents remainder **25**.

5. Divide the remaining cents by **10** to find the number of dimes. Obtain the remaining cents using the remaining cents remainder **10**.

6. Divide the remaining cents by **5** to find the number of nickels. Obtain the remaining cents using the remaining cents remainder **5**.

7. The remaining cents are the pennies.

8. Display the result.

Listing 2.10 ComputeChange.java

```
1  import java.util.Scanner;
2
3  public class ComputeChange {
4      public static void main(String[] args) {
5          //Create a scanner
6          Scanner input = new Scanner(System.in);
7
8          //Receive the amount
9          System.out.print("Enter an amount in double, for example 11.56: ");
10         double amount = input.nextDouble();
11
12         int remainingAmount = (int)(amount * 100);
13
14         //Find the number of one dollars
15         int numberOfOneDollars = remainingAmount / 100;
16         remainingAmount = remainingAmount % 100;
17
18         //Find the number of quarters in the remaining amount
```

```
19          int numberOfQuarters = remainingAmount / 25;
20          remainingAmount = remainingAmount % 25;
21
22          //Find the number of dimes in the remaining amount
23          int numberOfDimes = remainingAmount / 10;
24          remainingAmount = remainingAmount % 10;
25
26          //Find the number of nickels in the remaining amount
27          int numberOfNickels = remainingAmount / 5;
28          remainingAmount = remainingAmount % 5;
29
30          //Find the number of pennies in the remaining amount
31          int numberOfPennies = remainingAmount;
32
33          //Display results
34          System.out.println("Your amount " + amount + " consists of");
35          System.out.println(" " + numberOfOneDollars + " dollars");
36          System.out.println(" " + numberOfQuarters + " quarters");
37          System.out.println(" " + numberOfDimes + " dimes");
38          System.out.println(" " + numberOfNickels + " nickels");
39          System.out.println(" " + numberOfPennies + " pennies");
40      }
41  }
```

```
run:
Enter an amount in double, for example 11.56: 11.56
your amount 11.56 consists of
 11 dollars
 2 quarters
 0 dimes
 1 nickels
 1 pennies
BUILD SUCCESSFUL (total time: 10 seconds)
```