Exercises

Create a new subfolder in your `LearnToCode\Workbook2` folder named `Mod03` to hold the exercises for this module. The code for each exercise below should be in its own subfolder under `Mod03`.

EXERCISE 1

Create a Java application that uses a `while` statement to display the text "I love Java" 5 times.

Create the application again, this time using a `do/while` loop.

EXERCISE 2

Create a Java application that uses a `for` loop to display a countdown from 10 to 1 and then ends by displaying the words "Launch!"

HINT: Inside the loop add `Thread.sleep(1000);` to pause 1 second between each number.

EXERCISE 3

Create a simple Java application that rolls a pair of dice 20 times. Display the value of the two dice each time they are rolled. Count how many times the numbers 2, 4, 6 and 7 are rolled and display the result.

To make this work, create a class named `Dice` and add a method named `roll()` that generates a random number between 1 and 6. You can generate a random number within a range using the following algorithm:

```
int randomNumber = minValue + (int)(Math.random() * maxValue);
```

Exercises *cont'd*

Now switch back to your `main()` function:

1. Create an instance of `Dice` named `dice`. Also create integer variables for `roll1`, `roll2`, and four different counters for the number of times 2, 4, 6 and 7 are rolled
2. Create a loop that executes 100 times.
3. Within the loop, call your dice's `roll()` method two times:

```
roll1 = dice.roll();
roll2 = dice.roll();
```

4. Print the value of each roll of the dice formatted like this:

```
Roll 1:   4  -  6   Sum:  10
```

5. Determine if the sum of `roll1` and `roll2` is 2, and if so increment the `twoCounter`.
6. Determine if the sum of `roll1` and `roll2` is 4, and if so increment the `fourCounter`.
7. Determine if the sum of `roll1` and `roll2` is 6, and if so increment the `sixCounter`.
8. Determine if the sum of `roll1` and `roll2` is 7, and if so increment the `sevenCounter`.
9. When the loop terminates, display your counters!

Now, use this knowledge to go play Craps at your local casino! ☺