CSIS-1400 - Assignment Dice

Learning Purpose:

Practice

- Random number generation
- Use of arrays
- Formatted output

Sample Output:

```
Sum   Frequency   Percentage
  2        1003         2.8%
  3        1980         5.5%
  4        2955         8.2%
  5        4123        11.5%
  6        4908        13.6%
  7        6014        16.7%
  8        4940        13.7%
  9        3932        10.9%
 10        3100         8.6%
 11        2034         5.7%
 12        1011         2.8%
```

Turn in:

Zip up Dice.java and turn it in via Virtual Campus.

Instructions:

Create a new Java file called **Dice.java**

- Simulate the rolling of 2 dice.
  Do that by creating one single object of type Random and by reusing it to roll the first die and then the second die.
- Once both dice have been rolled calculate the sum of the two values.
- Use a one-dimensional integer array to count how often each sum appears.
  When rolling two dice the sum will be a value from 2 – 12. However, not every sum has the same probability of being rolled.
  E.g.: There are three ways to roll a sum of 4, six ways to roll a sum of 7 but only one way to roll a sum of 12.

	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

- Roll the two dice **36,000** times.
- Display the results in a tabular format like in the sample output. Start with a header line (Sum, Fequency, and Percentage) and list the numbers in right aligned columns.
  The percentage should display only one digit after the decimal point.
  Hint: In order to output % within a format string write **%%**

  Recommendation: Check whether the results are reasonable
  (e.g. the sum 7 should be rolled about 1/6 of the time)