|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| LEARNING PROFILE FOR Chapter04Exercise03 | | | | | |
| *Name* | *:* | *Tyler Lucas* | *Submission Date* | *:* | *N/A* |
| *Student ID* | *:* | *3305203* | *Date Created* | *:* | *2017-05-23* |

# Problem Statement

Chapter 4, Exercise 3

Write a function that simulates rolling a pair of dice until the total on the dice comes up to be a given number. The number that you are rolling for is a parameter to the function. The number of times you have to roll the dice is the return value of the function. The parameter should be one of the possible totals: 2, 3, … 12. The function should throw an IllegalArgumentException if this is not the case. Use your function in a program that computes and prints the number of rolls it takes to get snake eyes. (Snake eyes means that total showing on the dice is 2.)

# Description of the Code

Main method is mostly text, communicating with the user over standard input/output. Uses a helper method getIntInRange(int,int) to repeat asking the user for correct input until it actually gets it, making the code more legible. Uses a chain of methods to get the number of rolls required to achieve a certain dice total, as follows: getDiceRoll() -> getDiceRollSum(int) -> countDiceRollsUntil(int,int) -> main(). Each was designed to be used independently, throwing IllegalArgumentException if appropriate (and as required by the problem statement).

# Errors and Warnings

No issues with version 1.0, but there were some problems encountered when designing method testing and validation scripts (version 1.1+).

# Sample Input and Output

## Exercise Solution Version (Version 1.0)

### Proper Input (2)

Welcome to the magical dice rolling game!

Let's roll a pair until the total we're looking for comes up.

What total are you looking for? Enter 2-12: 2

Rolling...

It took 8 rolls to come up with a sum total value of 2.

### Improper Input 1

Welcome to the magical dice rolling game!

Let's roll a pair until the total we're looking for comes up.

What total are you looking for? Enter 2-12: 1

Please enter an integer between 2 and 12: 0

Please enter an integer between 2 and 12: -1

Please enter an integer between 2 and 12: 121

Please enter an integer between 2 and 12: ten

\*\*\* Error in input: Integer value not found in input.

\*\*\* Expecting: Integer in the range -2147483648 to 2147483647

\*\*\* Discarding Input: ten

Please re-enter: 2147483648

\*\*\* Error in input: Integer input outside of legal range, 2147483648.

\*\*\* Expecting: Integer in the range -2147483648 to 2147483647

\*\*\* Discarding Input: (end-of-line)

Please re-enter: 3

Rolling...

It took 7 rolls to come up with a sum total value of 3.

### Improper Input 2

Welcome to the magical dice rolling game!

Let's roll a pair until the total we're looking for comes up.

What total are you looking for? Enter 2-12: -2147483648

Please enter an integer between 2 and 12: -12

Please enter an integer between 2 and 12: 1

Please enter an integer between 2 and 12: 7

Rolling...

It took 5 rolls to come up with a sum total value of 7.

## Method Testing and Verification Version (Version 1.1)

# Discussion