

EvenException & EvenErrorThrower

Directions: A new U.S. president is elected who does not believe in even numbers. In fact, the new president goes as far as to outlaw all even numbers from being used. Create a new Unchecked Exception class called EvenException that is thrown if an even number is encountered.

EvenException Class: Subclass of RuntimeException

Variables: None

Constructors:

- `new EvenException("Error Message")`

Methods: None

EvenErrorThrower:

Directions: The program below is written in a single main with an *average(List<Integer>)* helper method. The *average* helper method returns the average of all of the numbers in the list parameter as a double. If the method calculates the average to be an even number, the method will throw a new EvenException. The method header should reflect that an EvenException may be thrown.

This program computes the average of a positive, integer data set.

```
Enter dataset value or (-1) to calculate: 1
Enter dataset value or (-1) to calculate: 3
Enter dataset value or (-1) to calculate: 5
Enter dataset value or (-1) to calculate: -1
The average of your dataset is: 3.0
```

Begin entering the next dataset.

```
Enter dataset value or (-1) to calculate: 1
Enter dataset value or (-1) to calculate: 3
Enter dataset value or (-1) to calculate: -1
```

EvenException: Even numbers do not exist.

Begin entering the next dataset.

```
Enter dataset value or (-1) to calculate: 2
```

```
Exception in thread "main" EvenException: Even Numbers do not exist. You will
now be arrested for the use of an illegal number.
at Demo.main(Demo.java:21)
```