Lab Exercise 11
Chapter 12 Exception Handling and Text IO

COMP217 Java Programming
Spring 2019
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Text: Liang, Introduction to Java Programming, Tenth Edition
Chapter 12

Ex11-1
Submit TestCircleWithRadiusException.java

Modify the following code:

Assume the radius of a circle should be 0 < radius < 100.
Modify the following set of codes to add two exceptions

- Less than or equal to 0
- Larger than or equal to 100

```
public class TestCircleWithRadiusException {
  public static void main(String[] args) {
    try {
      CircleWithRadiusException c1 = new CircleWithRadiusException(-5);
      CircleWithRadiusException c2 = new CircleWithRadiusException(0);
      CircleWithRadiusException c1 = new CircleWithRadiusException(200);
    }
    catch ( … ) { System.out.println( … ); }
    catch ( … ) { System.out.println( … ); }

    System.out.println("Number of objects created: " +
    CircleWithRadiusException.getNumberOfObjects());
  }
}
/* ADD more codes */
```

Ex11-2
Submit WriteDataWithAutoClose2.java

Modify the following program to store your name, student ID, and course number

```
public class WriteDataWithAutoClose2 {
  public static void main(String[] args) throws Exception {
    java.io.File file = new java.io.File("scores.txt");
    if (file.exists()) {
      System.out.println("File already exists");
      System.exit(0);
    }

    try (
      // Create a file
      java.io.PrintWriter output = new java.io.PrintWriter(file);
    ) {
      // Write formatted output to the file
      output.print("John T Smith ");
      output.println(90);
      output.print("Eric K Jones ");
      output.println(85);
    }
  }
}
```

Ex11-3
Submit FindStatistics.java

Find statistics of given numbers

- Write a program that read a file of integers, and generate output file that has sum, average, maximum, minimum, and reversely-sorted input numbers

- Execution

  $ java FindStatistics Input10.txt Output.txt

- Input file: number of values, followed by integer values

  [Input10.txt]
  10
  9 1 3 7 9 0 8 6 2 8

- Output file:

  [Output10.txt]
  Sum = 53
  Average = 5.30
  Maximum = 9
  Minimum = 0
  Sorted
  9 9 8 8 7 6 3 2 1 0

Ex11-4
Submit CountWords.java

Count number of words of a file

- Write a program that read a file from a URL
  - http://websitetips.com/articles/copy/lorem/ipsum.txt
- Then count the number of words in this file
  - Words: separated by spaces, tab, enter characters
- Execution

```
$ java CountWords
656
```

Ex11-5
Submit ToggleCases.java

Toggle the cases

- Write a program that read a file from a URL
  - http://websitetips.com/articles/copy/lorem/ipsum.txt
- Then toggle the cases of the alphabet
  - Lowercase ➔ Uppercase
  - Uppercase ➔ Lowercase
  - Others ➔ Unchanged
- Execution

```
$ java ToggleCases
lOREM IPSUM DOLOR SIT AMET, CONSETETUR …
```