Lab #5

Notes

Folder organization for solutions on the student's account:

```
Z:\
|
|--Programming01
|----Lab01Problem01
|----Lab01Problem02
|----…
|----Lab02Problem01
|----…
|--Programming02
```

Task #1: "Arithmetic Mean" (0.5%)

Description: the application calculates an arithmetic mean for a set of grades (in the range from one to five). All grades should be read from the standard input each at a time. A zero value will signal the end of the input and is not used in the calculation.

Sample #1:

```
3
4
2
5
0
The arithmetic mean is 3.5
```

Sample #2:

```
5
5
4
4
0
The arithmetic mean is 4.5
```

Sample #3:

```
0
Nothing to calculate
```

Task #2: "Sum of Digits" (0.5%)

Notes: the *while* loop statement should be used

Read an integer from the standard input and find the sum of all its digits.

Sample #1:

```
Integer? 6427572
The sum of all digits is 33
```

Sample #2:

```
Integer? 784
The sum of all digits is 19
```

Task #3: "Simple Math Test" (2 versions: using while, using for) (0.5%)

Description: the program asks for a number of tests, prints each test on a separate line, reads each answer after each line, and provides statistics with a number of correct and incorrect answers at the end. Each test asks to find sum of two numbers. Each number is generated with the class Random. For solution students have to use while-loop.

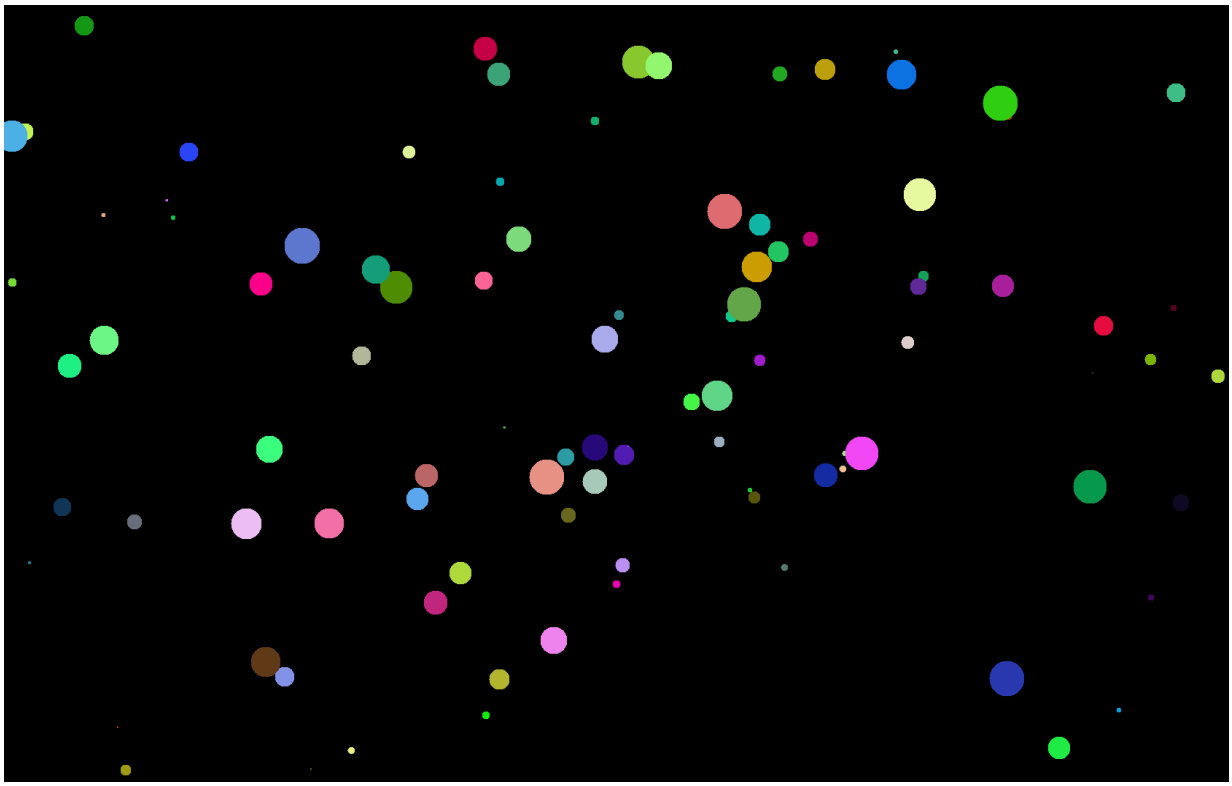
Sample #1:

```
Number of tests? 3
5 + 3 = 8
4 + 2 = 5
-3 + 11 = 9
Number of correct answers: 1
Number of incorrect answers: 2
```

Task #4: “Random balls” (0.5%)

Notes: *for* loop should be used

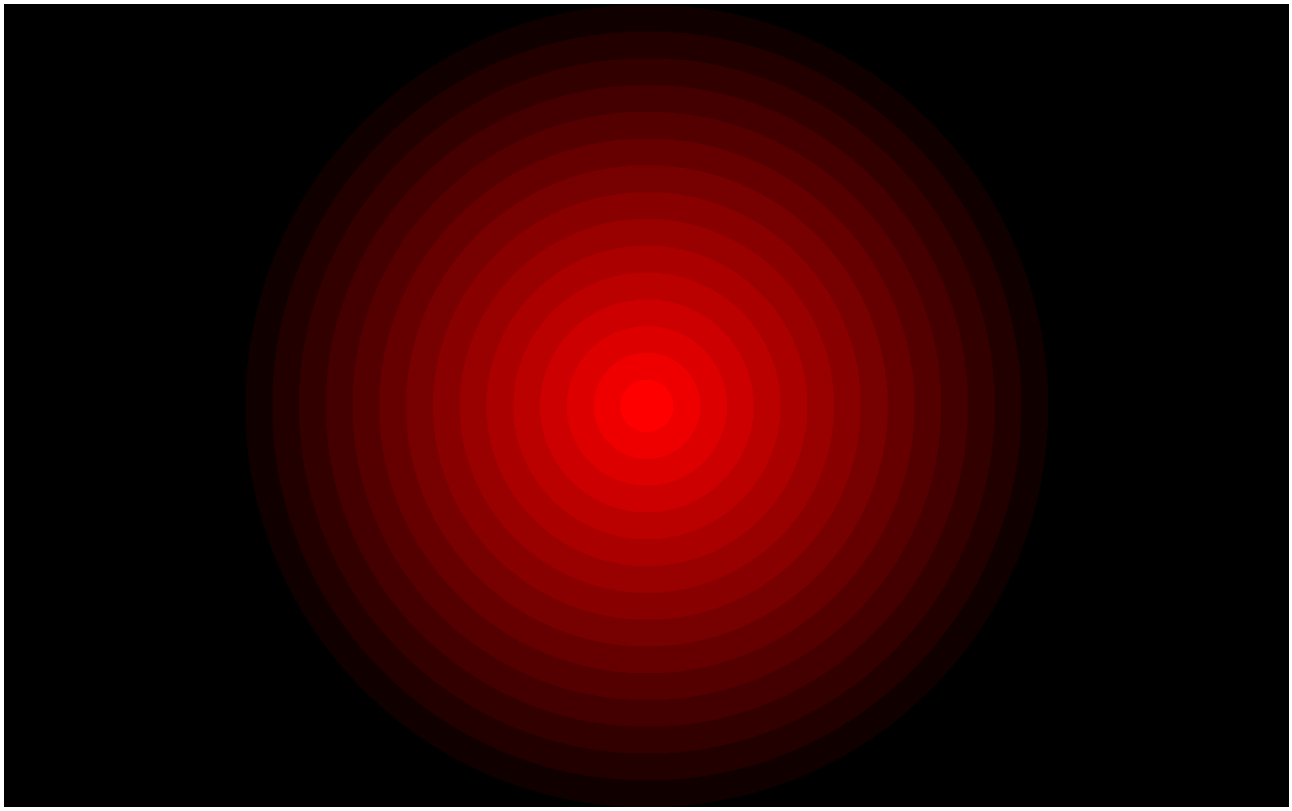
Application draws a certain number of rounds with random radiuses, random coordinates and random colors.



Task #5: "Circles" (0.5%)

Notes: the *for* loop should be used

Description: the application draws a certain number of circles on the screen.



Home Reading: Liang Introduction to Java Programming 8th ed. 4 Chapter (H:\Courses Information Support\Natural Sciences and Information Technologies\COM 111 Programming I. Intro to OOP\Books)