

HW1
Computer Programming
Fall 2021
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Q1: Draw the flowchart that expresses the algorithm for solving the following problems:

a- Problem Description:

Reads in a sequence of integer values and stops when a negative number is entered. Right before the algorithm stops, it should print out the largest and smallest numbers ever seen in the sequence. It should also print out the sum and the average of the entered numbers.

3
4
2
5
9
10
-1

Largest: 10

Smallest: 2

Sum: 33

Average: 5.5

b- Problem Description:

Reads in two integer values from the user. Right before the algorithm stops, it should print out the sum (addition), multiply, subtract, divide and remainder of the two numbers.

```
Output - ProjectW01.G01 (run)

run:
Input first number: 100
Input second number: 10
100 + 10 = 110
100 - 10 = 90
100 x 10 = 1000
100 / 10 = 10
100 mod 10 = 0
BUILD SUCCESSFUL (total time: 8 seconds)
```

c- Problem Description:

Reads in the height and the width values from the user. Right before the algorithm stops, it should print out the area and perimeter of a rectangle

```
Output - ProjectW01.G01 (run)

run:
Input the width: 2.2
Input the height: 3.3
Perimeter is 2*(3.3 + 2.2) = 11.00
Area is 2.2 * 3.3 = 7.26
BUILD SUCCESSFUL (total time: 4 seconds)
|
```

Q2: Write a Java program to print the sum (addition), multiply, subtract, divide and remainder of two numbers.

```
Output - ProjectW01.G01 (run)

run:
Input first number: 100
Input second number: 10
100 + 10 = 110
100 - 10 = 90
100 x 10 = 1000
100 / 10 = 10
100 mod 10 = 0
BUILD SUCCESSFUL (total time: 8 seconds)
```

Q3: Write a Java program that takes a number as input and prints its multiplication table up to 15

```
Output - ProjectW01.G01 (run)

run:
Input a number: 4
4 x 1 = 4
4 x 2 = 8
4 x 3 = 12
4 x 4 = 16
4 x 5 = 20
4 x 6 = 24
4 x 7 = 28
4 x 8 = 32
4 x 9 = 36
4 x 10 = 40
4 x 11 = 44
4 x 12 = 48
4 x 13 = 52
4 x 14 = 56
4 x 15 = 60
BUILD SUCCESSFUL (total time: 5 seconds)
```

Q4: Write a Java program that takes four numbers as input to calculate and print the average of the numbers.

Output - ProjectW01.G01 (run)

```
run:
Input first number: 10
Input second number: 54
Input third number: 98
Input fourth number: 73
Average of the four numbers is: 47
BUILD SUCCESSFUL (total time: 12 seconds)
|
```

Q5: Write a Java program to print the area and perimeter of a rectangle

Output - ProjectW01.G01 (run)

```
run:
Input the width: 2.2
Input the height: 3.3
Perimeter is 2*(3.3 + 2.2) = 11.00
Area is 2.2 * 3.3 = 7.26
BUILD SUCCESSFUL (total time: 4 seconds)
|
```