

# Option #1

## Pseudocode:

Class Module4

```
INITIALIZE total to 0
INITIALIZE average to 0
INITIALIZE maximum to NEGATIVE_INFINITY
INITIALIZE minimum to POSITIVE_INFINITY
INITIALIZE counter to 0
```

```
WHILE counter < 5 DO
  PROMPT user to enter a number
  READ userInput
```

```
  IF userInput < 1 THEN
    OUTPUT "Input must be > 0"
    CONTINUE to next iteration
  END IF
```

```
  ADD userInput to total
```

```
  IF userInput > maximum THEN
    SET maximum = userInput
  END IF
```

```
  IF userInput < minimum THEN
    SET minimum = userInput
  END IF
```

```
  INCREMENT counter by 1
END WHILE
```

```
OUTPUT "*****"
OUTPUT "Total: " + total
SET average = total / 5
OUTPUT "Average: " + average
OUTPUT "Maximum: " + maximum
OUTPUT "Minimum: " + minimum
OUTPUT "Interest: " + (total * 0.2)
```

## Source Code:

```
import java.util.Scanner;

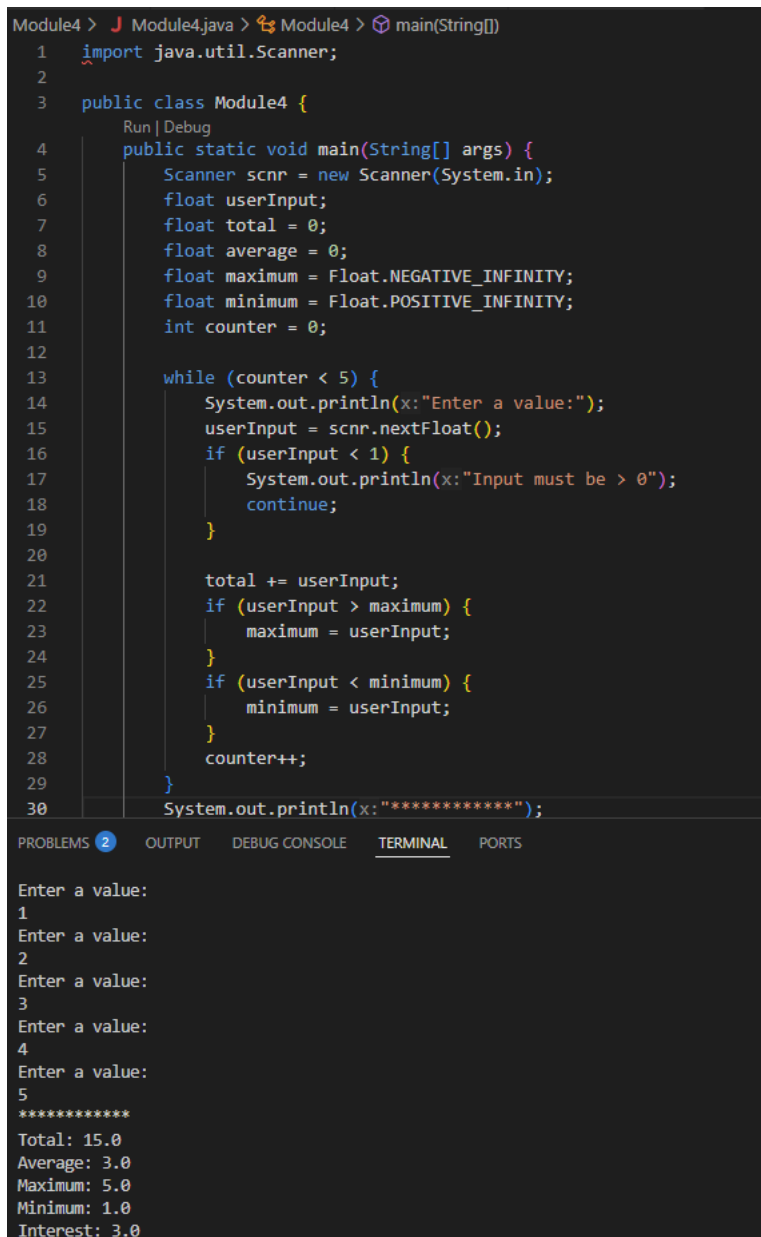
public class Module4 {
    public static void main(String[] args) {
        Scanner scnr = new Scanner(System.in);
        float userInput;
        float total = 0;
        float average = 0;
        float maximum = Float.NEGATIVE_INFINITY;
        float minimum = Float.POSITIVE_INFINITY;
        int counter = 0;

        while (counter < 5) {
            System.out.println("Enter a value:");
            userInput = scnr.nextFloat();
            if (userInput < 1) {
                System.out.println("Input must be > 0");
                continue;
            }

            total += userInput;
            if (userInput > maximum) {
                maximum = userInput;
            }
            if (userInput < minimum) {
                minimum = userInput;
            }
            counter++;
        }
        System.out.println("*****");
        System.out.println("Total: " + total);
        average = total / 5;
        System.out.println("Average: " + average);
        System.out.println("Maximum: " + maximum);
        System.out.println("Minimum: " + minimum);
        System.out.println("Interest: " + total * 0.2);

    }
}
```

## Screenshot of application execution



The screenshot displays an IDE with a Java code editor and a terminal window. The code defines a class `Module4` with a `main` method that uses a `Scanner` to read five floating-point values from the user. It then calculates and prints the total, average, maximum, minimum, and interest (the sum of the values) of these inputs.

```
Module4 > J Module4.java > Module4 > main(String[])
1  import java.util.Scanner;
2
3  public class Module4 {
4      Run | Debug
5      public static void main(String[] args) {
6          Scanner scnr = new Scanner(System.in);
7          float userInput;
8          float total = 0;
9          float average = 0;
10         float maximum = Float.NEGATIVE_INFINITY;
11         float minimum = Float.POSITIVE_INFINITY;
12         int counter = 0;
13
14         while (counter < 5) {
15             System.out.println(x:"Enter a value:");
16             userInput = scnr.nextFloat();
17             if (userInput < 1) {
18                 System.out.println(x:"Input must be > 0");
19                 continue;
20             }
21             total += userInput;
22             if (userInput > maximum) {
23                 maximum = userInput;
24             }
25             if (userInput < minimum) {
26                 minimum = userInput;
27             }
28             counter++;
29         }
30         System.out.println(x:"*****");

```

The terminal window shows the execution output, including prompts for user input and the final calculated values:

```
PROBLEMS 2 OUTPUT DEBUG CONSOLE TERMINAL PORTS
Enter a value:
1
Enter a value:
2
Enter a value:
3
Enter a value:
4
Enter a value:
5
*****
Total: 15.0
Average: 3.0
Maximum: 5.0
Minimum: 1.0
Interest: 3.0

```

## Git Repository

[https://github.com/ac-potts/CS320\\_CritThinking/tree/main/Module4](https://github.com/ac-potts/CS320_CritThinking/tree/main/Module4)