

Title: Max, Min, Average

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Description: Asks the user how many numbers they would like to enter. Then asks for the series of numbers and keeps track of the smallest, largest, and average of the numbers entered. Then prints out the average, smallest, and largest numbers.

Initial Algorithm:

1. Get number of numbers
2. Prompt for a set of numbers
3. Determine the smallest, largest, and average number entered
4. Display the average, smallest, and largest numbers
5. Determine whether the user wants to enter more or stop

Data Requirements:

Input:

- Repetitions
- Number

Output:

- Average
- Smallest
- Largest

Additional Data:

- Counter
- Total

Formulas:

- $Total = Total + Number$
- $Average = Total / Repetitions$
- $Smallest = Number$
- $Largest = Number$

Refined Algorithm:

1. Initialize Smallest to 2147483647
2. Initialize Largest to -2147483648
3. Prompt for Repetitions

4. WHILE Repetitions is not -1
 - a. FOR Counter = 1 To Repetitions
 - Prompt for a Number
 - Total = Total + Number
 - IF Number < Smallest THEN
 - Smallest = Number
 - END IF
 - IF Number > Largest THEN
 - Largest = Number
 - END IF
 - b. NEXT Counter
 - c. IF Repetitions > 0 THEN
 - Calculate the average number
 - Average = Total / Repetitions
 - Display the Average
 - Display the Smallest number
 - Display the Largest number
 - d. ELSE
 - Display error saying “no numbers were entered”
 - e. END IF
 - f. Prompt for Repetitions or -1 to stop
5. END WHILE