

Summary of Problem Statement**Problem #** 2

The program should generate a string representation of the vector of data, as well as provide basic statistics including the number of negative values, number of positive values, the sum of all of the values, the mean, median, and standard deviation of the data set, and the minimum and maximum values in the data set.

Known / Input

Amount = number of data points
 decimals = number of decimal places
 Entry = user defined values for the data points

Unknown / Output

pos = number of positive values entered
 neg = number of negative values entered
 sumofAll = finds sum of all the values
 average = computes average
 Deviation = calculates standard deviation
 minimum = stores min value
 maximum = stores max value

Assumptions

None

Other Variables

None

Algorithm

User enters the amount of values they will enter and the number of decimal places they want
 User then enters the numbers that they would like to enter
 Program checks the total number of values to see how many are positive and negative
 All values will be rounded using round(A,decimals):
 The program uses sum to add up all values
 The program uses mean to find the average of all values
 The program uses median to find the median of the data
 The program uses std to find the standard deviation
 The program uses min and max to find the minimum and maximum values
 Each value is then output

Test Cases

Using the provided test case:
 Data Points: 3
 Round: 2
 [2.34, 5.678, 10.9896]

Output: Data Set Information:

Vector = [2.34, 5.69, 10.99]

Positive: 3.00
 # Negative: 0.00
 Sum of all values: 19.02
 Mean: 6.34
 Median: 5.69
 Standard Deviation: 4.36
 Minimum: 2.34
 Maximum: 10.99>>