Project 2

Bridgette Stranko

Jacob Tubman

Solution

To calculate the average and standard deviation of four scores:

Get input from user (whole numbers only) for the four scores.

Assign the input to the values respectively: S1, S2, S3 and S4

Average is declared as a double so it must the total of the four scores (integers) must be divided by 4.0 (a double) to assign average a double value.

Average = (S1 + S2 + S3 + S4)/4.0 )/ 4

To find the min and max:

If S1 <= S2 and S1 <= S3 and S1 <= S4 then Min = S1

Else if S2 <= S1 and S2 <= S3 and S2 <= S4 then Min = S2

Else if S3 <= S1 and S3 <= S2 and S3 <= S4 then Min = S3

Else Min = S4

If S1 >= S2 and S1 >= S3 and S1 >= S4 then Max = S1

Else if S2 >= S1 and S2 >= S3 and S2 >= S4 then Max = S2

Else if S3 >= S1 and S3 >= S2 and S3 >= S4 then Max = S3

Else Max = S4

To sort the numbers and display them in order:

if(S1 > S2) call swap\_values and swap S1, S2

if(S1 > S3) call swap\_values and swap S1, S3

if(S1 > S4) call swap\_values and swap S1, S4

if(S2 > S3) call swap\_values and swap S2, S3

if(S2 > S4) call swap\_values and swap S2, S4

if(S3 > S4) call swap\_values and swap S3, S4

Display the scores in order:

The Scores in order are "S1”, “S2”, “S3”, “S4”

To swap the scores

Declare a temporary place holder (temp) as an integer

temp = value1

value1 = value2

value2 = temp

To determine whether or not the user wants to run the program again:

Declare a char variable ans

Do the above calculations while the user input for ans is Y or y

Baseline case is 1, 2, 3, 4

The average = (1+2+3+4)/4.0 = 2.50

The Standard Deviation = ) = 1.19