

Lab #1 Grade Median

Write a C++ program that asks the user how many grades there are, inputs the grades, and displays the median of those grades.

The median grades is the middle grade. If there are an even number of grades, the median is the average of the middle two grades.

Examples

Grades	Median
76.5 82.3 69.8 89.0 78.2	78.2
76.5 82.3 69.8 89.0 78.2 63.1	77.35

Your program must:

1. Store the grades in an array.
2. Have a function that inputs the grades, stores them in an array and returns the number of grades.
3. Handle up to 20 grades
4. Use a function that sorts an array of grades.
5. Have a separate function that takes a sorted array and the number of grades. It returns the median of those grades.

Hints:

- Chapter 3 contains examples of C++ console input and output
- Chapter 7 has examples using arrays, and passing arrays as function arguments.
- Chapter 8 provides some sort algorithms.

Once your program executes correctly, upload your .cpp file. Make sure your name is in the program in a comment.

Sample Output (**Bold** indicates user input)

Please enter the number of grades: **6**

85.2

92.3

78.0

51.5

91.6

87.0

The median grade is 86.1