Write a SPIM program which does the following:

1. [10] Prompt for an integer box count. Your program should repeat the prompt if the input is <= 1 or > 100.

2. [20] For each box, prompt for an integer width, height, and depth. Using these dimensions, calculate the box’s volume and store the volume for future computation. You can allocate an array large enough to hold 100 integers (i.e., you do not need dynamically allocate memory).

3. [30] Sort the box volumes into descending order (i.e., from largest to smallest).

4. [10] Print the sorted volumes with a single space between each entry.

5. [15] Calculate and print the integer mean of the volumes.

6. [15] Calculate and print the integer median of the volumes.

Your output should look like:

Enter box count (1 < count <= 100): 101
Enter box count (1 < count <= 100): 3
Enter width: 1
Enter height: 2
Enter depth: 3
Enter width: 4
Enter height: 5
Enter depth: 6
Enter width: 7
Enter height: 8
Enter depth: 9
Volumes (decreasing): 504 120 6
Integer mean volume: 210
Integer median volume: 120
Submit your program to Blackboard.