Practice 10_3 Loop Arrays

Task 01: Babar is teaching five sections. Each section has different number of students. For each class you have to compute average marks of section. Next, you have to count, how many students have marks greater than average? Finally, you have to find overall average as well.

To solve this question, take an integer pointer. For each section, ask number of students in the section. Declare a dynamic array according to the count. Take input marks (you may use random values instead). Do sum of marks and find average. Next, run loop on the marks to find number of students having marks above average. Add sum into another variable say grand_sum and add count into another variable grand_count. Delete dynamic array. Take input for count of next section. Declare dynamic array according to the count and continue the process for all sections…

Sample Run:

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Section 1 Count: 25
Section 1 Marks: 83 76 67 …
Average of Section 1: 72.25
Count of students above average:
Section 2 Count: 22
...
Overall Average: 71.5
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Task 02: Declare two integer pointers with names even & odd. Declare a large array of size 50. Initialize element randomly. Count even numbers. Next, declare dynamic arrays to pointers even & odd according to the count. Next, separate even and odd element into their respective arrays. Print both arrays in separate line. Find their averages. Count and print element of both arrays greater than average.

Task 03: Take six integer pointers. Take an integer array of size 40. Initialize elements randomly. Find average. Count below average and above average elements. Declare two dynamic arrays and separate elements into two arrays. Next, find average of each array and separate elements into four dynamic arrays. Finally, print four set of elements into different lines.

Task 04: Input two strings and find common letters into both with and without case difference.

Task 05: Input a sentence with three or more words. For each letter in the sentence (except space character), find and print number of occurrences of each letter (for comparison consider capital and small alphabets are same). For example:

```
Sentence: This is a pen.
T : 1
H : 1
I : 2
S : 2
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