By: Sir Imran Javed **PF Lab** **24th May 2024**

Task 1: Declare an array of 12 elements to store monthly sales. Initialize sale at random with values in range (10-
99). Print sale of each month in a single line. Also, print sales of each quarter in single line, along with minimum,
maximum and average sale of each quarter. Also, find & print the quarter number and sale of quarter having
minimum sale. Also, find & print the quarter number and sale of quarter having maximum sale. Also, find & print
the quarter number and average sale of quarter having minimum average sale. Also, find & print the quarter
number and average sale of quarter having maximum average sale. See sample run for further understanding:

Sample Run:
Monthly Sales: 11 42 11 32 34 33 40 10 20 24 16 22
Quarter I: 11 42 11 Min: 11 Max: 42 Average: 21.33
Quarter 2: 32 34 33 Min: 32 Max: 34 Average: 33.00
Quarter 3: 40 10 20 Min: 10 Max: 40 Average: 23.33
Quarter 4: 24 16 22 Min: 16 Max: 24 Average: 20.66
Quarter 3 has minimum sale 10
Quarter 1 has maximum sale 42
Quarter 4 has minimum average sale 20.66
Quarter 2 has maximum average sale 33.00

Task 2: Declare an array of 10 elements and store random elements in the range 11 to 30. Print elements in a
single line. Find max element and average of the array in float & print them. Next, check all the elements, if
elements are odd, modify the element by adding one. Also, check element with neighboring elements. If
elements are same, modify right side element by adding two. Print elements in a single again. Find max element
and average of the array in float & print them. Print difference of previous max with new max. Also, print
different of previous average with new average.
Finally, print a char/ graph by writing each element following by stars. See sample run carefully:

Sample Run:
11 22 15 16 17 …
Max: 29
Average: 19.27
12 22 16 18 20 …
Max: 38
Average: 26.48
Difference of Max: 9

Difference of Average: 7.21

Task 3: Create three arrays of ten elements each. Initialize first two arrays with random values in range 1-9. Print
corresponding elements of first and second array and ask user to add them. Store user's answers in third array.
Check user answer is correct or not, calculate score and print score at the end. In the last, print incorrect
statements and give corresponding correct statement as well
Sample Run:
3 + 5 = 8
2 + 7 = 9
1 + 6 = 5
2 + 4 = 7
3 + 6 = 9
1 + 4 = 6
…
Score 7 / 10
Incorrect Correct
1 + 6 = 5 1 + 6 = 7
1 + 4 = 6 1 + 4 = 5

Task 4: Initialize a list of 10 elements at random in range 10 to 99. Create a copy of list. Sort new list using bubble
sort and print all elements after each iteration of loop in single line.
Next, trace each element of previous list in new list and print its position. See sample run for your
understanding:

Sample Run:
27 45 12 23 18
27 12 23 18 45
12 23 18 27 45
12 18 23 27 45
12 18 23 27 45
---
27 is at position 3
45 is at position 4
12 is at position 0
23 is at position 2
18 is at position 1

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int x[LENGTH] = {..}, y[LENGTH];
for (i = 0 ; i < LENGTH; i++)
y[i] = x[i] //code to create copy
```