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C Language

Lab Work

Chapter - 8

Array in Detail

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Lab Work #8.2

Sr. No.	Question
Q.1	Write a Program to find the average of a given 2D array. For example, Input: Enter the array's row size: 3 Enter the array's column size: 3 Enter array's elements: a[0][0] = 2 a[0][1] = 4 a[0][2] = 1 a[1][0] = 3 a[1][1] = 5 a[1][2] = 4 a[2][0] = 8 a[2][1] = 2 a[2][2] = 6 Output: Average of an Array: 3.88
Q.2	Write a Program to perform the addition operation of two 2D arrays & store it in another array. Keep in mind that both array sizes must be the same. For example, Input: Enter the array's row size: 3 Enter the array's column size: 3 Enter array A's elements: a[0][0] = 2 a[0][1] = 4 a[0][2] = 1 a[1][0] = 3 a[1][1] = 5 a[1][2] = 4 a[2][0] = 8 a[2][1] = 2 a[2][2] = 6

	Enter array B's elements: b[0][0] = 3 b[0][1] = 6 b[0][2] = 2 b[1][0] = 5 b[1][1] = 6 b[1][2] = 8 b[2][0] = 3 b[2][1] = 7 b[2][2] = 4 Output: Array C is: 5 10 3 8 11 12 11 9 10
Q.3	Write a Program to find the sum of diagonal elements from a given 2D array. For example, Input: Enter the array's row & column size: 3 Enter array's elements: a[0][0] = 2 a[0][1] = 4 a[0][2] = 1 a[1][0] = 3 a[1][1] = 5 a[1][2] = 4 a[2][0] = 8 a[2][1] = 2 a[2][2] = 6 Output: The sum of diagonal elements of an Array: 13
Q.4	Write a Program to print and find the sum of all boundary elements from a given 5x5 2D array. For example, Input:

```
Enter array's elements:
a[0][0] = 2
a[0][1] = 4
a[0][2] = 1
a[0][3] = 6
a[0][4] = 3
a[1][0] = 9
a[1][1] = 5
a[1][2] = 4
a[1][3] = 6
a[1][4] = 7
a[2][0] = 8
a[2][1] = 2
a[2][2] = 6
a[2][3] = 3
a[2][4] = 5
a[3][0] = 3
a[3][1] = 4
a[3][2] = 8
a[3][3] = 5
a[3][4] = 1
a[4][0] = 2
a[4][1] = 3
a[4][2] = 9
a[4][3] = 5
a[4][4] = 7

Output:
2 4 1 6 3
9         7
8         5
3         1
2 3 9 5 7

The sum of boundary elements of an Array: 75
```