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CSE 115L : Section 14
Array: Practice Problems

1. Ask user for a positive integer n. Declare a **float** array of size n and take input from user. Compute average of all elements.
2. Initialize an **int** array with values 10, 5, 25, 9, 2. Then implement the following tasks:
 - i) Display the array elements in reversed order.
 - ii) Find and display the minimum value and its index (position).
3. Declare two **int** arrays A and B of size 5. Take user input for both arrays and determine whether the two arrays are strictly identical or not. Two arrays are strictly identical if both contain same values at same indices. Print "Strictly identical" or "Not identical" based on your finding.
4. Ask user for number of rows and number of columns. Based on input, declare two 2-dimensional arrays M and N. Now implement the following tasks:
 - i) Take input for both arrays
 - ii) Output the arrays as form of matrix
 - iii) Calculate the sum and store the sum in another 2D array of same dimension. Display the sum.

Sample run:

Row: 2 Column: 3	Enter first array elements: 2 3 1 10 4 6	Enter second array elements: 7 2 4 6 8 4	First array: 2 3 1 10 4 6 Second array: 7 2 4 6 8 4	Sum: 9 5 5 16 12 10
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5. Take input of a 3x3 matrix and display the sum of its main diagonal element. For the following matrix, your program should display 12. (Because 5+3+4 = 12)

5	2	1
0	3	7
6	8	4

Home Tasks

1. Initialize an **int** array with 10 values as per your choice. Then ask user for an integer n and search the whole array for n. If found, then display how many times it occurred in that array. Display “not found” otherwise.
2. Take user input for an int array of size 5 and determine whether the array is sorted in ascending order or not.
[Hint: in sorted array, each element (except the last one) is less than or equal to the next one]

Enter array elements: 5 8 8 13 20 Sorted	Enter array elements: 7 2 0 1 7 Not sorted
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3. Take user input for an int array of size N, when N is user input. Now modify the array in such a way that if any element is odd, then multiply it with 2 and if the element is even, then divide it by 2. Display the modified array.

Enter n: 5 Enter 5 integers: 7 9 12 4 45 Modified array: 14 18 6 2 90

4. Take input of size and elements of an int array. Display “found” if the array contains 3 consecutive integers with same value, print “not found” otherwise.

Enter size of array: 10 Enter numbers: 1 2 3 2 2 2 11 4 3 6 found

5. Take input of a matrix of MxN dimension, where M and N are user inputs. Now display the transpose of it. You can get the transpose matrix by interchanging row and column of the original matrix. See the following example:

Original matrix	Transpose matrix
4 6 2 1 3 8	4 1 6 3 2 8

6. Ask user for a positive integer n and then display a nxn identity matrix as follows:

Enter n: 4 1 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1
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