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CSE 115L : 2D Array: Practice Problems

1. Declare a 2D array and initialize it with the following values at the time of declaration (**no scanf**). Finally display its content in the following format.

```
78 83 82 54
81 80 23 14
11 20 31 11
56 79 31 90
32 45 56 87
```

2. Ask user for number of rows M and number of columns N. Based on the input, declare two 2-dimensional arrays of size M X 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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3. Take input of a NxN matrix and display the sum of its main diagonal element. N will also be input. **Example:** For the following matrix, your program should display 12. (Because 5+3+4 = 12)

```
5    2    1
0    3    7
6    8    4
```

4. Ask user for a positive integer n and then create and display a n x n diagonal matrix as follows:

Sample run:

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