

**Exercise 1 : Practice to manipulate character arrays**

A palindrome is a word, phrase, number or other sequence of characters which reads the same backward and forward. Write a C program that enter a word, store it in an array and determine whether it is palindrome or not.

Example : CIVIC is a palindrome

HOT is a not a palindrome

**Exercise 2 : Practice to manipulate 2D arrays**

Write C program that to add following two matrixes and display output.

$$\begin{pmatrix} 5 & 7 & 8 & 10 \\ 9 & 3 & 0 & 6 \\ 8 & 1 & 9 & 2 \\ 4 & 7 & 2 & 1 \end{pmatrix} + \begin{pmatrix} 2 & 2 & 1 & 3 \\ 8 & 1 & 3 & 1 \\ 1 & 2 & 2 & 4 \\ 3 & 1 & 1 & 2 \end{pmatrix} = \begin{pmatrix} 7 & 9 & 9 & 13 \\ 17 & 4 & 3 & 7 \\ 9 & 3 & 11 & 6 \\ 7 & 8 & 3 & 3 \end{pmatrix}$$

**Exercise 3 : Practice to manipulate 2D arrays**

Use a double-subscripted array to solve the following problem. A company has four salespeople ( 1 to 4) who sell five different products ( 1 to 5). Once a day, each salesperson passes in a slip for each different type of product sold. Each slip contains:

- The salesperson number
- The product number
- The total dollar value of that product sold that day

Assume that the information from all the slips for a day is available. Write a program that will read all this information for the day and store in a double-subscripted array **sales**. For each product find and display the total sales.