Array

1. Write a program in C to merge two arrays of same size sorted in ascending order.

   Test Data :

   Input the number of elements to be stored in the first array :3

   Input 3 elements in the array :

   element - 0 : 1

   element - 1 : 2

   element - 2 : 5

   Input the number of elements to be stored in the second array :3

   Input 3 elements in the array :

   element - 0 : 1

   element - 1 : 2

   element - 2 : 3

   Expected Output :

   The merged array in ascending order is :

   1 1 2 2 3 5

2. Write a program in C to find the maximum and minimum element in an array.

   Test Data :

   Input the number of elements to be stored in the array :3

   Input 3 elements in the array :

   element - 0 : 45

   element - 1 : 25

   element - 2 : 21

   Expected Output :

   Maximum element is : 45

   Minimum element is : 21

3. Write a program in C to insert New value in the array (unsorted list).

   Test Data :

   Input the size of array : 4

Input 4 elements in the array in ascending order:

element - 0 : 1

element - 1 : 8

element - 2 : 7

element - 3 : 10

Input the value to be inserted : 5

Input the Position, where the value to be inserted :2

Expected Output :

The current list of the array :

1 8 7 10

After Insert the element the new list is :

1 5 8 7 10

4. Write a program in C to insert New value in the array (sorted list).

Test Data :

Input the size of array : 3

Input 3 elements in the array in ascending order:

element - 0 : 5

element - 1 : 7

element - 2 : 9

Input the value to be inserted : 8

Expected Output :

The exist array list is :

5 7 9

After Insert the list is :

5 7 8 9

5. Write a program in C to find the second smallest element in an array.

Test Data :

Input the size of array : 5

Input 5 elements in the array (value must be <9999) :

element - 0 : 0

element - 1 : 9

element - 2 : 4

element - 3 : 6

element - 4 : 5

Expected Output :

The Second smallest element in the array is : 4

6. Write a program in C to accept two matrices and check whether they are equal.

   Test Data :

   Input Rows and Columns of the 1st matrix :2 2

   Input Rows and Columns of the 2nd matrix :2 2

   Input elements in the first matrix :

   element - [0],[0] : 1

   element - [0],[1] : 2

   element - [1],[0] : 3

   element - [1],[1] : 4

   Input elements in the second matrix :

   element - [0],[0] : 1

   element - [0],[1] : 2

   element - [1],[0] : 3

   element - [1],[1] : 4

   Expected Output :

   The first matrix is :

   1 2

   3 4

   The second matrix is :

   1 2

   3 4

   The Matrices can be compared :

   Two matrices are equal.

7. Write a program in C to find a pair with given sum in the array.

   Expected Output :

   The given array : 6 8 4 -5 7 9

   The given sum : 15

   Pair of elements can make the given sum by the value of index 0 and 5

8. Write a program in C to print next greater elements in a given unsorted array. Elements for which no greater element exist, consider next greater element as -1.

   Expected Output :

   The given array is : 5 3 10 9 6 13

   Next Bigger Elements are:

   Next bigger element of 5 in the array is: 10

   Next bigger element of 3 in the array is: 10

   Next bigger element of 10 in the array is: 13

   Next bigger element of 9 in the array is: 13

   Next bigger element of 6 in the array is: 13

   Next bigger element of 13 in the array is: -1

   Next Bigger Elements Array:

   10 10 13 13 13 -1

9. Write a program in C to find the row with maximum number of 1s. *Expected Output* :

   The given 2D array is :

   0 1 0 1 1

   1 1 1 1 1

   1 0 0 1 0

   0 0 0 0 0

   1 0 0 0 1

   The index of row with maximum 1s is: 1

10. Write a program in C to find out the maximum difference between any two elements such that larger element appears after the smaller number.

    Expected Output :

    The given array is : 7 9 5 6 13 2

    The elements which provide maximum difference is: 5, 13

    The Maximum difference between two elements in the array is: 8

String

11. Write a program in C to count the total number of words in a string.

    Test Data :

    Input the string : This is codeblocks.

    Expected Output :

    Total number of words in the string is : 3

12. Write a program in C to read a string through keyboard and sort it using bubble sort.

    Test Data :

    Input number of strings :3

    Input string 3 :

    zero

    one

    two

13. Write a C program to check whether a given substring is present in the given string.

    Test Data :

    Input the string : This is a test string.

    Input the substring to be search : search

    Expected Output :

    The substring is not exists in the string.

14. Write a program in C to read a sentence and replace lowercase characters by uppercase and vice-versa.

    Test Data :
    Input the string : This Is A Test String.

    Expected Output:

    The given sentence is : This Is A Test String.
    After Case changed the string is: tHIS iS a tEST sTRING.

15. All problems discussed in class.