



PG - DAC Sept 2023

Logical Building & Problem Solving

Assignment - 5(Date:14/09/2023)

1. Write a program in C to store elements in an array and print them.

Test Data :

Input 10 elements in the array :

element - 0 : 1

element - 1 : 1

element - 2 : 2

.....

Expected Output :

Elements in array are: 1 1 2 3 4 5 6 7 8 9

2. Write a program in C to read n number of values in an array and display them in reverse order.

Test Data :

Input the number of elements to store in the array :3

Input 3 number of elements in the array :

element - 0 : 2

element - 1 : 5

element - 2 : 7

Expected Output :

The values store into the array are :

2 5 7

The values store into the array in reverse are :

7 5 2

3. Write a program in C to find the sum of all elements of the array.

Test Data :

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

Input 3 elements in the array :

element - 0 : 2

element - 1 : 5

element - 2 : 8

Expected Output :

Sum of all elements stored in the array is : 15

4. Write a program in C to copy the elements of one array into another array.

Test Data :

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

Input 3 elements in the array :

element - 0 : 15

element - 1 : 10

element - 2 : 12

Expected Output :

The elements stored in the first array are :

15 10 12

The elements copied into the second array are :

15 10 12

5. Write a program in C to count the total number of duplicate elements 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 : 5

element - 1 : 1

element - 2 : 1

Expected Output :

Total number of duplicate elements found in the array is : 1

6. Write a program in C to print all unique elements in an array.

Test Data :

Print all unique elements of an array:

Input the number of elements to be stored in the array: 4

Input 4 elements in the array :

element - 0 : 3

element - 1 : 2

element - 2 : 2

element - 3 : 5

Expected Output :

The unique elements found in the array are:

3 5

7. Write a program in C to find the maximum and minimum elements 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

8. Write a program in C to separate odd and even integers into separate arrays.

Test Data :

Input the number of elements to be stored in the array :5

Input 5 elements in the array :

element - 0 : 25

element - 1 : 47

element - 2 : 42

element - 3 : 56

element - 4 : 32

Expected Output :

The Even elements are :

42 56 32

The Odd elements are :

25 47

9. Write a program in C to sort elements of an array in ascending order.

Test Data :

Input the size of array : 5

Input 5 elements in the array :

element - 0 : 2

element - 1 : 7

element - 2 : 4

element - 3 : 5

element - 4 : 9

Expected Output :

Elements of array in sorted ascending order:

2 4 5 7 9

10. Write a program in C to sort the elements of the array in descending order.

Test Data :

Input the size of array : 3

Input 3 elements in the array :

element - 0 : 5

element - 1 : 9

element - 2 : 1

Expected Output :

Elements of the array in sorted descending order:

9 5 1

11. Write a program in C to copy one string to another string.

Test Data :

Input the string : This is a string to be copied.

Expected Output :

The First string is : This is a string to be copied.

The Second string is : This is a string to be copied.

Number of characters copied : 31

Write a program in C to add two numbers using pointers.

Test Data :

Input the first number : 5

Input the second number : 6

Expected Output :

The sum of the entered numbers is : 11

12. Write a program in C to add numbers using call by reference.

Test Data :

Input the first number : 5

Input the second number : 6

Expected Output :

The sum of 5 and 6 is 11

13. Write a program in C to find the maximum number between two numbers using a pointer.

Test Data :

Input the first number : 5

Input the second number : 6

Expected Output :

6 is the maximum number.

14. Write a program in C to store n elements in an array and print the elements using a pointer.

Test Data :

Input the number of elements to store in the array : 5

Input 5 number of elements in the array :

element - 0 : 5

element - 1 : 7

element - 2 : 2

element - 3 : 9

element - 4 : 8

Expected Output :

The elements you entered are :

element - 0 : 5

element - 1 : 7

element - 2 : 2

element - 3 : 9

element - 4 : 8

15. Write a program in C to swap elements using call by reference.

Test Data :

Input the value of 1st element : 5

Input the value of 2nd element : 6

Input the value of 3rd element : 7

Expected Output :

The value before swapping are :

element 1 = 5

element 2 = 6

element 3 = 7

The value after swapping are :

element 1 = 7

element 2 = 5

element 3 = 6