



Programming Fundamental

Lab 06



**Topic: Arrays, Arrays with Functions,
Filing and functions, Pointers**

Faculty of Information Technology



University of Central Punjab

(Incorporated by Ordinance No. XXIV of 2002 promulgated by Government of the Punjab)
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Task 1:

Write a C++ Program to Count Digits, Alphabets and Spaces using File Handling.

Sample Output:

No. of Alphabets: 146

No. Of Digits: 5

No. Of White Spaces: 30

Task 2:

Write a function based C++ program that takes two array called source and destination array. It copies source array into destination array in reverse order.

Sample Input in source Array: 1 2 3 4 5

Sample Output in destination Array: 5 4 3 2 1

Task 3:

Write a function based C++ program in which two character arrays are accepted from the user. Your program then merges the two arrays in a third array but the entries must be done in alphabetical order.

Sample Output:

Enter 1st array:

D R P I E A N

Enter 2nd array:

B G K Q M O L

Output:

A B D E G I K L M N O P R



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Task 4:

Write a program in C++ to read an array containing n elements and sort this array in ascending order and descending order using user defined function and display sorted array from main function.

Sample Output:

```
Enter any number:  
5  
1  
2  
3  
4  
6  
7  
9  
8  
10  
  
Input Array is: 5 1 2 3 4 6 7 9 8 10  
  
Array is Ascending Order: 1 2 3 4 5 6 7 8 9 10
```

Task 5:

Write a function based C++ program that takes two arrays called source and destination array. It copies source array into destination array and then store the output of destination array in text file.

Sample Input in source Array: 1 2 3 4 5
Sample Output in text File: 1 2 3 4 5



Pointers

Task 6: Write a C++ program that takes an integer number from user. Make a pointer of integer type that stores address of the integer in a pointer variable. Now print the address and also the value stored in pointer variable.

```
Enter x
10
Value of x is : 10
Value of ptr is : 0x6ffe14
Value of *ptr is : 10
```

Task 7: Write a C++ program that takes a float number from user. Make a pointer of voidtype that stores address of the float in a pointer variable. Now print the address of float variable and also the value stored in pointer variable.

```
Enter x
10
Value of &x:0x6ffe14
Value of ptr:0x6ffe14
```

Task 8: Write a C++ program that takes two positive integers and make an integer type pointer that calculate sum.

```
Enter 1st number:
2
Enter 2nd number:
4
Sum of Two Numbers = 6
```



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Task 9: Write a C++ program that takes two float numbers from user. Make a float type pointer that calculate result after division.

```
Enter 1st number:  
2.5  
Enter 2nd number:  
4.5  
Division of Two Numbers = 0.555556
```

Task 10: Write a C++ program that takes an integer from user. Make a pointer of integer type that checks whether the integer entered by user is positive, negative or equal to zero.

```
Enter number  
-5  
Number is negative
```

Task 11: Write a C++ program that takes a positive integer from user. Make a pointer of integer type that prints the table of an integer entered by user.

```
Enter the number for Table:  
2  
Multiplicaiton Table:  
2*1 = 2  
2*2 = 4  
2*3 = 6  
2*4 = 8  
2*5 = 10  
2*6 = 12  
2*7 = 14  
2*8 = 16  
2*9 = 18  
2*10 = 20
```



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Task 12: Write a C++ program that takes an integer from user. Make a pointer of integer type that first increment (+1) then decrement (-1) in an integer number entered by user.

```
Enter number
10
Increment value: 11
Decrement Value: 10
```

Task 13: Write a C++ program that takes two positive integers from user and make an integer type pointer that find the difference between them.

```
Enter 1st number:
20
Enter 2nd number:
10
Difference of Two Numbers: 10
```

Task 14: Write a C++ program that takes three integers from user and make an integer type pointer that find the maximum number between them.

```
Enter 1st number:
10
Enter 2nd number:
15
Enter 3rd number:
5
Max number is:15
```