

LAB No. 11

Prepared by: Mr Noor Nabi

Objective of Lab No. 11:

After performing lab4, students will be able to:

- Know about pointers
- Various operations on Pointers.
- 1. Write a program to show the basic declaration of pointer.
- 2. Write a program to demonstrate how to handle the pointers in the program.

Expected Output :

```
Address of m : 0x7ffcc3ad291c
Value of m : 29

Now ab is assigned with the address of m.
Address of pointer ab : 0x7ffcc3ad291c
Content of pointer ab : 29

The value of m assigned to 34 now.
Address of pointer ab : 0x7ffcc3ad291c
Content of pointer ab : 34

The pointer variable ab is assigned with the value 7 now.
Address of m : 0x7ffcc3ad291c
Value of m : 7
```

3. Write a program to demonstrate the use of &(address of) and *(value at address) operator

Expected Output

```
Pointer : Demonstrate the use of & and * operator :
```

```
-----
m = 300
fx = 300.600006
cht = z
```

```
Using & operator :
```

```
-----
address of m = 0x7ffda2eeec8
address of fx = 0x7ffda2eeec8
address of cht = 0x7ffda2eeec7
```

```
Using & and * operator :
```

```
-----
value at address of m = 300
value at address of fx = 300.600006
value at address of cht = z
```

```
Using only pointer variable :
```

```
-----
address of m = 0x7ffda2eeec8
address of fx = 0x7ffda2eeec8
address of cht = 0x7ffda2eeec7
```

```
Using only pointer operator :
```

```
-----
value at address of m = 300
value at address of fx = 300.600006
value at address of cht = z
```

4. Write a program to add two numbers using pointers.
5. Write a program to add numbers using call by reference.
6. Write a program to find the maximum number between two numbers using a pointer.
7. Write a program to store n elements in an array and print the elements using pointer.
8. Write a program to find the largest element using Dynamic Memory Allocation.

Test Data :

Input total number of elements(1 to 100): 5

Number 1: 5

Number 2: 7

Number 3: 2

Number 4: 9

Number 5: 8

Expected Output :

The Largest element is : 9.00

9. Write a program to Calculate the length of the string using a pointer
10. Write a program to swap elements using call by reference.
11. Write a program to find the factorial of a given number using pointers.
12. Write a program to count the number of vowels and consonants in a string using a pointer
13. Write a program to compute the sum of all elements in an array using pointers
14. Write a program to print all the alphabets using pointer.
15. Write a program to print a string in reverse using a pointer

Best of luck 😊