## **Week 09 - Practice [Pointer]**

## **1.** **C program to demonstrate pointer use (& and \*).**

#include <stdio.h>

int main()

{

int \*p;

int var = 10;

p= &var;

printf("Value of variable var is: %d", var);

printf("\nValue of variable var is: %d", \*p);

printf("\nAddress of variable var is: %p", &var);

printf("\nAddress of variable var is: %p", p);

printf("\nAddress of pointer p is: %p", &p);

return 0;

}

Output:

Value of variable var is: 10

Value of variable var is: 10

Address of variable var is: 0x7fff5ed98c4c

Address of variable var is: 0x7fff5ed98c4c

Address of pointer p is: 0x7fff5ed98c50

## 

## **2.** **Write a program to swap value of two variables using pointer.**

#include <stdio.h>

int main()

{

int x, y, \*a, \*b, temp;

printf("Enter the value of x and y\n");

scanf("%d%d", &x, &y);

printf("Before Swapping\nx = %d\ny = %d\n", x, y);

a = &x;

b = &y;

temp = \*b;

\*b = \*a;

\*a = temp;

printf("After Swapping\nx = %d\ny = %d\n", x, y);

return 0;

}

**Using Function:**

#include <stdio.h>

void swap(int \*n1, int \*n2);

int main()

{

int num1 = 5, num2 = 10;

// address of num1 and num2 is passed

swap( &num1, &num2);

printf("num1 = %d\n", num1);

printf("num2 = %d", num2);

return 0;

}

void swap(int \*n1, int \*n2)

{

int temp;

temp = \*n1;

\*n1 = \*n2;

\*n2 = temp;

}

## **3.** **Write a program to find biggest among three numbers using pointer.**

#include<stdio.h>

main()

{

int a,b,c;

int\*ptra=&a,\*ptrb=&b,\*ptrc=&c;

printf("enter three values: ");

scanf("%d%d%d",ptra,ptrb,ptrc);

printf("a=%d\nb=%d\nc=%d\n",\*ptra,\*ptrb,\*ptrc);

if((\*ptra>\*ptrb && \*ptra>\*ptrc))

printf("biggest number=%d",\*ptra);

else if((\*ptrb>\*ptra && \*ptrb>\*ptrc))

printf("biggest number =%d",\*ptrb);

else

printf("biggest number=%d",\*ptrc);

return 0;

}

## **\*\*\* Write a program to find biggest among three numbers by sending pointer to function.**

## **4.** **Write a program to Access Array Elements Using Pointers.**

#include <stdio.h>

int main() {

int data[5];

printf("Enter elements: ");

for (int i = 0; i < 5; ++i)

scanf("%d", data + i);

printf("You entered: \n");

for (int i = 0; i < 5; ++i)

printf("%d\n", \*(data + i));

return 0;

}