Pointer Arthematics

on top of pointers, we cannot perform any operations by using pointers we can do operations

Program

```
#include <stdio.h>
void main()
{
   int a=10,b=20,*c,*d;
   c=&a;
   d=&b;
   printf("Sum=%d",*c+*d);
   printf("\nsub=%d",*c-*d);
   printf("\nProduct=%d",*c * *d);
   printf("\nDiv=%d",*c / *d);
}
```

Call – By -Value Model

It is a process of calling a function by using its values

Swap(a,b)

Here the modification those are done in the called function will not reflect on the variables of the calling function

Program

```
#include <stdio.h>
void swap(int a,int b)
{
   int t=a;
   a=b;
   b=t;
}

void main()
{
   int a=10,b=20;
   printf("Values Before Swapping:\n");
   printf("\nVal of a=%d",a);
   printf("\nval of b=%d",b);
   swap(a,b); //calling function
   printf("\nValues After Swapping:\n");
   printf("\nVal of a=%d",a);
   printf("\nval of b=%d",b);

}
```

Call – By – Reference Model

It is a process of calling a function by using its address

Swap(a,b)

Here the modification those are done in the called function will get reflected on the variables of the calling function

Program

```
#include <stdio.h>
void swap(int *a,int *b)
{
   int t=*a;
   *a=*b;
   *b=t;
}
```

```
void main()
{
   int a=10,b=20;
   printf("Values Before Swapping:\n");
   printf("\nVal of a=%d",a);
   printf("\nval of b=%d",b);
   swap(&a,&b);
   printf("\nValues After Swapping:\n");
   printf("\nVal of a=%d",a);
   printf("\nval of b=%d",b);

}
```