Topics: Pointers & Arrays | Ptrs Incremeted| Ptrs Decremented

1) Example of Ptrs Incrementing

```
#include<stdio.h>

int main( )

{

int i = 3, *x ;

float j = 1.5, *y ;

char k = 'c', *z ;

printf ( "\nValue of i = %d", i ) ;

printf ( "\nValue of j = %f", j ) ;

printf ( "\nValue of k = %c", k ) ;

x = &i ;

y = &j ;

z = &k ;

printf ( "\nOriginal address in x = %u", x ) ;

printf ( "\nOriginal address in y = %u", y ) ;

printf ( "\nOriginal address in z = %u", z ) ;

x++ ; //int = 4bytes, since Ptr is integer type

y++ ;

z++ ;

printf ( "\nNew address in x = %u", x ) ;

printf ( "\nNew address in y = %u", y ) ;

printf ( "\nNew address in z = %u", z ) ;

}
```

2) Addition of a number to pointers in Arrays | Condition: Refer to the same array

```
#include<stdio.h>
int main()
{
        int i = 4, *j, *k ;

        j = &i ;
        printf("%d\n",j );

        j = j + 1 ;
        printf("%d\n",j );

        j = j + 9 ;
        printf("%d\n",j );

        k = j + 3 ;
        printf("%d\n",k );
}
```

3) Subtraction of numbers from Ptrs in Arrays | Condition: Refer to the same array

```
#include<stdio.h>
int main()
{
        int i = 4, *j, *k ;
```

```
        j = &i ;
        printf("%d\n",j );

        j = j -1 ;
        printf("%d\n",j );

        j = j - 5 ;
        printf("%d\n",j );

        k = j - 6 ;
        printf("%d\n",k );
}
```

4) Subtraction of one pointer from another pointer

```
#include<stdio.h>
int main( )
{
        int arr[ ] = { 10, 20, 30, 45, 67, 56, 74 } ;
        int *i, *j ;
        i = &arr[1] ;
        j = &arr[5] ;
printf ( "%d\n", j - i ) ; //j and i point to a location 4 int-add apart //5-1
printf ( "%d", *j - *i ) ; //*j and *i return the values present //56-20
}
```