

Insertion Sort Function

```
#include<stdio.h>
void Display(int[],int);
void Insertion_Sort(int[],int);
int main()
{
    int num = 0;
    printf("Enter how many element you want = ");
    scanf("%d",&num);
    //Filter
    if(num<=0)
    {
        printf("Invalid Size\n");
        return -1;
    }
    int arr[num]; //array creation

    //Accept Value
    for(int i=0;i<num;i++)
    {
        printf("Enter Number = ");
        scanf("%d",&arr[i]);
    }

    //Display Array Before Sort
    printf("Before Sort = ");
    Display(arr,num);
```

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```
//Insertion Sort Call
Insertion_Sort(arr,num);

//Display array after sort
printf("\nAfter Sort = ");
Display(arr,num);

return 0;
}

void Display(int arr[],int num)
{
    for(int i=0;i<num;i++)
    {
        printf("%d ",arr[i]);
    }
}

void Insertion_Sort(int arr[],int num)
{
    int key,j;
    for(int i=1;i<num;i++)
    {
        key = arr[i];
        j = i-1;
        while(j>=0 && key<arr[j])
        {
            arr[j+1]=arr[j];
            j--;
        }
        arr[j+1] = key;
    }
    return;
}
```