

```
#include<stdio.h>
void display(int arr[],int count)
{
    printf("[ ");
    for(int i=0;i<count;i++)
    {
        printf("%d ",arr[i]);
    }
    printf("]\n");
}
void insertion_sort(int arr[],int count)
{
    int temp;int hole;
    for(int i=1;i<count;i++)
    {

        hole = i;
        temp = arr[i];
        printf(" Temporary variable ==> %d\n",arr[i]);
        printf("compairing [%d,%d]\n",arr[hole-1],temp);

        while(hole > 0 && arr[hole-1] > temp)
        {

            arr[ hole] = arr[hole-1];
            printf("moved [%d at index %d]\n",arr[hole-1] ,hole);
            hole--;

        }
        arr[hole] = temp;
        printf("moved [%d at index %d]\n",temp ,hole);

        printf("list after %d iteration(s) ==> ",i);
        display(arr,count);
        printf("*****\n");
    }
}
void main()
{
    int arr[10],count;
    printf("Enter total number of elements\n");
    scanf("%d",&count);
    printf("Enter elements\n");
    for(int i=0;i<count;i++)
    {
        scanf("%d",&arr[i]);
    }
    printf("Unsorted list==> \n");
    display(arr,count);
    insertion_sort(arr,count);
    printf("Sorted list is ==> ");
    display(arr,count);
}
```