

INSERTION SORT

Write a C program implement an INSERTION SORT and there steps

An insertion sort is one that sort a set of values by inserting values into an existing sorted files

A[6]	index	0	1	2	3	4	5
Steps1		-999					
Num = 5		-999					
i=j-1							
While(num<a[i])							
{							
a[i+1]=a[i];							
i--;							
}							
a[i+1]=num;							
		-999	5				
Num = 20		-999	5	20			
Num = 10		-999	5	10	20		
Num= 80		-999	5	10	20	80	
Num = 50		-999	5	10	20	50	80

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int a[10];
    int n,num,i,j,l;
    a[0]=-999;
    n=6;
    clrscr();
    for(j=1;j<n;j++)
```



```
{  
    printf("\n Enter any element ");  
    scanf("%d",&num);  
    i=j-1;  
    while(num<a[i])  
    {  
        a[i+1]=a[i];  
        i--;  
    }  
    a[i+1]=num;  
    printf("\n Pass %d\t",j);  
    for(l=1;l<=j;l++)  
        printf("\t%d",a[l]);  
}  
printf("\n Fianl Sorting ");  
for(i=1;i<n;i++)  
    printf(" %d",a[i]);  
getch();  
}
```





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```
#include<stdio.h>
#include<conio.h>
void main()
{
    int a[10],i,num,j,n,k;
    clrscr();
    printf("\n Enter How many number ");
    scanf("%d",&n);
    for(j=0;j<n;j++)
    {
        printf("\n Enter any number ");
        scanf("%d",&num);
        i=j-1;
        while(num<a[i] && i>=0)
        {
            a[i+1]=a[i];
            i--;
        }
        a[i+1]=num;
        printf("\n Pass %d : ",j+1);
        for(k=0;k<=j;k++)
            printf(" %d",a[k]);
    }

    printf("\nInsert sort ");
    for(i=0;i<n;i++)
        printf(" %d",a[i]);
    getch();
}
```

