

```
/*insertion sort*/
```

```
#include<stdio.h>
```

```
void insertion_sort(int arr[],int n);
```

```
int main(){
```

```
    int n,i;
```

```
    printf("enter the array size:\n");
```

```
    scanf("%d",&n);
```

```
    int arr[n];
```

```
    printf("enter the array values\n");
```

```
    for(i=0;i<n;i++){
```

```
        scanf("%d",&arr[i]);
```

```
    }
```

```
    insertion_sort(arr,n);
```

```
}
```

```
void insertion_sort(int arr[],int n){
```

```
    int i,j,temp;
```

```
    for(i=1;i<n;i++){
```

```
        temp=arr[i];
```

```
        j=i-1;
```

```
        while(j>=0 && temp<arr[j]){
```

```
            arr[j+1]=arr[j];
```

```
            j--;
```

```
        }
```

```
        arr[j+1]=temp;
```

```
    }
```

```
    printf("sorted array\n");
```

```
    for(i=0;i<n;i++){
```

```
        printf("%d\n",arr[i]);
```

```
    }
```

```
}
```

```
C:\Users\HP\OneDrive\Desktop >
enter the array size:
5
enter the array values
50
20
40
10
30
sorted array
10
20
30
40
50

-----
Process exited after 14.96 seconds with return value 0
Press any key to continue . . .
```