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C (gcc 6.2)



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Select

Open File

Custom Input

4
37 9
85 6

```

1 #include <stdio.h>
2 int main()
3 {
4     int a[10],i,j,n,ele;
5     printf("enter the no. of array elements\n");
6     scanf("%d",&n);
7     printf("%d\n",n);
8     printf("enter the array elements\n");
9     for(i=0;i<n;i++)
10    {
11        scanf("%d",&a[i]);
12        printf("%d",a[i]);
13    }
14    for(i=1;i<n;i++)
15    {
16        j=i;
17        while(j>=1 && a[j]<a[j-1])
18        {
19            if(a[j]<a[j-1])
20            {
21                ele=a[j];
22                a[j]=a[j-1];
23                a[j-1]=ele;
24            }
25            j=j-1;
26        }
27    }
28    printf("\nafter merge sort\n");
29    for(i=0;i<n;i++)
30    {
31        printf("%d\t",a[i]);
32    }
33    return 0;
34 }

```

Status Successfully executed Date 2020-06-25 02

Input

4
37 9
85 6

Output

```

enter the no. of array elements
4
enter the array elements
379856
after merge sort
6 9 37 85

```

C program to implement Merge sort

Algorithm:

Step 1: Start

Step 2: Input array

Step 3: $j = i$

Step 4: for $i = 1$ to $i \leq n-1$

while ($j \geq 1$ & & $a[j] < a[j-1]$)

if ($a[j] < a[j-1]$) then

temp = $a[j]$

$a[j] = a[j-1]$

$a[j-1] = temp$, $j = j-1$

Step 5: Output sorted array

Step 6: Stop

Flowchart:

