

C Program to implement merge sort.

Algorithm:→

Step 1: input $a[i]$, n

Step 2: print Enter the elements

```
for (i = 0; i < n; i++)
{
    scanf("%d", &a[i])
    printf("%d", a[i])
}
```

Step 3: repeat Step 2 until condition becomes false

Step 4: for ($i = 1$; $i < n$; $i++$)

```
{
    j = i;
    while (j >= 1 && a[j] < a[j-1])
    {
        if (a[j] < a[j-1])
        {
            de = a[j]
            a[j] = a[j-1]
            a[j-1] = de
        }
        j = j - 1
    }
}
```

Step 5: repeat step 4 until condition become false.

Step 6: print after merge sort

```
Step 7: for (i = 0; i < n; i++)
{
    printf("%d\t", a[i]);
}
```

Step 8: repeat step 7 until test condition becomes false

Step 9: return 0.

Step 10: Stop.

Flowchart: 

