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Algorithm

Step 1: Start

Step 2: Input n

Step 3: Display Enter the array Elements

      Repeat for $i = 0$ to $n-1$

        Input $a[i]$

Step 4: Repeat for $i = 1$ to $n-1$

        $j = i$

        while $(j >= 1 \ \&\& \ a[i] < a[i-1])$

            if $(a[i] < a[i-1])$

                $ele = a[i]$

                $a[i] = a[i-1]$

                $a[i-1] = ele$

           $i = j - 1$

Step 5:   [end For]

      Display After merge Sort

      Repeat for $i = 0$ to $n-1$

        output $a[i]$

Step 6: Stop

flowchart

```
                    ( Start )
                        |
                        v
                  / Input n /
                        |
                        v
          / Enter array Elements /
                        |
                        v
        < for (i=0; i<n; i++) >───────┐
                        |             │
                        v             │
                  / input a[i] /      │
                        |             │
                        v             │
        < for (i=1; i<n; i++) >───────────┐
                        |                 │
                        v                 │
                  [ j = i ]               │
                        |                 │
                        v                 │
      False    / while (j>=1      \  True │
       ┌───────<  && a[j]<a[j-1])  >──────┤
       │        \                /        │
       v            |                     │
  [ j = j-1 ]    False  / if (a[j]<a[j-1]) \  True
       │        ┌──────<                   >──────┐
       │        │       \                 /       │
       │        │                                 v
       │        │                         [ s = a[j]       ]
       │        │                         [ a[j] = a[j-1]  ]
       │        │                         [ a[j-1] = s     ]
       │        │                                 │
       └────────┤◄────────────────────────────────┘
                v
      / After merge sort /
                |
                v
     < for (i=0; i<n; i++) >──── Free
                |
                v
        / output a[i] /
                |
                v
            ( Stop )
```