To implement merge sort.

Algorithm

step 1. Start

Step 2. input a[i], n

step 3: print Enter the elements

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

step 3. repeat step 2 untill condition becomes false

step 4: for (i=1; i<n; i++)
```
    {
        j = i
        where (j >= 1 << a[j] < a (j-1)]
        {
            if (a[j] < a(j-1))
            {
                ele = a[j]
                a[i] = a[j-1]
            }   a(j-1) = ele
                j = j-1
        }
    }
```

Step 5: repeat step 4 untill condition becomes false

Step 6: print after merge sort

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

step 8. repeat 7 untill condi becomes false

Step 9. return 0

Step 10. Stop

Flowchart

```
                    ( Start )
                        |
              / input a[0] = i /
                        |
           / Enter arrays element /
                        |
        < for (i=0; i<n; i++) >--------> false
                   | true
           / read   a[i] /
                        |
           / Print    a[i] /
                        |
false <--- < for (i=0; i<n; i++) >
                   | true
                 [ j = i ]
                        |
False <----- < while          >
             < (j>=i &        >
             <  a[j]          >
                   | True
              < if            >   false
              < a[j] <        >----------->
              < a[j-1]        >
                   | true
           [ ele = a[j]    ]        [ j = j - 1 ]
           [ a[j] = a[j-i] ]
           [ a[j-i] = ele  ]
                        |
           / After merg  sort /
                        |
        < for (i=0; i<n; i++) >------> false
                   | true                |
           / print  a[i] /          [ return 0 ]
                                          |
                                      ( stop )
```