

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

```
#define max 10
```

```
int a[11] = { 10, 14, 19, 26, 27, 31, 33, 35, 42, 44, 0 };
```

```
int b[10];
```

```
void merging(int low, int mid, int high) {
```

```
    int l1, l2, i;
```

```
    for(l1 = low, l2 = mid + 1, i = low; l1 <= mid && l2 <= high; i++) {
```

```
        if(a[l1] <= a[l2])
```

```
            b[i] = a[l1++];
```

```
        else
```

```
            b[i] = a[l2++];
```

```
    }
```

```
    while(l1 <= mid)
```

```
        b[i++] = a[l1++];
```

```
    while(l2 <= high)
```

```
        b[i++] = a[l2++];
```

```
    for(i = low; i <= high; i++)
```

```
        a[i] = b[i];
```

```
}
```

```
void sort(int low, int high) {
```

```
    int mid;
```

```
    if(low < high) {
```

```
    mid = (low + high) / 2;
    sort(low, mid);
    sort(mid+1, high);
    merging(low, mid, high);
} else {
    return;
}
}
```

```
int main() {
    int i;

    printf("List before sorting\n");

    for(i = 0; i <= max; i++)
        printf("%d ", a[i]);

    sort(0, max);

    printf("\nList after sorting\n");

    for(i = 0; i <= max; i++)
        printf("%d ", a[i]);
```

```
}  
{  
C:\Users\nagir\OneDrive\Documents\merge sort.exe  
List before sorting  
10 14 19 26 27 31 33 35 42 44 0  
List after sorting  
0 10 14 19 26 27 31 33 35 42 44  
-----  
Process exited after 0.01407 seconds with return value 3  
Press any key to continue . . .
```