```
//17.merge sorting
#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]);
```

```
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 0.08058 seconds with return value 0
Press any key to continue . . .
```

```
}
```