[157, 110, 147, 122, 111, 149, 151, 141, 123, 112, 117, 13

[157, 110, 147, 122, 111, 149]   [151, 141, 123, 112, 117, 133]

[157, 110, 147]   [122, 111, 149]   [151, 141, 123]   [112, 117, 133]

[157, 110] [147] [122, 111] [149] [151, 141] [123] [112, 117] [13

[157] [110]   [122] [111]   [151] [141]   [112] [117]

[110, 157]   [111, 122]   [141, 151]   [112, 117]

[110, 147, 157]   [111, 122, 149]   [123, 141, 151]   [112, 117, 13

[110, 111, 122, 147, 149, 157]   [112, 117, 123, 133, 141, 151]

151, 157]

[110, 111, 112, 117, 122, 123, 133, 149, 147, 19

Merge sort Code :

```c
#include <stdio.h>
void merge (int a[], int l, int mid, int r){
    int i=l, j=mid+1, k=0, t[100];
    while (i<=mid && j<=r)
        t[k++]=a[i]<a[j] ? a[i++] : a[j++];
    while (i<=mid) t[k++]=a[i++];
    while (j<=r) t[k++]=a[j++];
    for (i=l; i<=r; i++)
        a[i]=t[i-l];

}


void mergesort (int a[], int l, int r){
    if (l<r){
        int mid = (l+r)/2;
        mergesort (a,l,mid);
        mergesort (a,mid+1, r);
        merge (a,l,mid,r);
    }
}
```

```c
int main () {
    int n, a[100], i;
    scanf ("%d", &n);
    for (i = 0; i < n; i++) {
        scanf ("%d", &a[i]);
    }

    mergesort (a, 0, n-1);

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