1-1

List: 12, 2, 16, 30, 8, 28, 4, 10, 20, 6, 18

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| j | a[1] | a[2] | a[3] | a[4] | a[5] | a[6] | a[7] | a[8] | a[9] | a[10] | a[11] |
| 0 | 12 | 2 | 16 | 30 | 8 | 28 | 4 | 10 | 20 | 6 | 18 |
| 1 | 12 | 2 | 16 | 30 | 8 | 28 | 4 | 10 | 20 | 6 | 18 |
| 2 | 2 | 12 | 16 | 30 | 8 | 28 | 4 | 10 | 20 | 6 | 18 |
| 3 | 2 | 12 | 16 | 30 | 8 | 28 | 4 | 10 | 20 | 6 | 18 |
| 4 | 2 | 12 | 16 | 30 | 8 | 28 | 4 | 10 | 20 | 6 | 18 |
| 5 | 2 | 8 | 12 | 16 | 30 | 28 | 4 | 10 | 20 | 6 | 18 |
| 6 | 2 | 8 | 12 | 16 | 28 | 30 | 4 | 10 | 20 | 6 | 18 |
| 7 | 2 | 4 | 8 | 12 | 16 | 28 | 30 | 10 | 20 | 6 | 18 |
| 8 | 2 | 4 | 8 | 10 | 12 | 16 | 28 | 30 | 20 | 6 | 18 |
| 9 | 2 | 4 | 8 | 10 | 12 | 16 | 20 | 28 | 30 | 6 | 18 |
| 10 | 2 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 28 | 30 | 18 |
| 11 | 2 | 4 | 6 | 8 | 10 | 12 | 16 | 18 | 20 | 28 | 30 |

1-2

List: 12, 2, 16, 30, 8, 28, 4, 10, 20, 6, 18

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 步驟 | a[1] | a[2] | a[3] | a[4] | a[5] | a[6] | a[7] | a[8] | a[9] | a[10] | a[11] |
| 0 | 12 | 2 | 16 | 30 | 8 | 28 | 4 | 10 | 20 | 6 | 18 |
| 1 | 4 | 2 | 6 | 10 | 8 | 12 | 28 | 30 | 20 | 16 | 18 |
| 2 | 2 | 4 | 6 | 10 | 8 | 12 | 28 | 30 | 20 | 16 | 18 |
| 3 | 2 | 4 | 6 | 10 | 8 | 12 | 28 | 30 | 20 | 16 | 18 |
| 4 | 2 | 4 | 6 | 10 | 8 | 12 | 28 | 30 | 20 | 16 | 18 |
| 5 | 2 | 4 | 6 | 8 | 10 | 12 | 28 | 30 | 20 | 16 | 18 |
| 6 | 2 | 4 | 6 | 8 | 10 | 12 | 28 | 30 | 20 | 16 | 18 |
| 7 | 2 | 4 | 6 | 8 | 10 | 12 | 16 | 18 | 20 | 28 | 30 |
| 8 | 2 | 4 | 6 | 8 | 10 | 12 | 16 | 18 | 20 | 28 | 30 |
| 9 | 2 | 4 | 6 | 8 | 10 | 12 | 16 | 18 | 20 | 28 | 30 |
| 10 | 2 | 4 | 6 | 8 | 10 | 12 | 16 | 18 | 20 | 28 | 30 |
| 11 | 2 | 4 | 6 | 8 | 10 | 12 | 16 | 18 | 20 | 28 | 30 |

1-3

List:8, 4, 12, 6, 14, 8, 2, 10, 16

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 步驟 | a[1] | a[2] | a[3] | a[4] | a[5] | a[6] | a[7] | a[8] | a[9] |
| 0 | 8 | 4 | 12 | 8 | 14 | 6 | 2 | 10 | 16 |
| 1 | 6 | 4 | 2 | 8 | 8 | 14 | 12 | 10 | 16 |

在該List中，8原本在8前面，結果經過一次排序後，跑到8後面，此List是QuickSort作為unstable sorting method的其中一項範例。