Following are the steps involved in quick sort algorithm:

1. After selecting an element as **pivot**, which is the last index of the array in our case, we divide the array for the first time.
2. In quick sort, we call this **partitioning**. It is not simple breaking down of array into 2 subarrays, but in case of partitioning, the array elements are so positioned that all the elements smaller than the **pivot** will be on the left side of the pivot and all the elements greater than the pivot will be on the right side of it.
3. And the **pivot** element will be at its final **sorted** position.
4. The elements to the left and right, may not be sorted.
5. Then we pick subarrays, elements on the left of **pivot** and elements on the right of **pivot**, and we perform **partitioning** on them by choosing a **pivot** in the subarrays.

"Trace the quick sort algorithm for input : {2,3,1}

pivot

|  |  |  |
| --- | --- | --- |
| 2 | 3 | 1 |

pivot

|  |  |  |
| --- | --- | --- |
| 1 | 2 | 3 |