```java
package sortAlgorithm;

class QuickSort {

    public static void quickSort(int[] nums) {

        if ( nums == null || nums.length <= 1 ) {
            return;
        }

        quickSortHelper(nums, 0, nums.length - 1);
    }


    private static void quickSortHelper(int[] nums,  int startIndex, int endIndex) {

        if ( startIndex >= endIndex ) {
            return;
        }

        int standardElement = nums[startIndex];

        int low = startIndex;
        int high = endIndex;

        while ( low < high ) {

            while ( low < high && nums[high] >= standardElement ) {
                high--;
            }
            if ( low < high ) {
                nums[low] = nums[high];
                low++;
            }

            while ( low < high && nums[low] <= standardElement ) {
                low++;
            }
            if ( low < high ) {
                nums[high] = nums[low];
                high--;
            }
        }
        nums[low] = standardElement;

        quickSortHelper(nums, startIndex, low - 1);
        quickSortHelper(nums, low+1, endIndex);
    }

    public static void main(String[] args) {

        int[] nums = {2, 7, 4, 2, 3, 9, -1, 9, 18};

        quickSort(nums);

        System.out.println("haha");
    }
}
```