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| --- |
| package vandana.projects.com; |
|  |  |
|  | public class QuickSort { |
|  | int partition(int arr[], int low, int high) |
|  | { |
|  | int pivot = arr[high]; |
|  | int i = (low-1); // index of smaller element |
|  | for (int j=low; j<high; j++) |
|  | { |
|  | if (arr[j] <= pivot) |
|  | { |
|  | i++; |
|  |  |
|  | // swap arr[i] and arr[j] |
|  | int temp = arr[i]; |
|  | arr[i] = arr[j]; |
|  | arr[j] = temp; |
|  | } |
|  | } |
|  |  |
|  | // swap arr[i+1] and arr[high] (or pivot) |
|  | int temp = arr[i+1]; |
|  | arr[i+1] = arr[high]; |
|  | arr[high] = temp; |
|  |  |
|  | return i+1; |
|  | } |
|  |  |
|  |  |
|  |  |
|  | void sort(int arr[], int low, int high) |
|  | { |
|  | if (low < high) |
|  | { |
|  |  |
|  | int pi = partition(arr, low, high); |
|  |  |
|  |  |
|  | sort(arr, low, pi-1); |
|  | sort(arr, pi+1, high); |
|  | } |
|  | } |
|  | static void printArray(int arr[]) |
|  | { |
|  | int n = arr.length; |
|  | for (int i=0; i<n; ++i) |
|  | System.out.print(arr[i]+" "); |
|  | System.out.println(); |
|  | } |
|  |  |
|  | public static void main(String[] args) { |
|  | int arr[] = {10, 7, 8, 9, 1, 5}; |
|  | int n = arr.length; |
|  |  |
|  | QuickSort ob = new QuickSort(); |
|  | ob.sort(arr, 0, n-1); |
|  |  |
|  | System.out.println("sorted array"); |
|  | printArray(arr); |
|  |  |
|  |  |
|  | } |
|  |  |
|  | } |