**package** quicksort;

**import** java.util.Arrays;

**public** **class** QuickSort {

**public** **static** **void** quickSort(**int**[] arr, **int** low, **int** high) {

**if** (low < high) {

**int** pivotIndex = *partition*(arr, low, high);

*quickSort*(arr, low, pivotIndex - 1); // Sort the left subarray

*quickSort*(arr, pivotIndex + 1, high); // Sort the right subarray

}

}

**public** **static** **int** partition(**int**[] arr, **int** low, **int** high) {

**int** pivot = arr[high];

**int** i = low - 1;

**for** (**int** j = low; j < high; j++) {

**if** (arr[j] <= pivot) {

i++;

*swap*(arr, i, j);

}

}

*swap*(arr, i + 1, high);

**return** i + 1;

}

**public** **static** **void** swap(**int**[] arr, **int** i, **int** j) {

**int** temp = arr[i];

arr[i] = arr[j];

arr[j] = temp;

}

**public** **static** **void** main(String[] args) {

**int**[] array = {6, 10, 3, 8, 5, 1, 7, 9};

System.***out***.println("Array before sorting: " + Arrays.*toString*(array));

*quickSort*(array, 0, array.length - 1);

System.***out***.println("Array after sorting: " + Arrays.*toString*(array));

}

}

