题目：实验二：算法时间性能的经验分析

时间：2020年11月8日星期日

代码：

package exp02;

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public class Sort {

public static void main(String[] args) {

int[] ints = new int[]{5, 6, 1, 2, 6, 8, 9, 0};

int[] array = new int[]{1, 2, 3, 4};

System.out.println(intToString(ints));

selectSort(ints, ints.length);

System.out.println(intToString(ints));

//perm(array, 0, array.length - 1);

}

private static void insertSort(int[] arr, int n) {

if (n == 1) {

return;

}

insertSort(arr, n - 1);

for (int i = 0; i < n; i++) {

if (arr[i] > arr[n - 1]) {

swap(arr, i, n - 1);

}

}

}

private static void selectSort(int[] arr, int n) {

if (n == 1) {

return;

}

int max = n - 1;

for (int i = 0; i < n; i++) {

if (arr[i] > arr[max]) {

max = i;

}

}

swap(arr, max, n - 1);

selectSort(arr, n - 1);

}

private static void perm(int[] arr, int left, int right) {

if (left == right) {

System.out.println(intToString(arr));

} else {

for (int i = left; i <= right; i++) {

swap(arr, left, i);

perm(arr, left + 1, right);

swap(arr, left, i);

}

}

}

private static void swap(int[] arr, int n1, int n2) {

int temp = arr[n1];

arr[n1] = arr[n2];

arr[n2] = temp;

}

private static String intToString(int[] arr) {

StringBuilder str = new StringBuilder();

for (int i = 0; i < arr.length; i++) {

if (i == arr.length - 1) {

str.append(arr[i]);

break;

}

str.append(arr[i]).append(", ");

}

return str.toString();

}

}

运行结果及截图：

