public class main {

static Scanner sc = new Scanner(System.in);

static int inputSize() {

while (true) {

try {

System.out.print("Enter number of array: ");

String raw = sc.nextLine().trim();

int n = Integer.parseInt(raw);

return n;

} catch (NumberFormatException e) {

System.out.println("Enter number!");

continue;

}

}

}

static void print(int[] a, String msg) {

System.out.print(msg);

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

System.out.print(a[i] + " ");

}

}

static int[] getRandom(int n) {

int[] a = new int[n];

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

Random random = new Random();

int rn = random.nextInt(n);

a[i] = rn;

}

return a;

}

static void sortBySelectionSort(int[] a) {

for (int i = 0; i < a.length - 1; i++) {

int minIndex = i;

for (int j = i + 1; j < a.length; j++) {

if (a[j] < a[minIndex]) {

minIndex = j;

}

}

if (minIndex != i) {

int temp = a[minIndex];

a[minIndex] = a[i];

a[i] = temp;

}

}

}

public static void main(String[] args) {

int n = inputSize();

int[] a = getRandom(n);

print(a, "Unsorted array: ");

sortBySelectionSort(a);

System.out.println();

print(a, "Sorted array: ");

}

}