PRACTICE-PROJECT2

FOURTH SMALLEST ELEMENT IN AN UNSORTED LIST –

**package** practice;

**import** java.util.Scanner;

**class** MyException **extends** Exception {

**public** MyException(String msg) {

**super**(msg);

}

}

**public** **class** FourthSmallestElement {

**public** **static** **int**[] sort(**int** list[], **int** size) {

**for**(**int** i=0; i<size; i++) {

**for**(**int** j=1; j<(size-i); j++) {

**if**(list[j-1] > list[j]) {

**int** temp = list[j-1];

list[j-1] = list[j];

list[j] = temp;

}

}

}

**return** list;

}

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

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

System.***out***.println("Enter the size of the array: ");

**try** {

**int** size = sc.nextInt();

**if**(size < 4) {

sc.close();

**throw** **new** MyException("Size must minimum 4.");

}

**int** list[] = **new** **int**[size];

System.***out***.println("Enter the elements of the array: ");

**for**(**int** i=0; i<size; i++) {

list[i] = sc.nextInt();

}

System.***out***.println("\nArray elements: ");

**for**(**int** i=0; i<size; i++) {

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

}

list = *sort*(list,size);

System.***out***.println();

System.***out***.println("\nSorted array elements: ");

**for**(**int** i=0; i<size; i++) {

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

}

System.***out***.println();

System.***out***.println("\nFourth smallest element in the list: "+list[3]);

sc.close();

} **catch** (MyException e) {

System.***out***.println(e.getMessage());

}

}

}