
5. A Long Walk on Elm Street

Program Name: LongWalk.java

Input File: longwalk.dat

Fred wants to know which houses on a given street are the farthest apart. He has compiled house addresses for various streets by scanning the yellow pages, but the addresses are not in any particular order. Write a program to determine which houses on a street are farthest apart based on street address.

Input

- The first line will contain a single integer n that indicates the number of data sets to follow.
- Each data set will consist of:
 - A line that contains the name of the street for that data set.
 - A line that contains an integer m that indicates how many addresses follow, where m will be greater than 1.
 - The next m lines will be integers representing street addresses.
 - Each address will be greater than 0 and less than one million, $0 < \text{address} < 1,000,000$.
 - No address will appear more than once per data set.

Output

For each data set print out the name of the street and the street addresses, including the street name, of the two houses that are farthest apart on that street. The smaller street address shall be listed first. The output for each data set is placed on two lines as shown below.

Example Input File

```
3
Elm Street
3
1001
1210
514
El Camino Real
4
99999
12
10000
9999
Broadway
3
1
999999
123456
```

Example Output to Screen

```
The two houses farthest apart on Elm Street are
514 Elm Street and 1210 Elm Street
The two houses farthest apart on El Camino Real are
12 El Camino Real and 99999 El Camino Real
The two houses farthest apart on Broadway are
1 Broadway and 999999 Broadway
```