

# UCF “Practice” Local Contest — August 27, 2011

## Waterford Wackiness (filename: wacky)

Orlando was recently ranked to be the “angriest” city in the United States by Men’s Health magazine. One part of the ranking was based on traffic congestion and violations of the law. Most of you are probably aware of how poor the driving is within the Waterford Lakes Shopping Center. Four-way stop signs at intersections are seldom handled correctly with folks always going out of turn, etc. What is needed is a program to help show people the correct order that they should proceed through a four-way stop sign.

### *The Problem:*

Given the times that cars arrive at a four-way stop sign, determine the order that they should proceed through the intersection.

### *The Input:*

The first line will contain a single positive integer,  $n$ , representing the number of data sets. For each data set, there will be a line with an integer  $c$  ( $1 \leq c \leq 100$ ), representing the number of car arrivals at the stop sign. Following this will be  $c$  lines, each containing a car entry. Each car entry will contain a positive integer,  $i$ , representing the number of the car, a single character,  $d$  ( $N, S, E, W$ ), representing the cardinal direction from which the car is coming, and a positive integer,  $t$ , representing the time since the last car arrived from that same direction (or since the start of the current data set in the case of the first car in that direction). Each of the three elements of the car entry will be separated by a single space.

For each data set, assume that there will be only one entry for a given car number, i.e., a car arrives only once at the intersection. Also assume that no two cars will arrive at the intersection at the same time.

Note that the cars within a direction are listed in order (in the input). Also note that a car should proceed through the intersection as soon as it arrives (at the intersection).

### *The Output:*

For each data set, output a header followed by the order of the cars as they proceeded through the intersection. For each car, output “Car #i” where  $i$  is the number of the car proceeding. Leave a blank line after the output for each data set. Follow the format illustrated in Sample Output.

(Sample Input/Output on the next page)

*Sample Input:*

```
3
2
1 N 30
2 S 40
3
1 N 30
2 N 20
3 S 40
6
3 E 400
4 W 100
1 N 300
2 S 200
6 N 150
5 W 50
```

*Sample Output:*

```
Data set #1:
Car #1
Car #2
```

```
Data set #2:
Car #1
Car #3
Car #2
```

```
Data set #3:
Car #4
Car #5
Car #2
Car #1
Car #3
Car #6
```