Problem 17: Aerospace Intruders

Difficulty: Medium

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Problem Background

You are patrolling national airspace in an F-22 Raptor and your radar indicates incoming alien robot invaders. Your directive is to destroy each ship starting with the closest and ending with the furthest.

Problem Description

Each time you destroy one ship, all remaining ships advance closer to you, but at differing rates. Class-A ships advance 10 X-units, Class-B ships advance 20 X-units, and Class-C ships advance 30 X-units.

For the purposes of this problem you are trying to protect the Y axis, so the closest ship is the one with the lowest X coordinate. In the event of a tie, you should destroy the ship with the largest Y coordinate first. Negative X coordinates are fine – it just means the aliens have invaded your airspace!

Sample Input

The first line of your program's input, received from the standard input channel, will contain a positive integer representing the number of test cases. Each test case will include:

- A positive number N representing the ships to follow.
- N lines, each containing a description of the alien ship in the following format.

  <ShipName>_<Class>:<X>,<Y>

  The ship name and the class of the ship will be separated by an underscore. The class and the X coordinate will be separated by a colon. The X and Y coordinates will be separated by a comma.

```
2
3
DOOM_A:123,1444
TEST_B:12,145
BOGEE_C:52,345
13
SHIP1_A:150,150
SHIP2_B:200,150
SHIP3_C:165,130
SHIP4_A:205,135
SHIP5_B:155,105
SHIP6_C:195,120
SHIP7_A:140,50
SHIP8_B:175,70
SHIP9_C:215,70
SHIP10_A:145,10
SHIP11_B:160,30
SHIP12_C:185,35
SHIP13_C:225,20
```

Sample Output

Your program should output the data about the ships that it destroys in the order in which it destroys them. The format for each output line should be:

Destroyed Ship: <SHIPNAME> xLoc: <x>

```
Destroyed Ship: TEST xLoc: 12
Destroyed Ship: BOGEE xLoc: 22
Destroyed Ship: DOOM xLoc: 103
Destroyed Ship: SHIP7 xLoc: 140
Destroyed Ship: SHIP3 xLoc: 135
Destroyed Ship: SHIP5 xLoc: 115
Destroyed Ship: SHIP12 xLoc: 95
Destroyed Ship: SHIP6 xLoc: 75
Destroyed Ship: SHIP11 xLoc: 60
Destroyed Ship: SHIP9 xLoc: 35
Destroyed Ship: SHIP13 xLoc: 15
Destroyed Ship: SHIP8 xLoc: 15
Destroyed Ship: SHIP2 xLoc: 20
Destroyed Ship: SHIP10 xLoc: 45
Destroyed Ship: SHIP1 xLoc: 40
Destroyed Ship: SHIP4 xLoc: 8
```