Problem 15: Money, Money, Money!

Difficulty: Easy

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Problem Background

If a city or a country wants to measure how much income its residents have, one such measure is called "Per Capita Income." Per capita income, also known as income per person, is the average income of the people in an economic unit such as a country or city. It is calculated by taking a measure of all sources of income in the aggregate (such as GDP or Gross National Income) and dividing it by the total population.

Problem Description

Besides just knowing the per capita income for a given point in time, it is useful to look at the trend of per capita income over a period of time to diagnose the economic health of an area. This is where you come in. You have been asked to create a program that will graph the per capita income of a region over time.

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 string representing the name of the region.
- A positive integer, **N**, representing the number of data points for the region.
- **N** lines, each containing two space separated numbers representing a single data point for the region in the following form:

  <PER_CAPITA_INCOME> <YEAR>
  Where PER_CAPITA_INCOME is a dollar amount that will have two decimal places and year is a four digit year. Each data point will have a distinct year.

```
1
USA
5
15777.0 1993
28829.0 2013
4141.0 1973
23276.0 2003
9494.0 1983
```

Sample Output

Your program should output a horizontal bar graph of the data for each region. The first line of each region's output should be the name of the region followed by a colon. The next N lines should be the data points for that region sorted ascending by their year. Each line should contain the year followed by a space followed by some number of asterisks. Each asterisk should correspond to $1000, which means you will need to round the per capita income to the nearest thousand dollars.

```
USA:
1973 ****
1983 *********
1993 ***************
2003 **********************
2013 ***************************
```