
7. Miles Per Gallon Calculator

Program Name: MPGCalc.java

Input File: mpgcalc.dat

Walter Johnson, an old, stingy man, has hired you to write some software to help him get the highest miles per gallon possible in his El Camino. He wants to attribute his driving style to his miles per gallon so that he can decide the best way to drive. Every time he fills up his tank, he will document his current odometer reading, the amount of gas he put in, and an arbitrary word for his own sorting purposes. Since he knows handling errors and making the software robust takes more time and thus more of his money, he has told you that you can assume his data is in the right format and the odometer readings are always increasing on each line.

Input

The file will contain a single line containing a positive integer that represents the odometer reading at the beginning of his study followed by an unknown number of lines. Each of the following lines will contain, in order, a positive integer responding to the odometer reading for the fill up, a space, a number rounded to tenths representing the number of gallons put into the car, a space, and a single word for categorization.

Output

For each category, print the list of category names in alphabetical order followed by that category's miles per gallon with tenths precision, left justified and aligned vertically as shown below.

Note: The space between columns is not significant as long as both columns are left justified and there is at least one space between columns.

Example Input File

```
11365
11415 2.7 HIGHWAY
11545 10.9 CITY
11650 9.3 CITY
11800 12.2 HIGHWAY_TRAFFIC
11843 2.9 HIGHWAY
```

Example Output to Screen

```
CITY          11.6
HIGHWAY       16.6
HIGHWAY_TRAFFIC 12.3
```