Problem 7 – Vladko's Notebook

Vladko Karamfilov (a.k.a. **SUPER VLADO** or **St.Karamfilov**) is a very famous **table tennis player**. He is also very organized. In order to become the best tennis player there is, he writes down everything about his opponents in a **pretty notebook, covered in pink flowers**. He is winning all his games, so he has a lot of hostile opponents. One night, one of them crawled into Vladko's room and tore his notebook apart into separate sheets of paper. Vladko needs your help to gather his information from all the sheets. Fortunately, Vladko writes everything about **a single opponent** on a **sheet with a certain color** (for example all information on red sheets is about opponent X, all information on blue sheets is about opponent Y etc.). You are given a **list of colored sheets** given as a text table with the following columns:

- ✓ Option 01 – **[color of the sheet]|[win/loss]|[opponent name]**
- ✓ Option 02 – **[color of the sheet]|[name]|[player name]**
- ✓ Option 03 – **[color of the sheet]|[age]|[player age]**

The different **columns** will always be **separated only by 'I'** (there won't be any whitespaces). The rank of each player is calculated by the formula **rank = (wins+1) / (losses+1)**. If a certain color sheet **has no information** about the **name** or the **age** of the player, **you should not** print it in the output. If there is no information about the **opponents**, you must print **"(empty)"** where the opponents list should be. There might be **many opponents with the same name**. If there was **no information recovered (no colors containing name and age)**, print only **"No data recovered."** Write a program to **aggregate the results** and print them as shown in the example below.

Input

The input comes from the console on a **variable number of lines** and ends when the keyword "**END**" is received. The input data will always be valid and in the format described. There is no need to check it explicitly.

Output

Print at the console the information for each player (**sorted by color name**) that holds the **age**, the **name,** a **list with the opponents** (in alphabetical order) and **rank** of the player. Please follow exactly the format from the example below. The rank of the players should be **rounded to 2 digits** after the decimal point:

- ✓ 1.5 -> 1.50; 1 -> 1.00; 1.3214123 -> 1.32

Constraints

- The numbers of **input lines** is between 1 and 150.
- The names of **colors** and **players** consist of Latin letters and spaces. Their **length** is between 1 and 50 characters.
- The value of **age** will be an integer in the range [0 … 50].
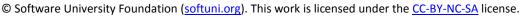- Allowed working time: 0.3 seconds. Allowed memory: 32 MB.

Hints

- You'll need to store strings, numbers and collections in a single collection. Use the **dynamic** type.
- **The sorting** of the **opponents** array should be done using the **StringComparer.Ordinal** option.

Examples

Input	Output
purple|age|99 red|age|44 blue|win|pesho blue|win|mariya purple|loss|Kiko purple|loss|Kiko purple|loss|Kiko purple|loss|Yana purple|loss|Yana purple|loss|Manov purple|loss|Manov red|name|gosho blue|win|Vladko	Color: purple -age: 99 -name: VladoKaramfilov -opponents: Kiko, Kiko, Kiko, Manov, Manov, Yana, Yana, Yana -rank: 0.11 Color: red -age: 44 -name: gosho -opponents: (empty) -rank: 1.00

```
purple|loss|Yana
purple|name|VladoKaramfilov
blue|age|21
blue|loss|Pesho
END
```