

## Problem 2. Practice sessions

The racers must practice for the race. Your job is to keep the records of the roads and the time for each lap. The track with the best time will be the chosen one for the finals.



Write a program, that keeps information about **roads** and **the racers** who practice on them. When the practice begins, you're going to start receiving data until you get the "END" message. There are three possible commands:

- "Add->{road}->{racer}"
  - Add the **road** if it **doesn't exist** in your collection and add the **racer** to it.
- "Move->{currentRoad}->{racer}->{nextRoad}"
  - Find the **racer** on the **current road** and move him to the **next one**, only if he **exists** in the **current road**. Both roads will always be **valid** and will **already exist**.
- "Close->{road}"
  - Find the **road** and **remove** it from the sessions, **along with** the **racers** on it **if it exists**.

In the end, print all of the **roads** with the **racers** who have practiced and **ordered by the count of the racers in descending order, then by the roads in ascending order**. The output must be in the following format:

Practice sessions:

{road}

++{racer}

++{racer}

++{racer}

.....

## Input / Constraints

- You will be receiving lines of information in the format described above, until you receive the "END" command.
- The input will always be in the right format.
- Both **roads** from the "Move" command will always be **valid** and you don't need to check them explicitly.

## Output

- Print the **roads** with their **racers** in the **format described above**.

## Examples

Input	Output
-------	--------

Add->Glencrutchery Road->Giacomo Agostini Add->Braddan->Geoff Duke Add->Peel road->Mike Hailwood Add->Glencrutchery Road->Guy Martin Move->Glencrutchery Road->Giacomo Agostini->Peel road Close->Braddan END	Practice sessions: Peel road ++Mike Hailwood ++Giacomo Agostini Glencrutchery Road ++Guy Martin
<b>Comments</b> We add racers to the roads they are racing on. When we receive the " <b>Move</b> " command, we <b>check</b> if <b>Giacomo Agostini</b> is on <b>Glencrutchery Road</b> and if he is, we <b>remove</b> him from it and <b>add</b> him to the next one - <b>Peel road</b> . When we receive the " <b>Close</b> " command, we <b>remove</b> Brandon road and <b>remove</b> all its records. In the end we print the <b>roads sorted</b> by the <b>count</b> of <b>racers</b> on them and <b>then by</b> the <b>names</b> of the <b>roads</b> in <b>ascending order</b> .	
Add->Glen Vine->Steve Hislop Add->Ramsey road->John McGuinness Add->Glen Vine->Ian Hutchinson Add->Ramsey road->Dave Molyneux Move->Ramsey road->Hugh Earnsson->Glen Vine Add->A18 Snaefell mountain road->Mike Hailwood Add->Braddan->Geoff Duke Move->A18 Snaefell mountain road->Mike Hailwood->Braddan Move->Braddan->John McGuinness->Glen Vine Close->A18 Snaefell mountain road END	Practice sessions: Braddan ++Geoff Duke ++Mike Hailwood Glen Vine ++Steve Hislop ++Ian Hutchinson Ramsey road ++John McGuinness ++Dave Molyneux



