It’s the future, you’re the ruler of a totalitarian dystopian society inhabited by **citizens** and **robots**, since you’re afraid of rebellions you decide to implement strict control of who enters your city. Your soldiers check the **Id**s of everyone who enters and leaves.

You will receive an unknown amount of lines from the console until the command "**End**" is received, on each line, there will be a piece of information for either a citizen or a robot who tries to enter your city in the format: "**{name} {age} {id}**" for **citizens** and "**{model} {id}"** for **robots**. After the "**End**" command on the next line, you will receive a single number representing **the last digits of fake ids**, all citizens or robots whose **Id** ends with the specified digits must be detained.

The output of your program should consist of all detained **Id**s each on a separate line in the **order** of **input**.

### Input

The input comes from the console. Every commands’ parameters before the command "**End**" will be separated by a **single space**.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| Peter 22 9010101122  MK-13 558833251  MK-12 33283122  End  122 | 9010101122  33283122 |
| Teo 31 7801211340  Peter 29 8007181534  IV-228 999999  Sam 54 3401018380  KKK-666 80808080  End  340 | 7801211340 |
| George 954614  Ron 124610  VI-228 999999  Mike 13 7604128614  Peter 90 5602142414  T500 131313130  End  14 | 954614  7604128614  5602142414 |