

Princess Celestia wants everypony to line up for the start of her Summer-eve ball.

She has asked you, Twilight Sparkle, to sort the ponies alphabetically but with royalty in front. Royal ponies have gemstones in their names.



## Input

You will receive a list of ponies numbering anywhere from 5 to 30 ponies, with 1 per line. The end of input will be marked with END on a line by itself. Names are guaranteed to be no longer than 80 characters in length, and to only contain letters and spaces.

```
Fluttershy
Applejack
Rubyanne
Rainbow Dash
Rarity
Pinkie Pie
Emerald Sunshine
Spike the Dragon
Misty Sapphire
END
```

## Output

Sort and list the ponies alphabetically in ascending order ('A' "first"), ignoring case. However, any pony with a gemstone in their name must be placed at the "top" of the list (before the "A's" start) in the gemstone order given in the Discussion section below.

```
Misty Sapphire
Emerald Sunshine
Applejack
Fluttershy
Pinkie Pie
Rainbow Dash
Rarity
Rubyanne
Spike the Dragon
```

## Discussion

The Pony ranking (in Ascending order) for gemstones is as follows:

```
Lapis
Topaz
Tourmaline
Sapphire
Peridot
Ruby
Pearl
Emerald
Diamond
Aquamarine
Amethyst
Garnet
```

Note, you are guaranteed that you will not have to deal with any gemstones not listed above. If multiple gems are listed in the same name, sort by whichever gem has "highest priority" (e.g. a pony named 'Garnet Lapis' would be listed before a pony named 'Topaz Sapphire,' because Lapis has the highest priority).

In the case of equal ranking on gemstones, output in alpha order by total name (not just the gemstones), only sort by highest priority gemstones, after that by alpha. (Example, given the names: Lapis Topaz and Amethyst Lapis, they should be printed in order as: Amethyst Lapis then Lapis Topaz. That is because both names have the highest ranked gemstone (Lapis), so we simply sort them in ascending order alphabetically after their ranking has been established. We would not list Lapis Topaz before Amethyst Lapis because Topaz has a higher ranking over Amethyst. Stop comparing gemstone ranking after determining the *highest* rank of the gems in the name.)

You are guaranteed that there will be no *ties* in priority for gemstone ranking. You are also guaranteed that you will not encounter hyphenated names like Ruby-Sue. However, if a gemstone name *happened* to be found as part of a name (like *Rubyanne*) you can safely treat that as just another name to alphabetize. Gemstone names have to stand on their own (separated by spaces, or the entirety of the name) to be treated royally.

Reminder: have you run your solution against **all** of the student data sets?

## Additional Examples

Input 1	Output 1	Input 2	Output 2
Cherilee	Sapphire Shores	Photo Finish	Pearl Peridot
Sapphire Shores	Cherilee	Discord	Princess Pearl
Tirek	Grubber	Spitfire	Discord
Songbird Serenade	Songbird Serenade	Soarine	Granny Smith
Tempest Shadow	Tempest Shadow	Pearl Peridot	Photo Finish
Grubber	Tirek	Granny Smith	Soarine
END		Princess Pearl	Spitfire
		END	