Cartoons

Write a function that takes inputs of cartoon characters and the type of animal that character is, then summarizes each animal type (according to the order they were input). Character names must also be displayed according to the order they were input.

Input

List of cartoon characters and the type of animal, separated by space. One character per line.

The last line is the char 'q'.

Output

The type of animal, followed by the characters that is this type of animal. One line per animal type. Display animal types and character names in the order they were input.

Example

Input (from keyboard)	Output (on screen)
Ted, bear Pongo, dog Fozzie, bear Winnie-the-Pooh, bear Nana, dog Hello Kitty, cat Scooby Doo, dog Garfield, cat Yogi, bear Tom, cat Sylvester, cat Pluto, dog Goofy, dog q	bear: Ted, Fozzie, Winnie-the-Pooh, Yogi dog: Pongo, Nana, Scooby Doo, Pluto, Goofy cat: Hello Kitty, Garfield, Tom, Sylvester