

## A. Infinity Gauntlet

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

You took a peek on Thanos wearing Infinity Gauntlet. In the Gauntlet there is a place for six Infinity Gems:

- the Power Gem of purple color,
- the Time Gem of green color,
- the Space Gem of blue color,
- the Soul Gem of orange color,
- the Reality Gem of red color,
- the Mind Gem of yellow color.

Using colors of Gems you saw in the Gauntlet determine the names of **absent** Gems.

### Input

In the first line of input there is one integer  $n$  ( $0 \leq n \leq 6$ ) — the number of Gems in Infinity Gauntlet.

In next  $n$  lines there are colors of Gems you saw. Words used for colors are: purple, green, blue, orange, red, yellow. It is guaranteed that all the colors are **distinct**. All colors are given in lowercase English letters.

### Output

In the first line output one integer  $m$  ( $0 \leq m \leq 6$ ) — the number of absent Gems.

Then in  $m$  lines print the names of absent Gems, each on its own line. Words used for names are: Power, Time, Space, Soul, Reality, Mind. Names can be printed in any order. Keep the first letter uppercase, others lowercase.

### Examples

input
4 red purple yellow orange
output
2 Space Time

input
0
output
6 Time Mind Soul Power Reality Space

### Note

In the first sample Thanos already has Reality, Power, Mind and Soul Gems, so he needs two more: Time and Space.

In the second sample Thanos doesn't have any Gems, so he needs all six.