



8 - Zombdar

You are reading data from a zombie sensor. The sensor scans the area to obtain the number of zombies in the immediate area. The zombie sensor normally writes log entries in the form of "zombies:
<integer>;" or "No zombies;" to its buffer as it performs scans, but it may also write "RUN;" when the sensor is overloaded. These are the only values that will be written to the buffer.

The zombie sensor's serial port emits a line containing whatever data is in its buffer every second, regardless of whether the buffer contains a complete log entry, or even multiple entries.

A valid sequence of log entries may be:

```
Zombies: 5;  
Zombies: 1;  
No Zombies;  
Zombies: 70;  
RUN;  
RUN;  
RUN;
```

But the sensor's serial port may emit:

```
Zom  
bies:  
 5;Zombies: 1  
;  
No Zombies;  
Zombies 70;  
RUN;  
RUN;RUN;Zo
```

It is imperative to process the serial port data correctly if you are to survive.

Input

The first line of input contains the number of data sets, N ($1 \leq N \leq 50$). For each data set, the input contains the raw data emitted by the zombie sensor's serial port (see above for details) followed by a line containing only the string "END OF CASE". Since data is emitted by the zombie sensor's serial port once per second, the first line of input is read after 1 second, the 2nd line after 2 seconds, and so on.

Output

For each complete log entry, you should output a line containing "timestamp: log_entry", where timestamp is the number of seconds elapsed between the start of the data set and the time at which the entry was completely parsed.

Sample Input

```
2
Zom
bies:
  5;Zombies: 1
;
No Zombies;
Zombies: 70;
RUN;
RUN;RUN;RU
END OF CASE
No
  Zombies;
No
  Zombies;
Zombies: 4;Z
ombies
: 14;
Zombies
: 60;
Zombies:
  100;

Zom
bies: 15;
RUN;
```

RUN;RUN;

R

END OF CASE

Sample Output

3: Zombies: 5;

4: Zombies: 1;

5: No Zombies;

6: Zombies: 70;

7: RUN;

8: RUN;

8: RUN;

2: No Zombies;

4: No Zombies;

5: Zombies: 4;

7: Zombies: 14;

9: Zombies: 60;

11: Zombies: 100;

14: Zombies: 15;

15: RUN;

16: RUN;

16: RUN;

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