## Robotics

Somewhere in the future, there is a robotics factory. The current project is assembly line robots.

Each robot has a **processing time**, the time it needs to process a product. When a **robot is free** it should **take a product for processing** and log his name, product and processing start time.

Each robot **processes a product coming from the assembly line**. A **product is coming** from the line **each second** (so the first product should appear at [start time + 1 second]). If a product passes the line and **there is not a free robot** to take it, it should be **queued at the end of the line again**.

The robots are **standing on the line in the order of their appearance**.

### Input

* On the first line, you will get the names of the robots and their processing times in format **"robotName-processTime;robotName-processTime;robotName-processTime"**
* On the second line, you will get the starting time in format **"hh:mm:ss"**
* Next, until the **"End"** command, you will get a product on each line.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| ROB-15;SS2-10;NX8000-3  8:00:00  detail  glass  wood  apple  End | ROB - detail [08:00:01]  SS2 - glass [08:00:02]  NX8000 - wood [08:00:03]  NX8000 - apple [08:00:06] |
| ROB-60  7:59:59  detail  glass  wood  sock  End | ROB - detail [08:00:00]  ROB - sock [08:01:00]  ROB - wood [08:02:00]  ROB - glass [08:03:00] |