# Problem 2. SoftUni Lecture CDN

In this exam problem’s universe, SoftUni decided to store its lectures’ recordings on its own servers. Also, in this universe your job application to SoftUni was accepted and as the new intern, you have been given the simple task of implementing a **Content Delivery Network** for the **recordings**. We’ll leave storing the actual video files to the backend engineers - your job here is to simply **generate lecture links** based on existing data. Since you’re a sneaky little hacker, you also want to **scrape** some of the links for “safe keeping”.

A sample lecture link looks like this:

* **https://streamcdn1.softuni.bg/course=csharp-oop-basics&lecture=polymorphism&trainer=housey**

As you can see, every link begins with “**https://streamcdn{n}.softuni.bg/**”, where **{n}** is the **stream server number**. After that, it has parameters like the **course**, **lecture** and the **trainer**. A single server can only hold up to **10 hours of video**, so keep that in mind when storing the videos.

## Input / Constraints

The input data should be read from the console.

You will receive **multiple lines** in the format:

* lecture:{name};trainer:{trainer};course:{trainer};duration:{hours}h{minutes}m

The **tokens** (lecture/trainer/course/duration) will be in **random order**, so you need to account for that fact when parsing them. The **duration** will **always have hours and minutes**, even if their values are **0**.

When you parse the lecture info, you need to **store** it in the **current server**. As said above, each **server** can only hold **10 hours of video**. If a video you’d store would **overflow** the maximum duration of **10 hours**, put it on the **next server** (**increment** the server index by **1**). **Do not** put videos in the previous server after an overflow occurs.

You will **stop receiving lectures** when you receive the command

* “scrape {course/trainer} {course\_name/trainer\_name}”,

The **input data will always be in the format specified**. **There is no need to check it explicitly**.

## Output

Upon receiving the final line of the input, depending on what was specified (**scrape course** or **scrape** **trainer**), you need to **look through the servers** and **find** **all lectures which have that course**/**trainer**. **Create links** for them and **print** them on the **console**, separated by **new lines**, in **order of insertion**.

Finally, calculate the **total duration** of the lectures and **print it** in the following format:

* “total duration: HH:MM:SS”

Make sure each token (hour/minute/second) has **leading zeroes** if it needs them.

## Examples

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| **Input** |
| trainer:housey;course:csharp-oop-basics;lecture:polymorphism;duration:3h05m  lecture:matrices-extra;trainer:bojo;course:csharp-oop-basics;duration:4h35m  duration:1h56m;trainer:housey;course:csharp-db;lecture:joins  trainer:viktor;duration:2h33m;course:js-fundamentals;lecture:dom  trainer:housey;course:python-fund;lecture:functional;duration:2h06m  lecture:matrices-extra;trainer:bojo;course:csharp-oop-basics;duration:4h35m  scrape course csharp-oop-basics |
| **Output** |
| https://streamcdn1.softuni.bg/course=csharp-oop-basics&lecture=polymorphism&trainer=housey  https://streamcdn1.softuni.bg/course=csharp-oop-basics&lecture=matrices-extra&trainer=bojo  https://streamcdn2.softuni.bg/course=csharp-oop-basics&lecture=matrices-extra&trainer=bojo  total duration: 12:15:00 |
| **Comments** |
| The first (and only) server switch happens when we attempt to insert the “**dom**” lecture. |

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| **Input** |
| trainer:housey;course:csharp-oop-basics;lecture:polymorphism;duration:3h05m  lecture:matrices-extra;trainer:bojo;course:csharp-oop-basics;duration:4h35m  duration:1h56m;trainer:housey;course:csharp-db;lecture:joins  lecture:matrices-extra;trainer:bojo;course:csharp-oop-basics;duration:4h35m  lecture:matrices-extra-2;trainer:bojo;course:csharp-oop-basics;duration:2h20m  trainer:viktor;duration:2h33m;course:js-fundamentals;lecture:dom  trainer:housey;course:python-fund;lecture:functional;duration:2h06m  scrape trainer housey |
| **Output** |
| https://streamcdn1.softuni.bg/course=csharp-oop-basics&lecture=polymorphism&trainer=housey  https://streamcdn1.softuni.bg/course=csharp-db&lecture=joins&trainer=housey  https://streamcdn3.softuni.bg/course=python-fund&lecture=functional&trainer=housey  total duration: 07:07:00 |
| **Comments** |
| The first server switch happens when we attempt to insert the “**matrices-extra**” lecture. The second – when we insert the “**functional**” lecture. |

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| **Input** |
| lecture:softuniada;course:marathons;duration:9h30m;trainer:nakov  lecture:softuniada2018;course:marathons;duration:10h00m;trainer:nakov  lecture:softuniada2033;course:marathons;duration:9h45m;trainer:nakov  scrape trainer nakov |
| **Output** |
| https://streamcdn1.softuni.bg/course=marathons&lecture=softuniada&trainer=nakov  https://streamcdn2.softuni.bg/course=marathons&lecture=softuniada2018&trainer=nakov  https://streamcdn3.softuni.bg/course=marathons&lecture=softuniada2033&trainer=nakov  total duration: 29:15:00 |
| **Comments** |
| We insert the **first lecture** (which is 9h30m long) into the 1st server, then we insert the **second lecture** into the **second server**. Since the **second server** now has exactly **10 hours of video** on it, we insert the **third lecture** into the **third server**. |