

You have a file describing the output of a private investigator following his target.

The file has many sentences, one in a row.

The private investigator uses consistent phrasing to describe what is going on. Only one word can change in a specific phrase/pattern.

The input may look like:

```
01-01-2012 19:45:00 Naomi is getting into the car
01-01-2012 20:12:39 Naomi is eating at a restaurant
02-01-2012 09:13:15 George is getting into the car
02-01-2012 10:14:00 George is eating at a diner
03-01-2012 10:14:00 Naomi is eating at a diner
```

Your task is to write code that groups together similar sentences (sentences where only a single word has changed) and extracts the changes, then outputs them to a file in the following format:

=====

```
01-01-2012 19:45:00 Naomi is getting into the car
02-01-2012 09:13:15 George is getting into the car
The changing word was: Naomi, George
```

```
02-01-2012 10:14:00 George is eating at a diner
03-01-2012 10:14:00 Naomi is eating at a diner
The changing word was: Naomi, George
```

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Please upload your code to GitHub and send me a link. Make sure to also upload a sample input file. Alongside the code, please answer the following questions:

- What can you say about the complexity of your code?
- How will your algorithm scale? If you had two weeks to do this task, what would you have done differently? What would be better?