Biteable Code Challenge: Mini ETL

Hi there! Thank you for taking the time to complete this coding challenge. We are eager to see what you can do, and we hope this is an enjoyable experience.

Plan to spend no more than two hours on your solution. If you spend more than two hours, please outline how you spent your time in the README (see below).

1 Task

Write some code that will read comma-separated lines from standard input, parse them, transform the data, and print the transformation to standard output.

Sample input/output pairs are provided below.

Here are some things to keep in mind when writing your solution:

- The input consists of arbitrarily ordered, comma-separated rows, each representing an item, its ID, and the ID of its parent item.
- The output should reflect the hierarchical nature of the data.
  - Each line should be indented to reflect the item's level in the hierarchy.
  - Each item should be prefixed with a plus and a space.
- Any number of items may share a name.
- The task can be accomplished with a single pass for reading and a single pass for writing the data. However, please focus on correctness before optimization.
- Please use a stable sort in the output. Two sibling items should appear in the output in the same relative order as they appear in the input.
- A parent item may or may not precede a child item in the input.
- The input is guaranteed to be well formed.
  - There is a single root item; there are no orphans.
  - There are no cycles.
  - There are no commas within an item name.
  - No item is duplicated.
  - No two items have the same ID.

- The root of the hierarchy has a parent equal to "nil."
- The size of the input is guaranteed to be less than a quarter of the memory on your machine.
- Whether the input has a header row is up to you.

2 Sample 1

2.1 Input

```
ITEM,ID,PARENT
feelings,98473,nil
happy,621dsz.t,98473
sad,what-a-strange-id,98473
```

2.2 Output

```
+ feelings
  + happy
  + sad
```

3 Sample 2

3.1 Input

```
ITEM,ID,PARENT
Mercury,18,1
Proxima Centauri,23,16
Venus,17,1
Terra,42,1
Milky Way,16,nil
Pluto,14,1
Proxima Centauri c,98,23
Mountains,77,42
Mountains,79,97
Jupiter,78,1
Proxima Centauri b,99,23
Saturn,10,1
Sol,1,16
Uranus,15,1
Luna,24,42
Mars,97,1
```

3.2 Output

```
+ Milky Way
  + Proxima Centauri
    + Proxima Centauri c
    + Proxima Centauri b
  + Sol
    + Mercury
    + Venus
    + Terra
      + Mountains
      + Luna
    + Pluto
    + Jupiter
    + Saturn
    + Uranus
    + Mars
      + Mountains
```

4 Submitting

Please include a README file that indicates how to run your solution. You may also want to include the reasoning behind the design decisions you made, anything you would change if you were to rewrite it, and anything else you'd like to communicate.

When you're ready to submit, zip up a directory containing your files and include the zip file as an attachment on an email replying to the email in which you received this file.