Last Revised: 2022-03-15

Def Method Code Test Candidate Instructions

Intro

This exercise will provide us with an initial gauge of your programming skills, and more importantly, your overall software development craft. It is not meant to be long, tricky, or complicated. It is also not a test of memorization, so feel free to look up anything. It is not timed, so you can take as long as you need. Engineers often spend 4-8hrs on it.

Goal

Build a command line application that parses the INPUT FILES locally and returns the EXPECTED OUTPUT.

INPUT FILES
[https://s3.amazonaws.com/def-method/code-test/input_files.zip]

The order of properties is different for each format.

The pipe-delimited file lists each record as follows:

```
LastName | FirstName | MiddleInitial | Gender | FavoriteColor | DateOfBirth
```

The comma-delimited file looks like this:

```
LastName, FirstName, Gender, FavoriteColor, DateOfBirth
```

The space-delimited file looks like this:

```
LastName FirstName MiddleInitial Gender DateOfBirth FavoriteColor
```

You may assume that there are no delimiters in any of the properties. Some properties (e.g., gender) are represented differently, depending on the delimiter. Dates are represented in American format (month, day, year).

EXPECTED OUTPUT
[https://s3.amazonaws.com/def-method/code-test/expected_output.txt]

Instructions

Create a command line application using a programming language of your choice.
The program should:
Read the files from your local environment.

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Print out all the input data sorted together in the following ways:

```
Sort 1 - by gender (females before males) then by last name ascending
Sort 2 - by birth date, ascending then by last name ascending
Sort 3 - by last name, descending
```

For all three sorts, ensure that fields are displayed in the following order:

```
last name, first name, gender, date of birth, favorite color
```

Dates should be displayed in the format `M/D/YYYY`.
The program output should match the contents of the EXPECTED OUTPUT file.

What you will be graded on
- Correct output
- Simplicity
- Readability
- Design
- Unit testing
- Ability to follow these instructions

Your Solution Should:
- Include a README file that describes:
  - How to build and run the application
  - How to run the tests
  - Relevant version requirements (e.g., Python 2 vs. Python 3)
- Be runnable from the command line.
- Not use third-party libraries, except for:
  - Any libraries or frameworks needed for testing (e.g., minitest, rspec, mocha, JUnit, etc.)
  - A build tool (e.g., maven, rake, etc.)
  - A package manager to include any of the required libraries or packages listed above (e.g., npm, bundler, etc.)
- Include a build file if applicable.
- Include any suggestions on how the code test could be improved.

Submitting Your Solution
Solutions should be submitted using the upload link you received via email. If you did not receive an email with this link, please contact engineering-interviewing@defmethod.com.

Your solutions should be sent in a zip archive.
Questions and comments should be sent to us at engineering-interviewing@defmethod.com.