

Interview challenge

Attached: JSON-file: "challenge.json".

Challenge

Write a process that imports the contents of a JSON-file cleanly and consistently to a database. Preferably this is done as a background job in Laravel. Docker use is encouraged (but not required).

When analyzing your solution, our focus is mainly on its structure. We prefer to see a solid, clean and maintainable solution that is not 100% functional or finished, rather than a complete solution that is sloppy or hard to understand. We are particularly interested in the thought process behind your approach.

Requirements:

- [Primary] Write a process such that it may be terminated (by anything, including a SIGTERM, power failure, what have you) at any time, after which it may resume in a robust, reliable manner. The process must continue exactly where it left off, without writing duplicate entries.¹
- Design your solution 'for the future', that is: taking into account a hypothetical customer who typically changes and extends their requirements time after time.
- The data model must be sensible, but is not a focus of the test. Code for Eloquent-models or any other access structure itself is not crucial.
- Only process records for which the subject's age is between 18 and 65 (or is unknown).

Bonus

As an extra challenge, consider the following:

- What happens when the source file grows to, say, 500 times the given size?
- Is your solution easily adjustable to different source data formats (CSV, XML, etc.)?
- Say that another data filter would be the requirement that the credit card number must have three identical digits in sequence. How would you tackle this?

¹ Note that there may well be duplicate records in the source file (the data between any two records might be 100% identical, no key's value is guaranteed to be unique). Any duplicates in the source file *must* also be imported as-is into the database!