What are **two** benefts of storing this data in MongoDB with JSON over a relational database management system such as Postgres? Please reference specific examples from the business collection to back up your claims. - Format your answer as follows: 1. Benefit #1, Example #1. 2. Benefit #2, Example #2.

Limit each benefit to 1 sentence and each example to 1 sentence for a total of at most four sentences.

- 1. very human-readable. For example the open hours each day of the week is nested in hours field and we can just read it like an article, whereas in a RDMS to include all the times in one column of one record will make the entire table so big that the whole screen won't even fit.
- 2. very flexible. For example, if we just wanna add a new attribute called "cuisine" for the 'Flying Elephants at PDX', we can just insert that without disrupting the whole collection.

## 0.0.1 Question 2d

In the last question, you performed equivalent left joins in both Postgres and Mongo. Now, examine their query plans, paying special attention to executionTimeMillis. Which join was faster? What gives that database system you chose an advantage over the other? Keep your response to at most three sentences.

Postgres join is much much faster than Mongo join. Postgres uses relational model, which support native joins as well as built-in self-optimizer, whereas MongoDB is based on NoSQL document model and it doesn't have native joins. Plus, Mongo encourages denormalization, which makes data more human-readable but increases the storage requirement during updates.

What do you notice about how the columns of business\_df are constructed? How are values that are not found in every document handled in the pandas dataframe? Compare and contrast this dataframe representation with the document representation we saw with Mongo. Keep your response to at most two sentences.

The columns are formed to fit all the text info while maintaining the same shape so it forms a table, which makes some attributes very hard to read. Values not found in every document are replaced with NaN.