

**IMPORTANT:** Taking my application and changing the database from businesses to another data set BUT WITH NO OTHER CHANGES will pass, but no more than that.

#### Finding a data set

The key to a good submission is to source a good data set. This can be for any application area, but you should be looking for data with at least 2 levels of information (for example businesses and reviews on businesses). The volume of data is not so important, but you may want to demonstrate pagination, searching and sorting – so a dataset of at least 100 elements should be your target.

Although you will need the data to be in JSON format, you may find data in another format such as CSV or XML. There are good online tools that will convert between data types, such as that seen at <http://www.convertcsv.com/csv-to-json.htm>.

There are lots of good online sources for useful datasets. You will easily find these by searching, but some starting points are presented below.

- <https://github.com/jdorman/awesome-json-datasets>
- [https://catalog.data.gov/dataset?res\\_format=JSON](https://catalog.data.gov/dataset?res_format=JSON)
- <http://data.europa.eu/euodp/en/data>
- <https://www.kdnuggets.com/2017/12/big-data-free-sources.html>
- <https://www.opendatani.gov.uk>
- <https://data.gov.ie>
- <https://data.smartdublin.ie>
- <http://www.belfastcity.gov.uk/council/Openandlinkeddata/opendatasets.aspx>
- <https://data.world/datasets/json>

#### Development Tips

The best submission will be an application written from scratch with your own back-end and front-end. Obviously, you can use lessons learned from the *We MEAN Business* application, but the selection of API endpoints provided and the front-end interface should be one tailored for your own data set.

Alternatively, you can take my application as a starting point, change the database and enhance the functionality. There are many things that I deliberately haven't done, in order to leave space for you to work in. These include...

- A better pagination scheme. At present, we only have access to the previous and next pages, but it would be better to take the Google approach and provide links for up to 10 pages at a time. (Try doing a Google search and see how the page links are presented.)
- My application does not make any check for clicking “next page” when we are already at the end of the data set. If an API endpoint that returned the number of businesses in the collection was provided, we could provide this additional functionality.

- A “search” interface would be very useful. For example, in the *We MEAN Business* application, we could search for a business by name, location, keyword or rating – or some combination of these.
- Although I have provided “front-end authentication”, there is nothing to prevent anyone using Postman to access the back-end directly and submit an unauthorised review. Auth0 also provides back-end authentication and this would be a significant improvement.
- Currently, reviews for a business are displayed in a single list – no matter how many of them are stored in the database. It would be better to provide pagination for reviews – as well as the ability to sort reviews by date or rating (either ascending or descending)
- Each review has a set of votes (funny/useful/cool) that are not presently being used. It would be good to display these as clickable icons (similar to a Facebook “like”) that allows readers to add additional votes.
- The above modification would be further enhanced if any user was only able to provide one vote (either funny, useful or cool) for each review.
- A “My Profile” component that enables users to view reviews and votes that they have left would be very useful. The ability for users to edit and/or remove these would be even better...
- The *We MEAN Business* application has the facility for geolocation-based queries, but we did not implement this. The potential to integrate this with Google Maps would create a very impressive interface.

Please note that this is NOT a checklist of features that you MUST include – but ideas on how you can raise the level of your own application. Also, **npm** provides many packages that will allow you to do complex manipulation, filtering and presentation of your data. The use of these is definitely encouraged!