

Web Science Quiz 2
Spring 2025
April 11, 2025

Instructions:

1. Read everything twice before you do anything.
2. Submit everything you want graded to GitHub, in your personal repo in your main branch in a folder named quiz2. **No exceptions for any reason. For example, if you put it in a quiz2 branch but not on the main branch, you will get a 0.**
3. Good luck!

Question 1

Here are two new APIs. They're free and don't require any signups or API keys:

1. <https://quotesondesign.com/api/>
2. <https://forismatic.com/en/api/>

You are going to create an ETL pipeline for these two APIs. Here is the schema to use:

```
{
  id: Number,
  author: String,
  quote: String
}
```

The id should increment each time you put a new quote in. You must write code for each of the two APIs above to transform what you receive into the above schema. Put these documents in a new collection named **quotes**.

Extend your Node.js server and, using Express.js, create the following API for your React frontend to talk to:

1. GET /quiz2
 - a. Get a listing of all nodes from the collection
 - i. **Do not** simply dump the entire database.
2. GET /quiz2/:number
 - a. Get the document corresponding to :number
3. POST /quiz2
 - a. Run your ETL pipeline with any one of the APIs above.
4. POST /quiz2/:number
 - a. Create a proper error with a proper error code and human-readable error description.
5. PUT /quiz2
 - a. Bulk update all documents in the collection
6. PUT /quiz2/:number
 - a. Update the document corresponding to :number

- b. If the document corresponding to :number does not exist, create a proper error with a proper error code and human-readable error description.
- 7. DELETE /quiz2
 - a. Bulk delete all documents in the collection
- 8. DELETE /quiz2/:number
 - a. Delete the document corresponding to :number

Extend your React frontend to be able to interact with these new endpoints and display something sensible for each.

After you have accomplished this, your task is to go **far above and beyond** this minimum. Show me everything you've learned over the past two semesters. We'll call it creativity. Include a README.md file that has all of your citations and everything you'd like me to consider for creativity.

Grading

ETL pipeline/Database	25 pts
Node+Express API	25 pts
React	25 pts
Creativity	25 pts
Total	100 pts

Extra credit (+25): Find another free API, put data from it into a Mongo collection, make an interesting visualization with the tool of your choice, and display that visualization on your frontend.