

CMSC 389N

Express, React and Mongoose!

Agenda

- Announcements
- Reminders
- Basic Express App
- React + Express
- Mongoose and MongoDB
- Full stack app!!

Express App Generator

To Create a sample app: `npm express-generator name`

And run: `npm install`

Creates a whole app that you can run using `npm start`!

Let's walk through the app!

Integrating React with Express

1. Create a directory that will hold both your front end AND back end.
2. Create a basic express and React App
 - a. Edit either of the controllers for express
 - b. Modify App.js
 - c. Make sure they are running on different ports!
3. Add proxy in React to point to express server
4. Optional: Install Concurrently to have both run at the same time

Concurrently

Make sure you are in the app folder (not react or express).

Run:

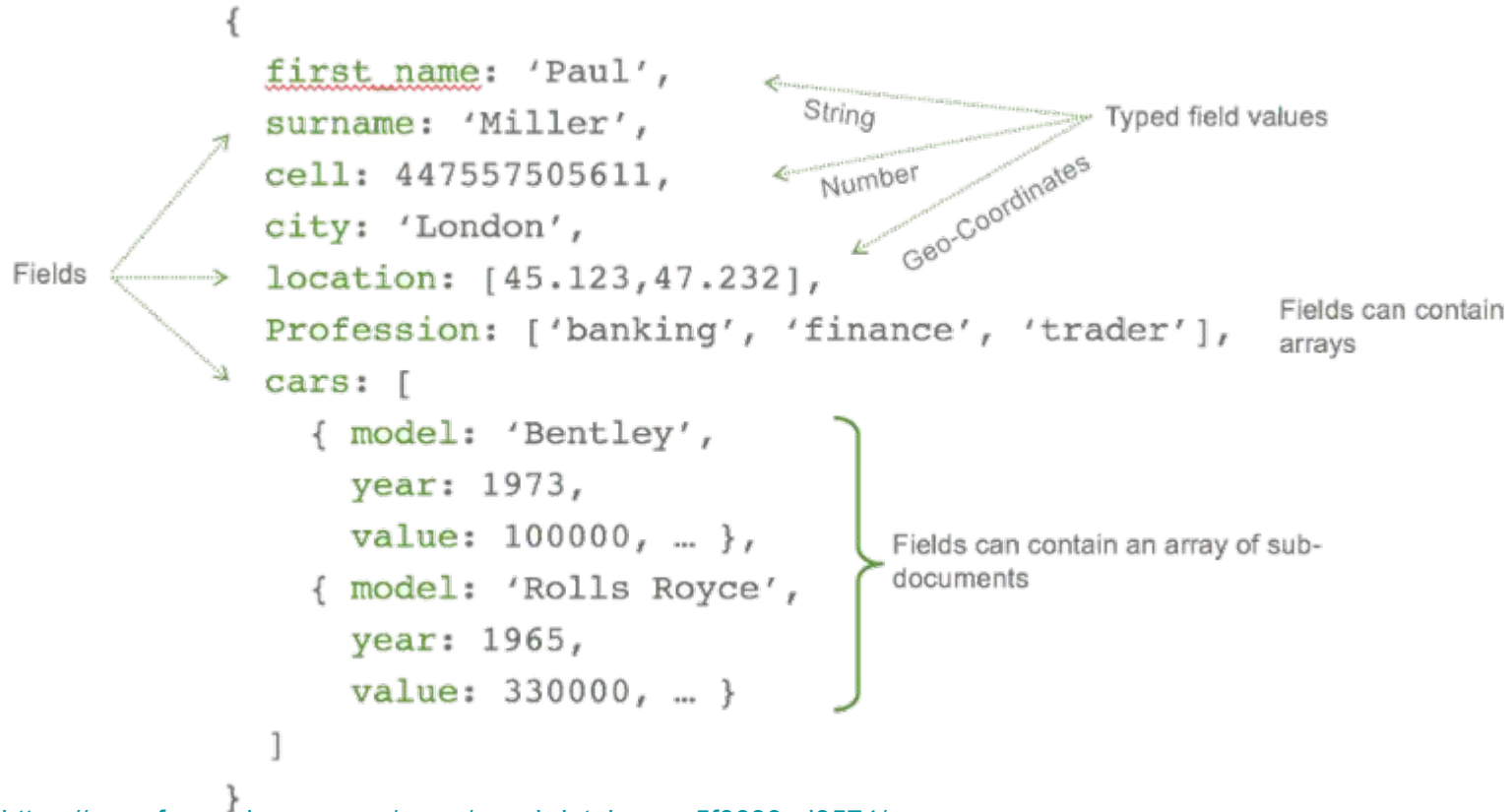
- `npm init -y`
- `npm i -S concurrently`
- In `package.js` for whole app under `scripts`:
- `"start": "concurrently \"cd backend && npm start\" \"cd client && npm start\""`

SQL Databases

Results		Messages				
	id	emp_name	emp_age	emp_salary	join_date	phone
1	1	Mike	35	5000.50	2016-01-01 00:00:00.000	042-4521-458452
2	2	Michale	30	4500.00	2016-05-01 00:00:00.000	021-1234-574845
3	3	Jimmy	27	3000.75	2016-05-03 00:00:00.000	001-4521-458452
4	4	Shaun	30	3500.30	2018-01-20 00:00:00.000	042-2544-458452
5	5	Ben	45	5000.00	2015-03-15 00:00:00.000	001-3355-457484
6	6	John	28	2600.00	2018-04-12 19:35:27.067	092-1414-458452
7	7	NULL	40	5500.00	2018-03-20 00:00:00.000	042-3333-458452
8	8	Jay	36	5500.00	2018-03-25 00:00:00.000	021-4242-145854
9	9	Haynes	25	3300.00	2018-03-20 00:00:00.000	033-1133-457457

From: <https://www.igquery-az.com/sql-insert-select/>

What is NoSQL?



From: <https://www.freecodecamp.org/news/nosql-databases-5f6639ed9574/>

Mongoose + Node

What is Mongoose? What is MongoDB?

Think of Mongoose as a wrapper for MongoDB for our use in Node.

Important parts of Mongoose

Collections:

- The actual data, holds all of our JSONs and information

Documents:

- The individual records we are adding in

Fields:

- The traits we predefine that will be in our JSONs

Important parts of Mongoose

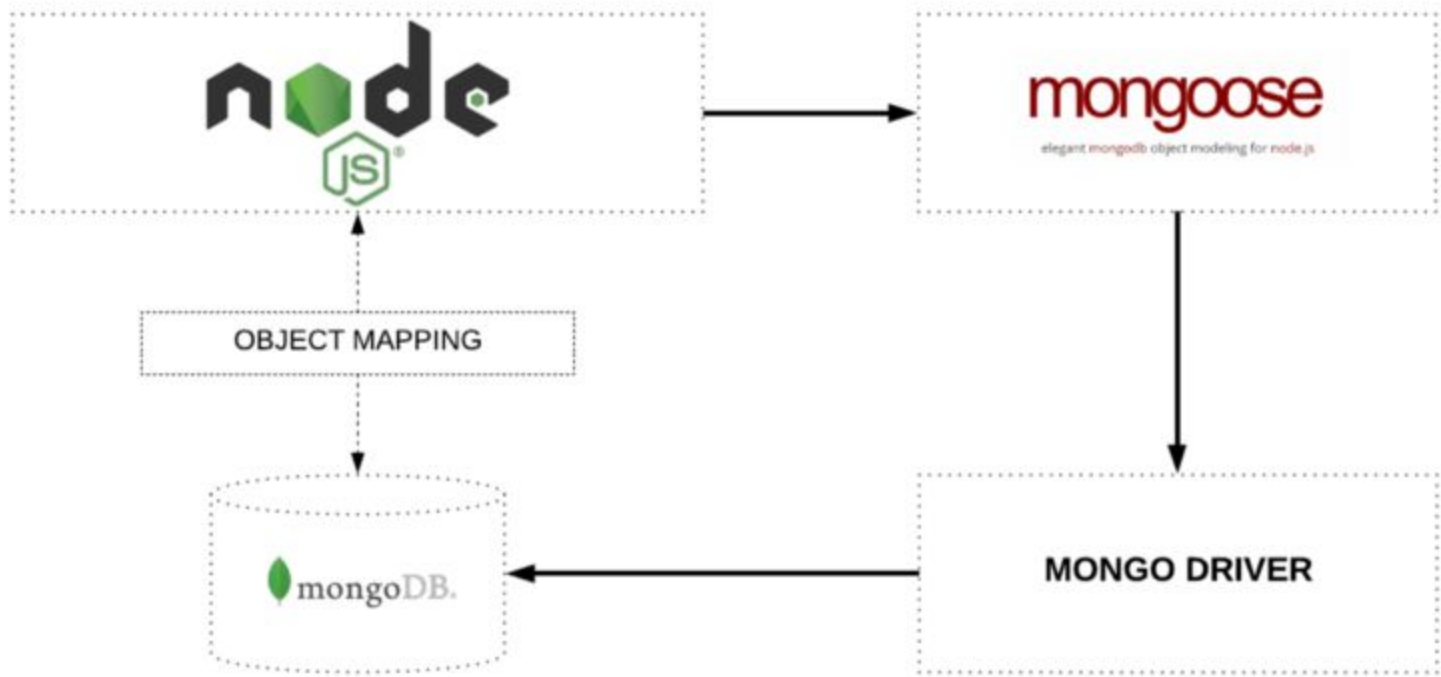
Schema:

- Defines the shape of the data you will be managing in your database
- Looks just like some of the JSONs we grabbed from twitter!
- Types you may use: String, Number, Date, Buffer, Boolean, Mixed, ObjectId, Array, Decimal128, Map

Important parts of Mongoose

Model:

- Based on the schema, think of it as a Mongoose constructor that uses the Schema as it's structure.
- `Var mo = mongoose.model(modelName, schema);`



Source: <https://www.freecodecamp.org/news/introduction-to-mongoose-for-mongodb-d2a7aa593c57/>

Using MongoDB

Download here:

<https://www.mongodb.com/download-center/community>

Or use cloud free version!

To install mongoose: `npm install mongoose validator`

What operations can we do?

Model.deleteMany()

Model.deleteOne()

Model.find()

Model.findById()

Model.findByIdAndDelete()

Model.findByIdAndRemove()

Model.updateMany()

Model.updateOne()

Model.findByIdAndUpdate()

Model.findOne()

Model.findOneAndDelete()

Model.findOneAndRemove()

Model.findOneAndReplace()

Model.findOneAndUpdate()

Model.replaceOne()