Software Development

Full-Stack React

Module 14

Object-Relational Mapping (ORM)

What are some of the challenges of using plain SQL in JavaScript?

Challenges of SQL in JavaScript

1. It’s prone to accidental syntax errors.
2. Complicated queries can be hard to follow.
3. It requires extra work to validate and secure data.
4. Similar routes can lead to repetitive queries being written.
5. Data relationships aren’t obvious just by looking at the code.

How can objects help us manage SQL queries in JavaScript?

Objects and SQL

01

We can set up object methods to run generic SQL queries based on the methods' parameters.

02

We can structure objects to mimic how the data are stored in the database, eliminating ambiguity.

03

We can import objects into any other module that needs to execute its SQL queries.

Is there a library that might already do this for us?

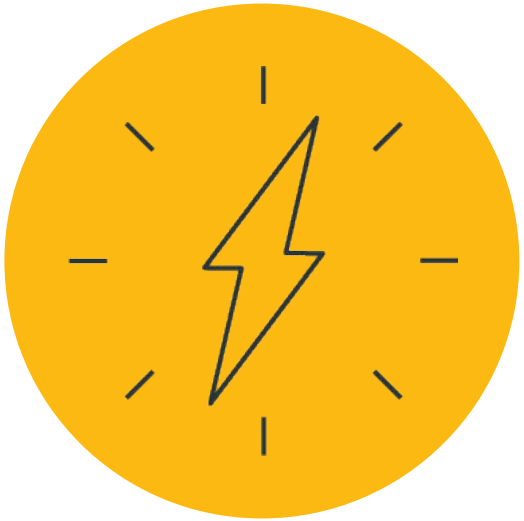
Sequelize is an object-relational mapper (ORM) that can be installed with npm.

Sequelize

Sequelize can do the following:

- Allow you to model your data as JavaScript classes
- Abstract SQL queries to simpler object methods
- Provide built-in validation checks for securing data
- Make it easier to visualize and join relational data
- And more!

How can we learn to use and implement Sequelize?



Sequelize and other ORMs were created to make managing and using data easier, but they still come with a learning curve!

Using Sequelize

You can try the following strategies to learn Sequelize:

- Read the official documentation and practice with the provided examples
- Reverse-engineer finished code to see how something was accomplished
- Build something from scratch
- Debug a broken app
- And most importantly, ask questions!

Instructor **Demonstration**

Questions?

The End