Clarusway

Backend Workshop -4-

Workshop

Subject: ORM & Sequelize

Learning Goals

- Onderstanding ORM & sequelize.

Introduction

MVC (Model-View-Controller) is a software architectural pattern commonly used for developing user interfaces. Sequelize is an ORM (Object-Relational Mapping) library for Node.js that makes it easy to work with relational databases. We will try to reinforce both with this study.

Pre-requirements

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Lets start

1. Sometimes analogies are used to understand the subject. Let's do that too. Can you match the MVC structure with the story below? Which one is the controller, which one is the model, which one is the view?

- Assume that you visit a restaurant. You won't cook food in the kitchen, even though you can do so at home. Instead, you visit the establishment and wait for the waiter to arrive.
- The waiter now approaches you, and you place your dinner order. The server has only written down the specifics of your food order; he is unaware of who you are or what you desire.
- The waiter then makes his way to the kitchen. The server does not prepare your dish in the kitchen.
- Your food is prepared by the cook. Your order and your table number are given to the waiter.
- Cook, then have food prepared for you. The dish is prepared by him using ingredients. Let's say you select the vegetable sandwich option. He then uses the refrigerator to get the bread, tomato, potato, capsicum, onion, bit, and cheese that he needs.
- The chef gives the waiter the last of the meal. Moving this meal outside the kitchen is now the waiter's responsibility.
- The server is now aware of the foods you've ordered and how to serve them.

Answer:
View= You
Waiter= Controller
Cook= Model
Refrigerator= Data

2. What is a model and why is it important in an Express.js application?

Answer:

- A model represents a data structure and determines how data is processed within an application. In Express.js applications, models are used to communicate with the database and ensure organized management of data.

3. What is ORM (Object-Relational Mapping) and what does it do?

Answer:

- ORM is a software design that allows objects to be associated with relational database tables. ORM enables database operations to be performed in an object-oriented manner and reduces database dependency.

4. What is Sequelize and when used for?

Answer:

- "sequelize", refers to an open-source object-relational mapping (ORM) library for Node.js. It allows developers to interact with relational databases such as MySQL, PostgreSQL, SQLite, and Microsoft SQL Server in a more simplified and efficient manner.

Sequelize is particularly useful when building applications that require complex database interactions, such as CRUD (Create, Read, Update, Delete) operations, data modeling, and associations between different entities. It simplifies the process of writing SQL queries and reduces the need for manual SQL code.

5. What are the basic CRUD (Create, Read, Update, Delete) operations provided by Sequelize?

Answer:

- Sequelize provides various CRUD operations on models:

Create: Model.create() Read: Model.findAll(), Model.findByPk(), Model.findOne() Update: instance.update(), Model.update() Delete: instance.destroy(), Model.destroy()

☺ **Thanks for Attending** ✍

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