Q. Explain the role of database drivers or ORMs (Object-Relational Mappers) in connecting Node.js applications to databases. Provide examples of popular ORMs for Node.js.

→

In Node.js applications, accessing and managing data requires a connection to a database. This is achieved using database drivers or Object-Relational Mappers (ORMs).

1. Database Drivers:

A database Drivers is a low-level library that enables direct communication between Node.js and a specific database system (e.g. MySQL, PostgreSQL, MongoDB).

Functions:

- Establishing connections
- Sending queries
- Receiving Responses
- Handling errors

Example:

Using mysql2 for MYSQL or pg for PostgreSQL.

2. ORMs (Object-Relational Mappers)

An ORM is a higher-level abstraction that maps database tables to Javascript objects, making it ~~ease~~ easier to perform CRUD operations without writing raw SQL.

Benefits:

- Cleaner code
- Built in support for relationship and validation
- Protection against SQL injection.

Ex. User.findAll();

Popular ORMs in Node.js

- Sequelize - SQL based
- Mongoose - MongoDB
- Objection.js - Built on knex, supports complex queries

VISHWAKARMA INSTITUTES