

Software Development

---

# MERN and Authentication

Module 18



What is the **MERN Stack**?



# What Is the MERN Stack?

The **MERN stack** is a group of four technologies that, when used together, create the “stack”. There are other stacks, but the **MERN stack** uses technologies we already know:

01

MongoDB

02

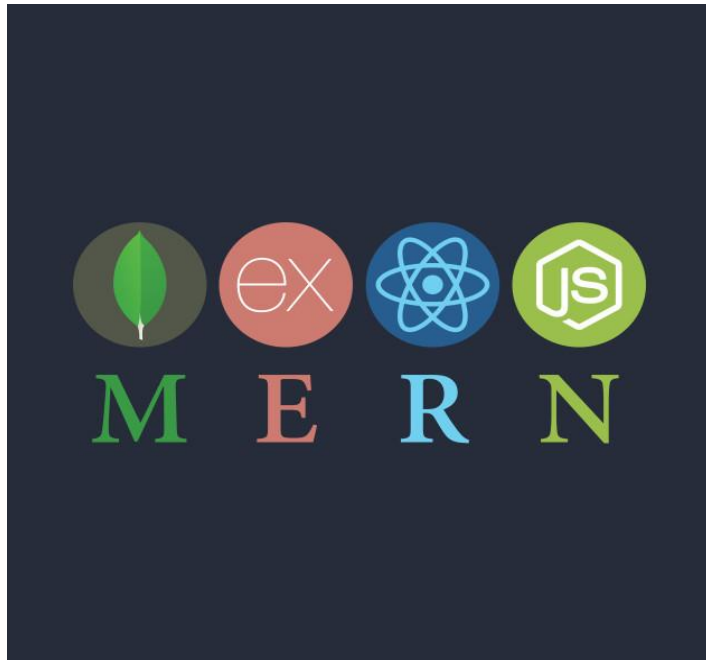
Express.js

03

ReactJS

04

Node.js



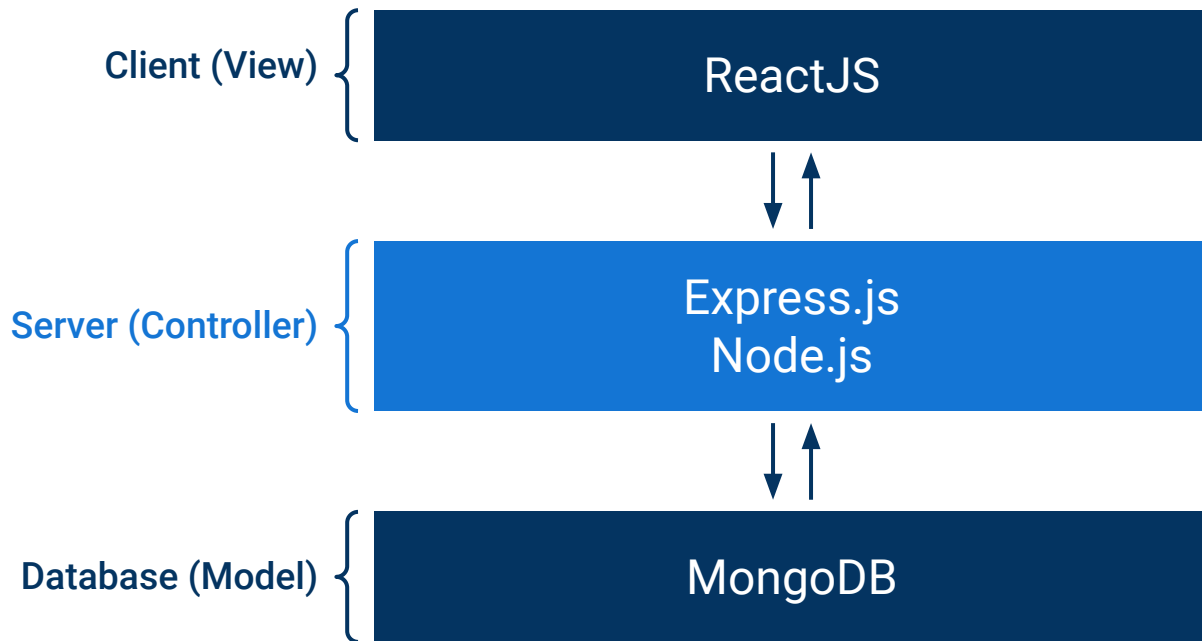


How does the **MERN**  
**stack** work?



# How the MERN Stack Works

The **MERN stack** has a three-layer architecture based on the Model-View-Controller design pattern. Each interconnected layer performs a specific function in the application.





What is the **function** of the **client layer**?



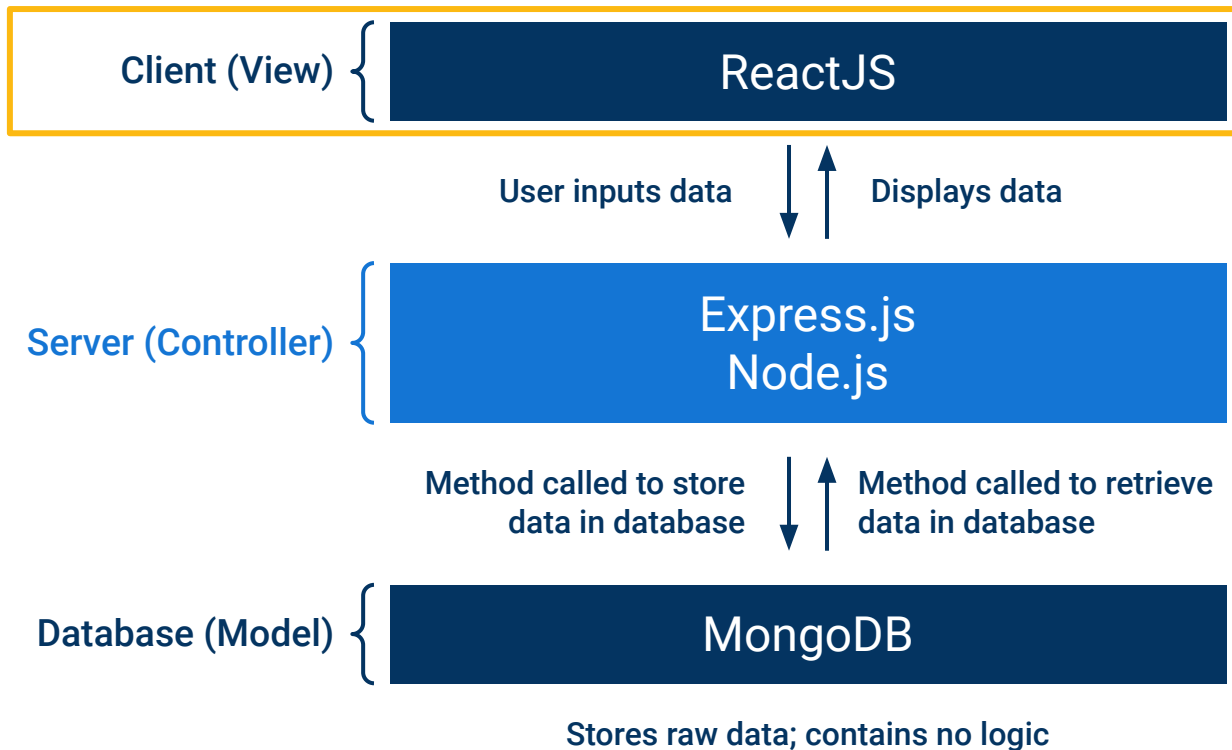
# The Client Layer: ReactJS

**ReactJS** is a front-end JavaScript library that allows us to turn reusable components into interactive user interfaces.

## The client layer

controls what the user sees and how the user interacts with data.

In **the client layer**, data retrieved from the database can be displayed. Users can also input data using the user interface.





What is the **function** of  
the **server layer**?



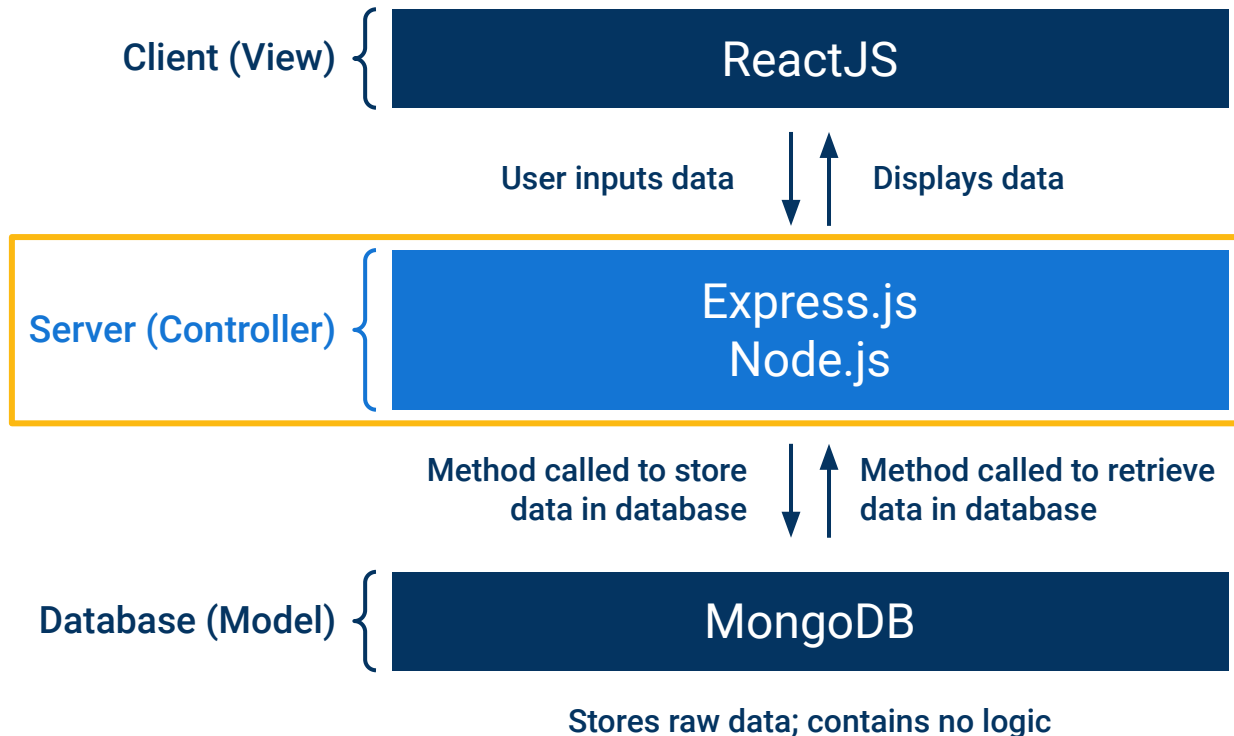


# The Server Layer: Express.js and Node.js

**Express.js** is a web framework for **Node.js** that handles requests and connects the client layer with the database layer.

**The server layer** defines how data is handled in our apps and routes data between the database and client layers.

**The server layer** listens for events from the client layer and responds by executing methods that save and retrieve data from the database layer.





What is the **function** of  
the **database layer**?



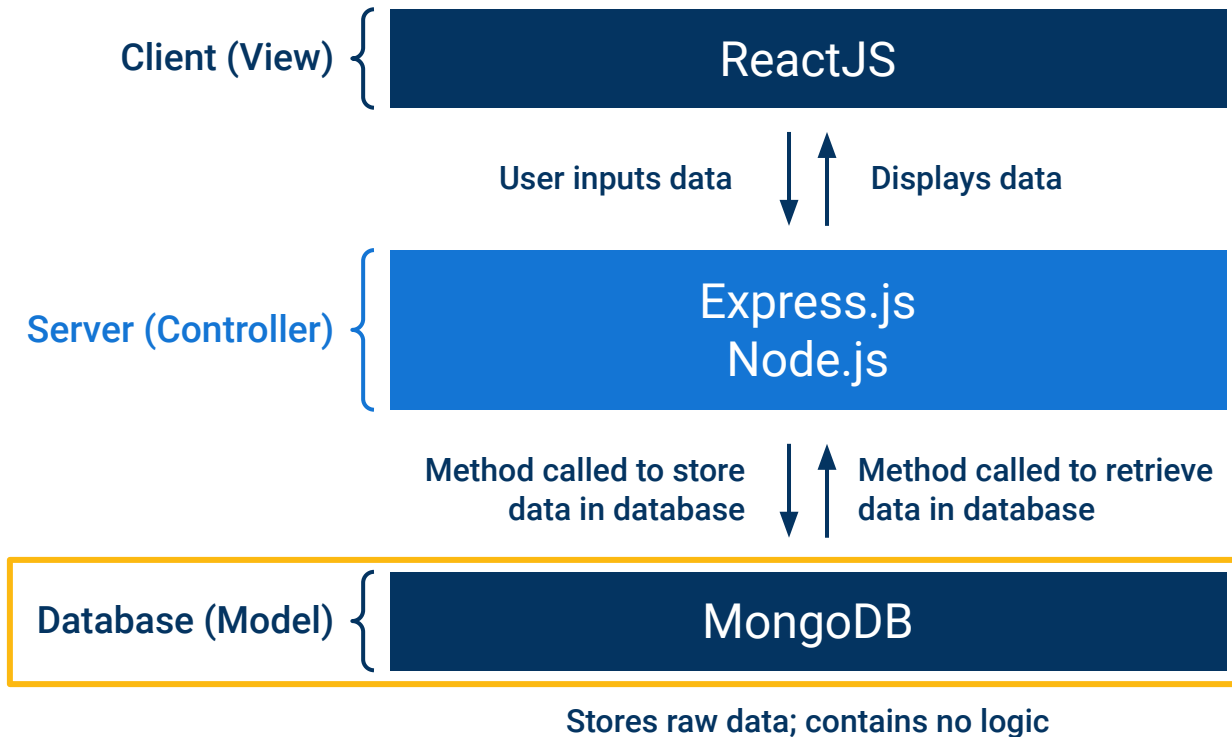
# The Database Layer: MongoDB

**MongoDB** is a general purpose, document-based, distributed NoSQL database.

## The database layer

stores all the data needed for your application to function.

**MongoDB** stores JSON natively (technically BSON), which makes it work easily with JavaScript apps.





Why use the **MERN stack**?



# The Use of the MERN Stack

The **MERN stack** is a group of four technologies that, when used together, create the “stack.”

01

**MERN** is built on widely used technologies and relies on a single programming language.

02

The three-layer architecture of **MERN** makes it relatively easy to debug.

03

**MERN** is easily scalable and a great solution for data-heavy apps.



# Instructor **Demonstration**



**Questions?**





**The End**