



OWASP JUICE SHOP

BACKGROUND

OWASP = Open Web Application Security Project



Who is the OWASP® Foundation?

The Open Web Application Security Project® (OWASP) is a nonprofit foundation that works to improve the security of software. Through community-led open source software projects, hundreds of local chapters worldwide, tens of thousands of members, and leading educational and training conferences, the OWASP Foundation is the source for developers and technologists to secure the web.

- Tools and Resources
- Community and Networking
- Education & Training

For nearly two decades corporations, foundations, developers, and volunteers have supported the OWASP Foundation and its work.

[Donate](#), [Join](#), or become a [Corporate Member](#) today.

JUICE SHOP

Vulnerable Web Shop

Created to see how web attacks work

Different challenges

HAPPY FLOW

SHOPPING

Browse -> Shopping Cart -> Buy

Chat support

USER PROFILE

Registration -> Login

Password reset

SHORT DEMO

ARCHITECTURE

MEAN-STACK

Express

Angular

Node

Database: Mongo DB JS Derivate MarsDB + SQLite

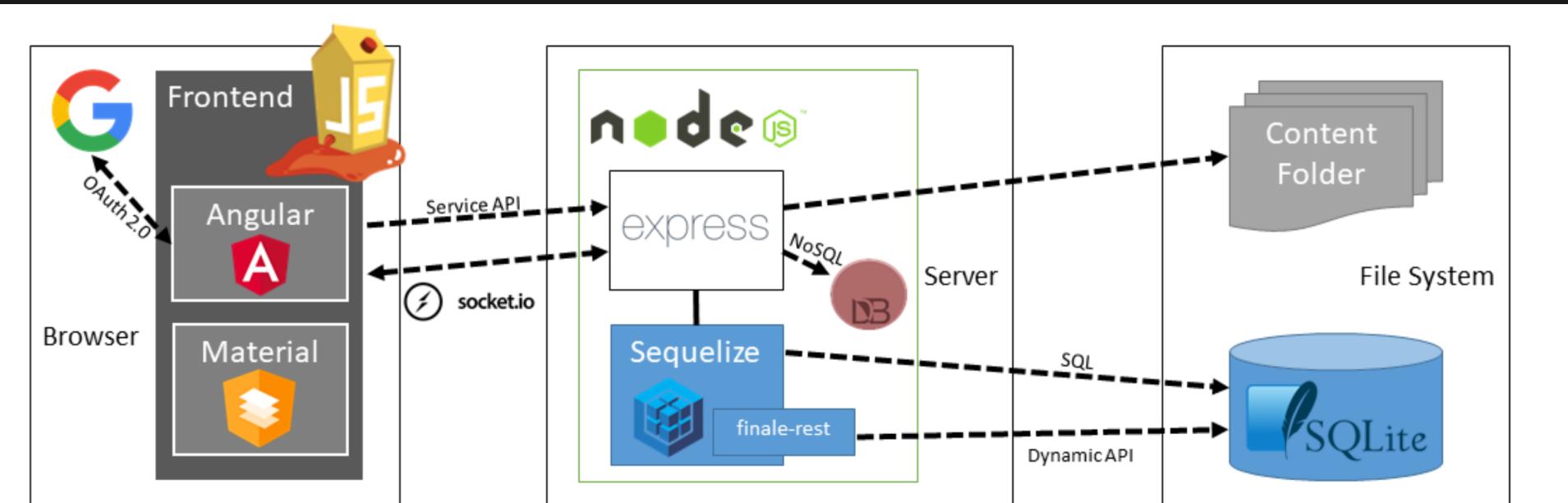
"OUR SYSTEM"

3 Tier Architecture

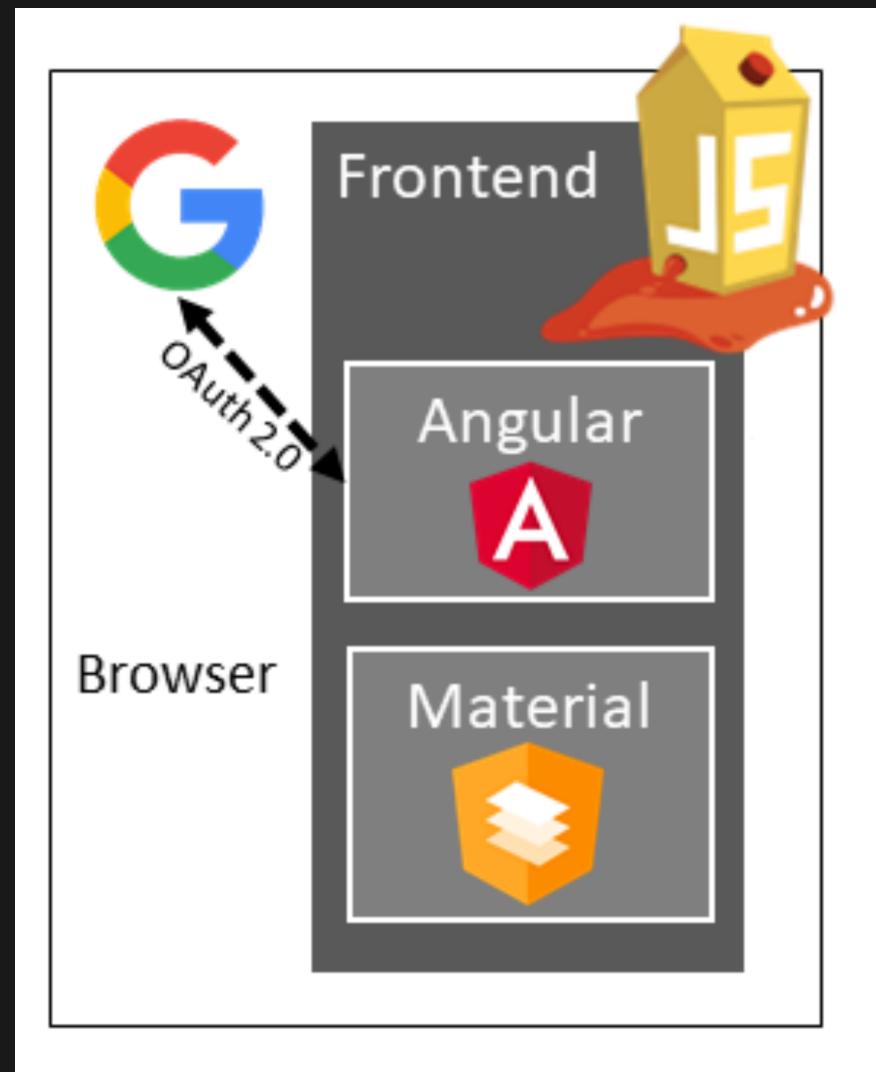
Frontend / User Interface

Application Server

Storage Backend

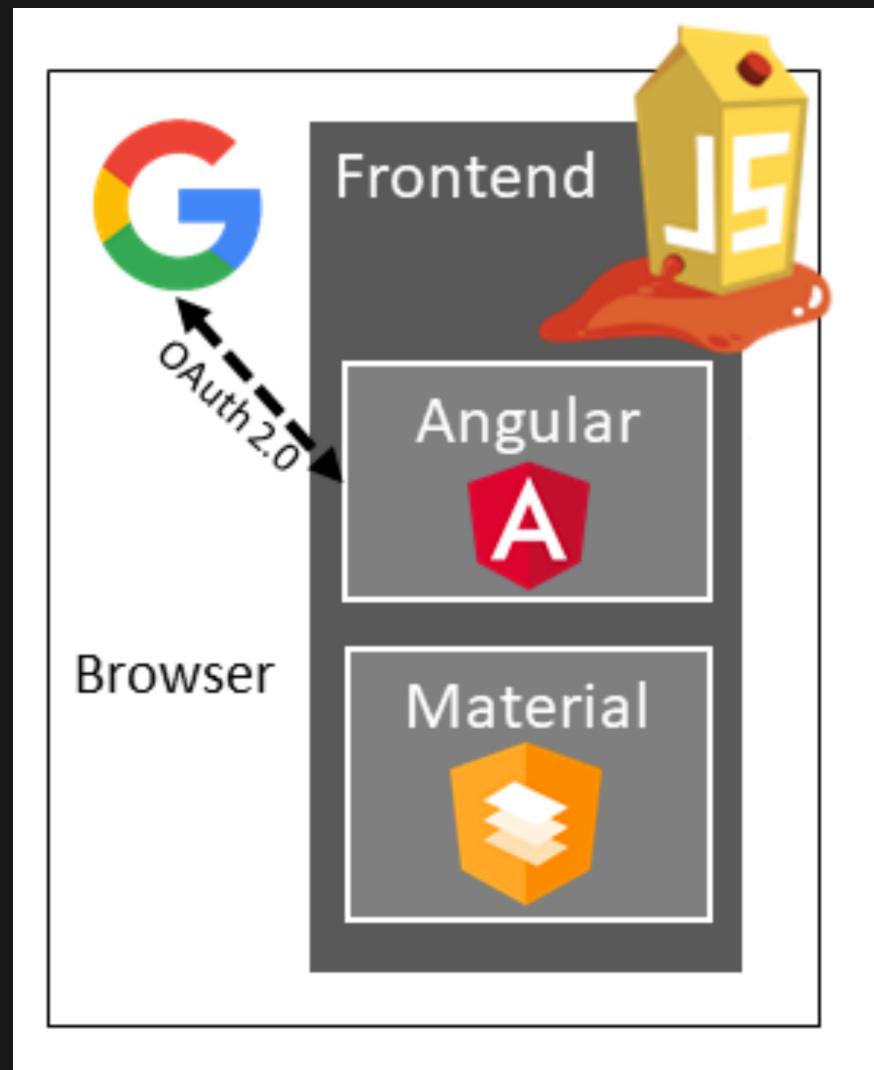


FRONTEND / USER INTERFACE



FRONTEND / USER INTERFACE

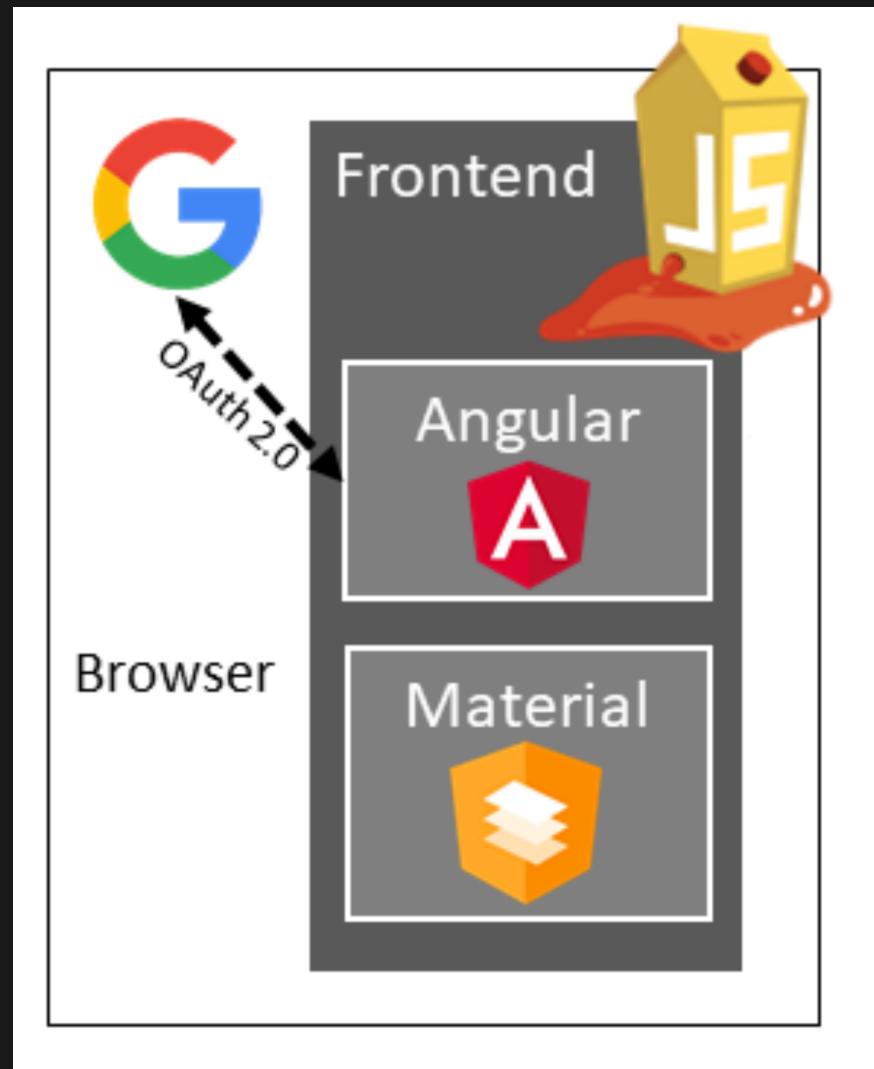
Runs in Browser



FRONTEND / USER INTERFACE

Runs in Browser

JavaScript/TypeScript SPA

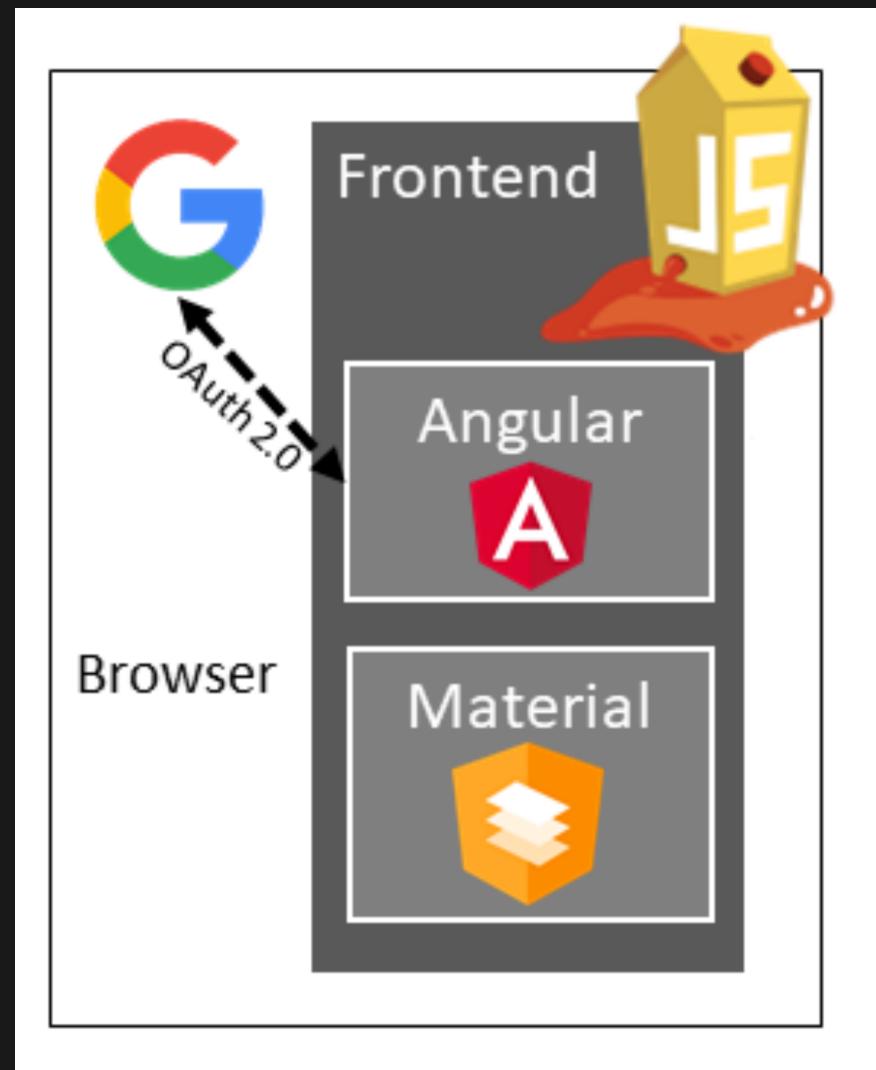


FRONTEND / USER INTERFACE

Runs in Browser

JavaScript/TypeScript SPA

Angular Framework



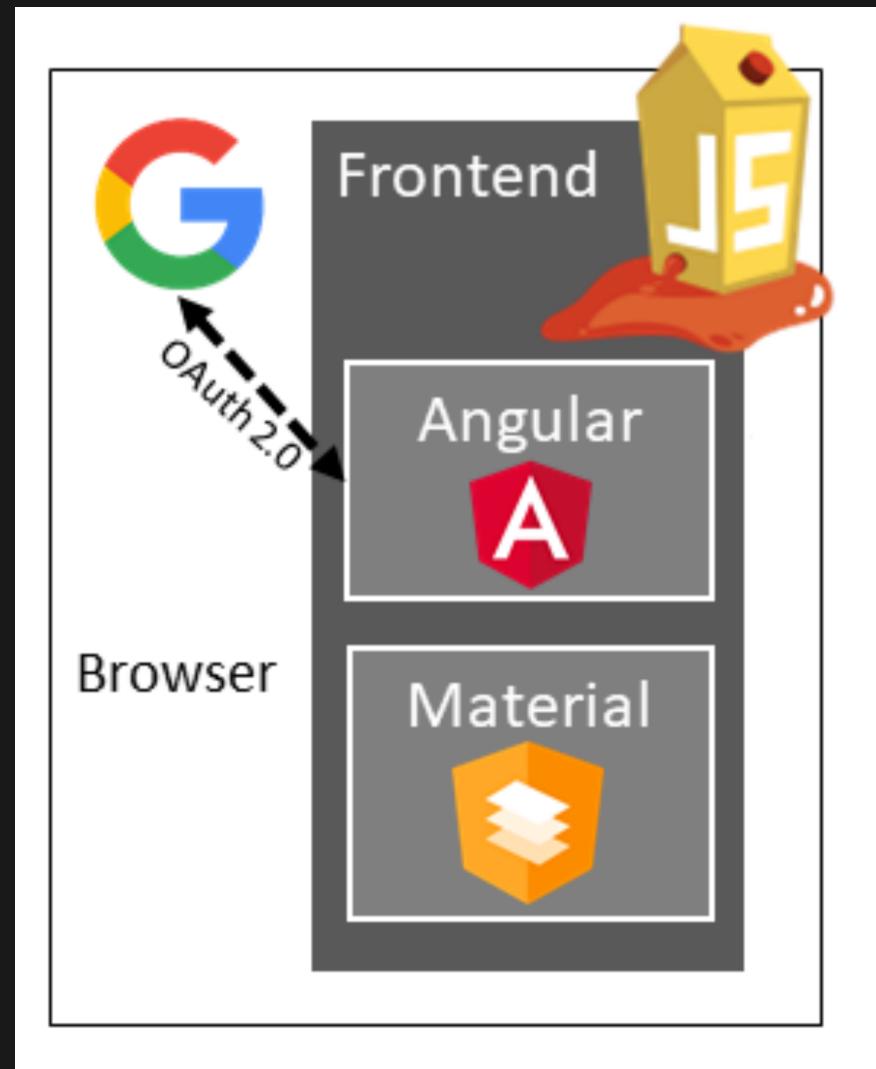
FRONTEND / USER INTERFACE

Runs in Browser

JavaScript/TypeScript SPA

Angular Framework

Material.io Design



FRONTEND / USER INTERFACE

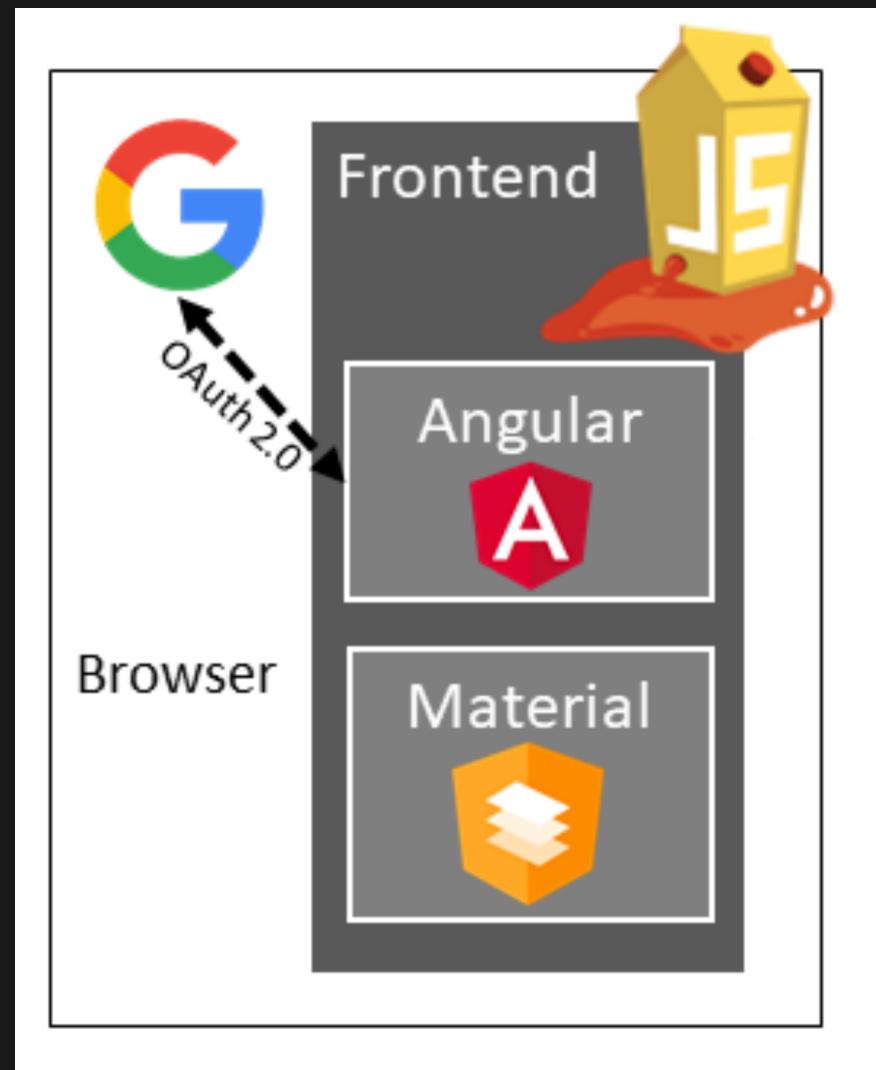
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JavaScript/TypeScript SPA

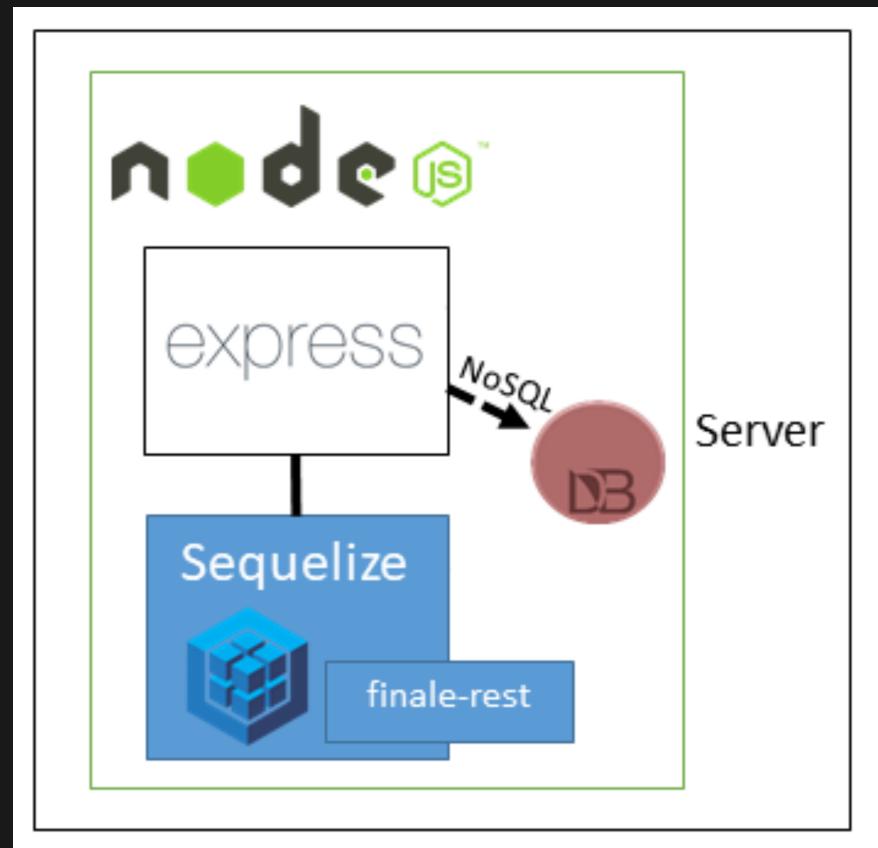
Angular Framework

Material.io Design

External OAuth Provider

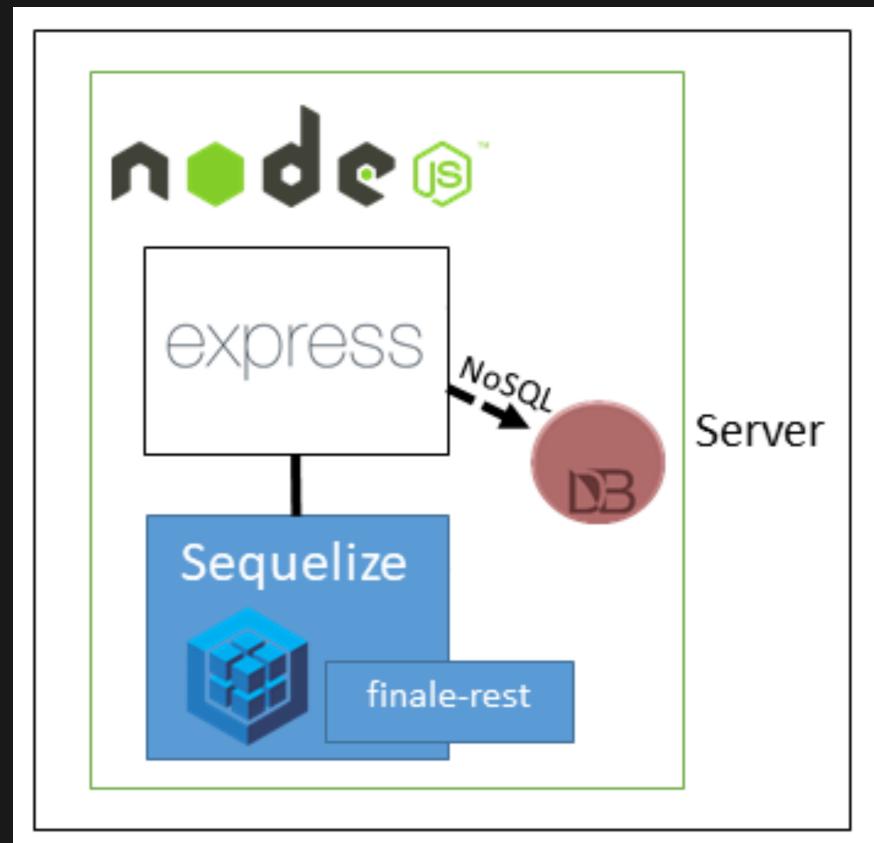


APPLICATION SERVER



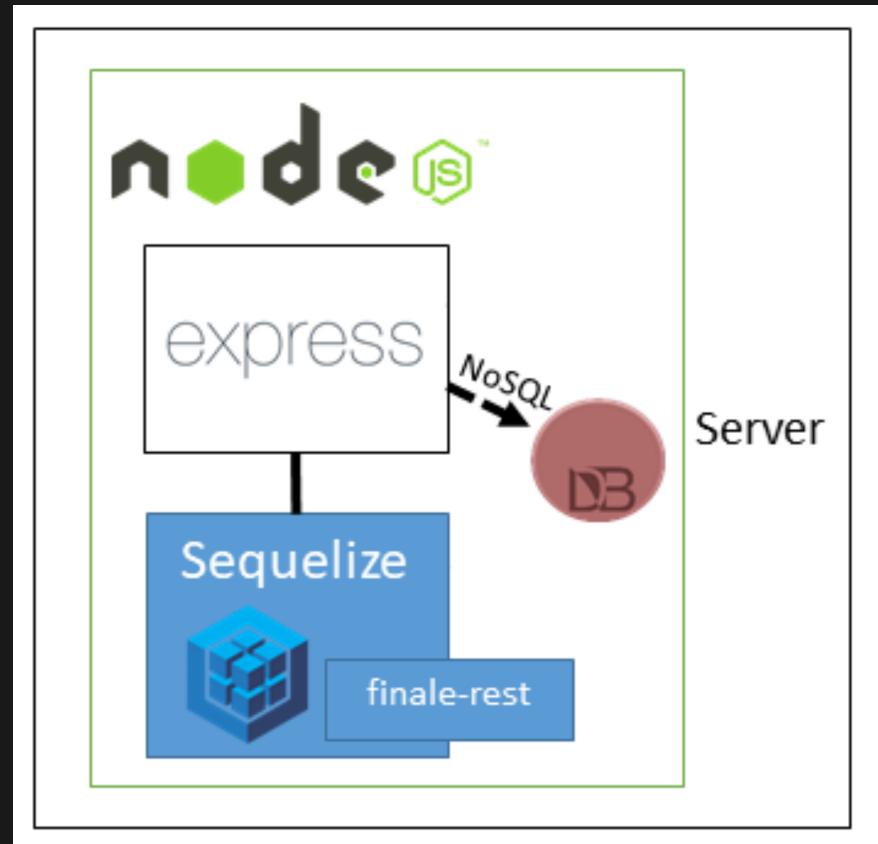
APPLICATION SERVER

JavaScript / TypeScript



APPLICATION SERVER

JavaScript / TypeScript
Node.js

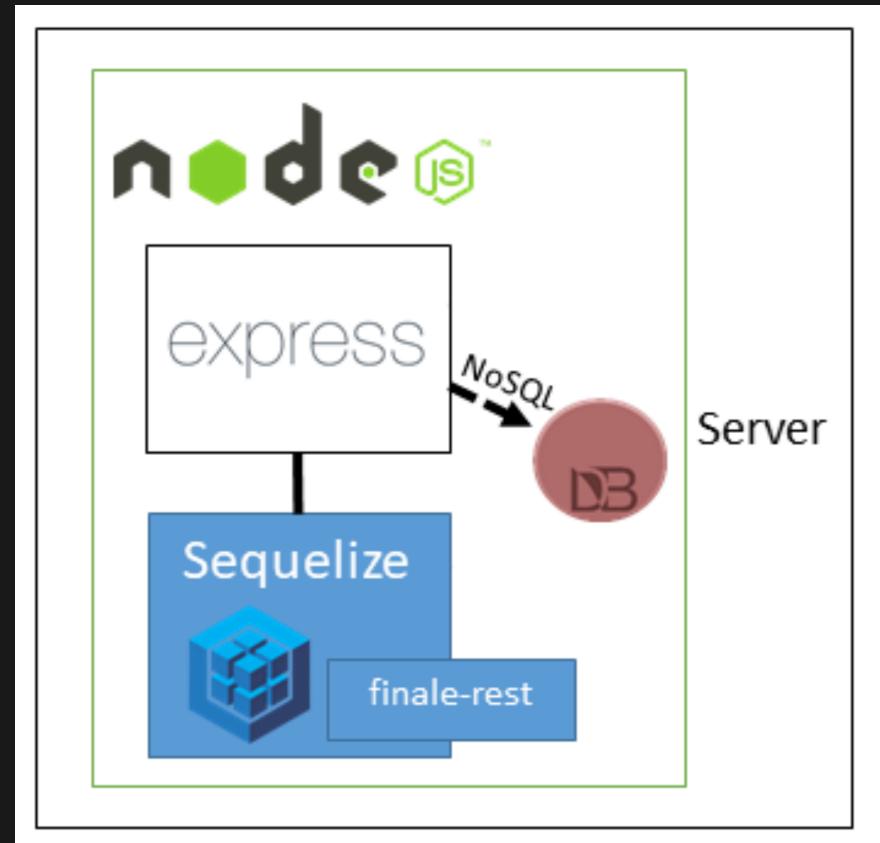


APPLICATION SERVER

JavaScript / TypeScript

Node.js

Express - Web Application
Framework



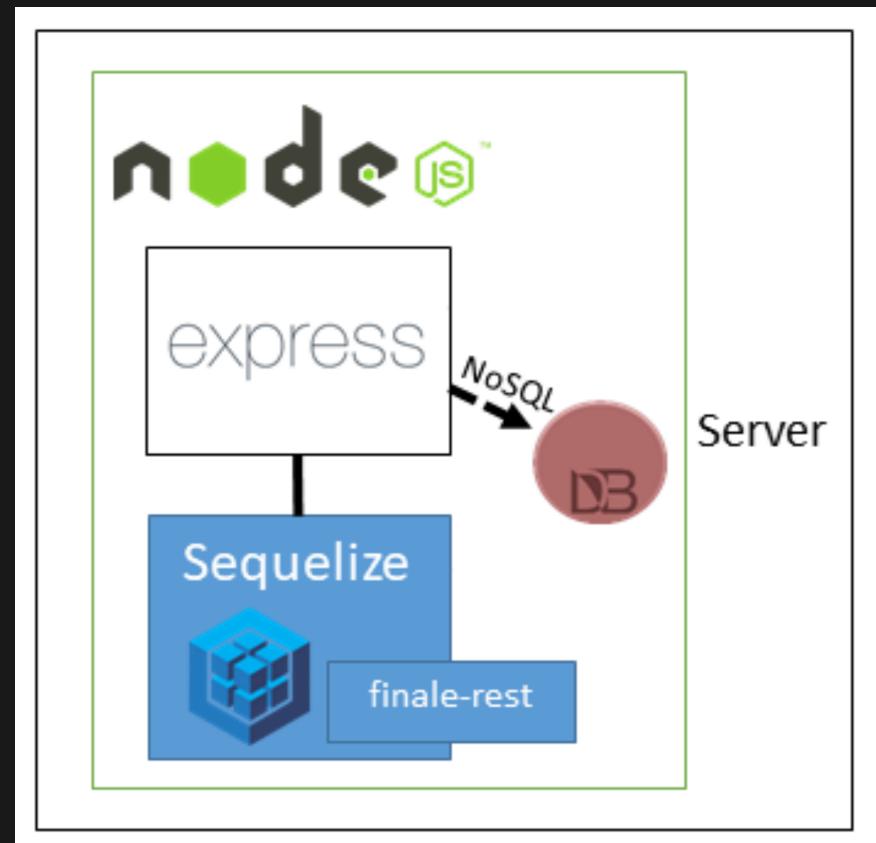
APPLICATION SERVER

JavaScript / TypeScript

Node.js

Express - Web Application
Framework

Sequelize - ORM



APPLICATION SERVER

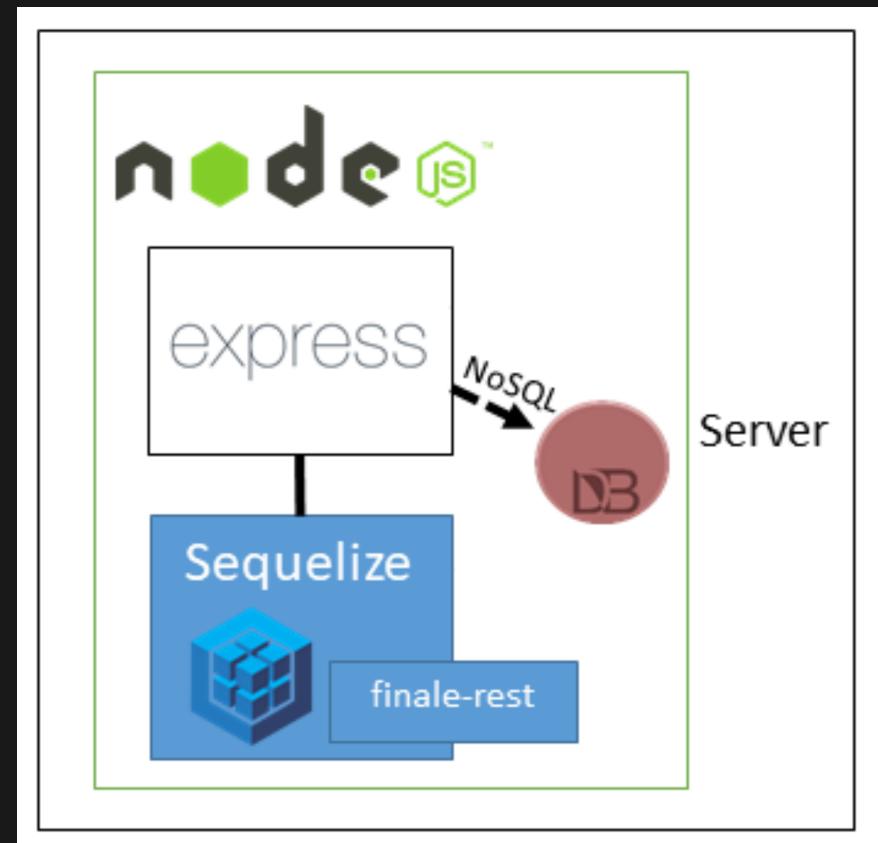
JavaScript / TypeScript

Node.js

Express - Web Application
Framework

Sequelize - ORM

Socket.io - Realtime, bidirectional
communication



APPLICATION SERVER

JavaScript / TypeScript

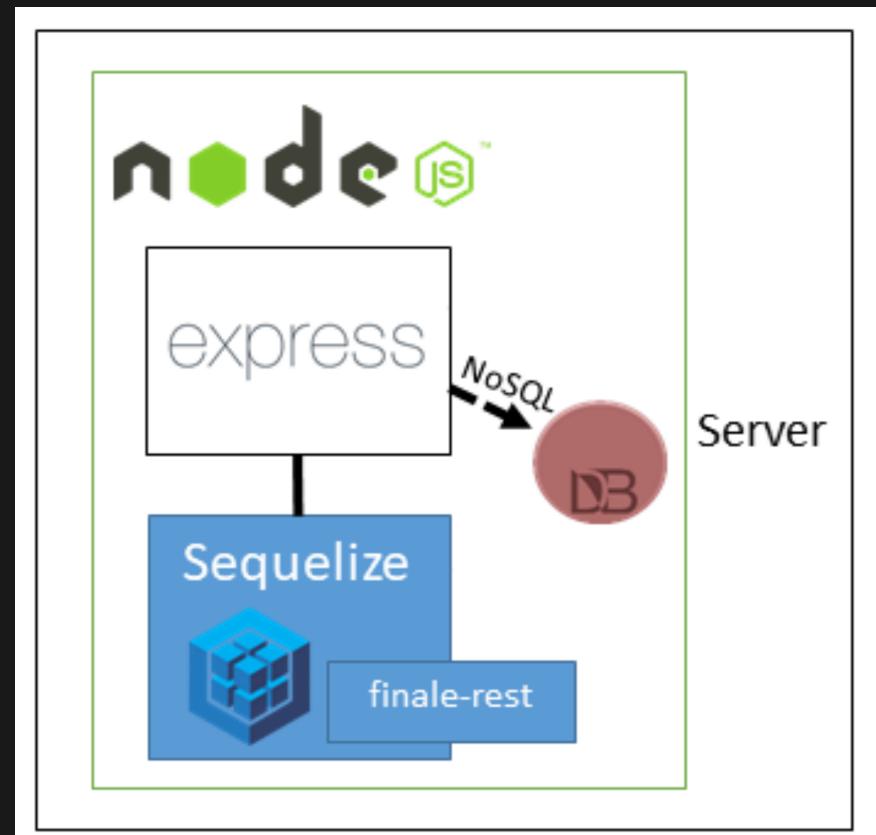
Node.js

Express - Web Application
Framework

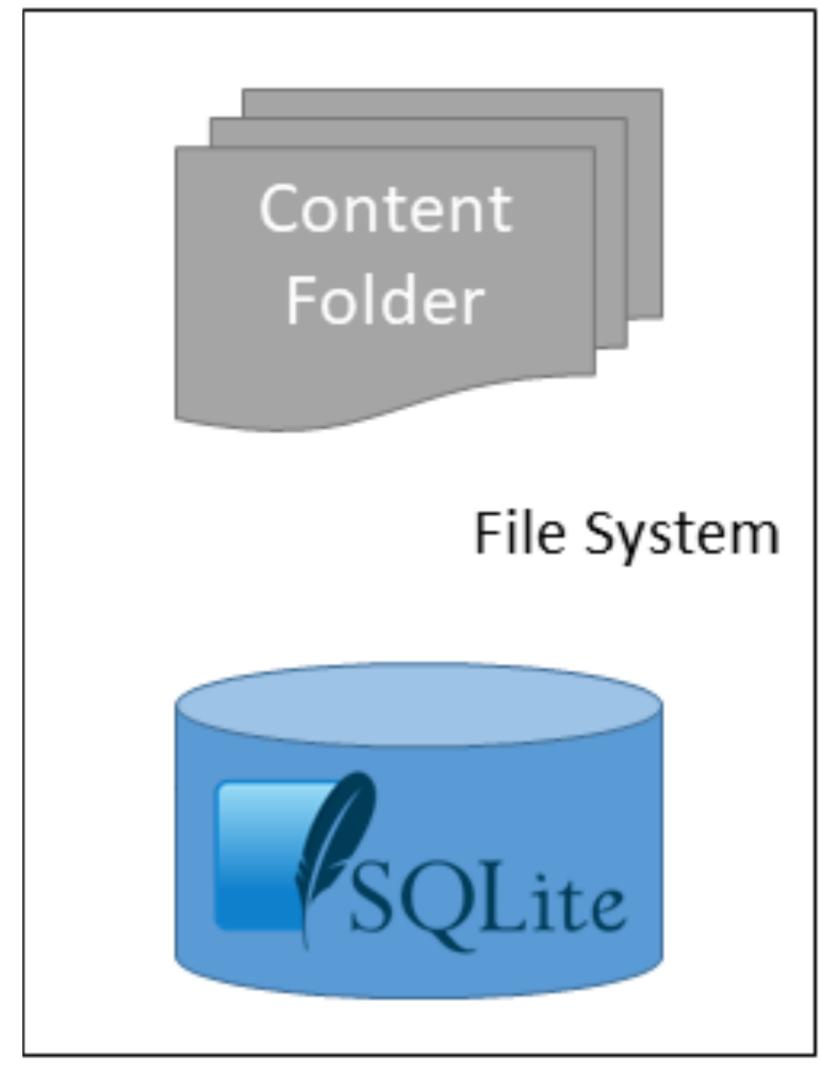
Sequelize - ORM

Socket.io - Realtime, bidirectional
communication

REST based Service API



STORAGE BACKEND



STORAGE BACKEND

Filesystem

Content
Folder

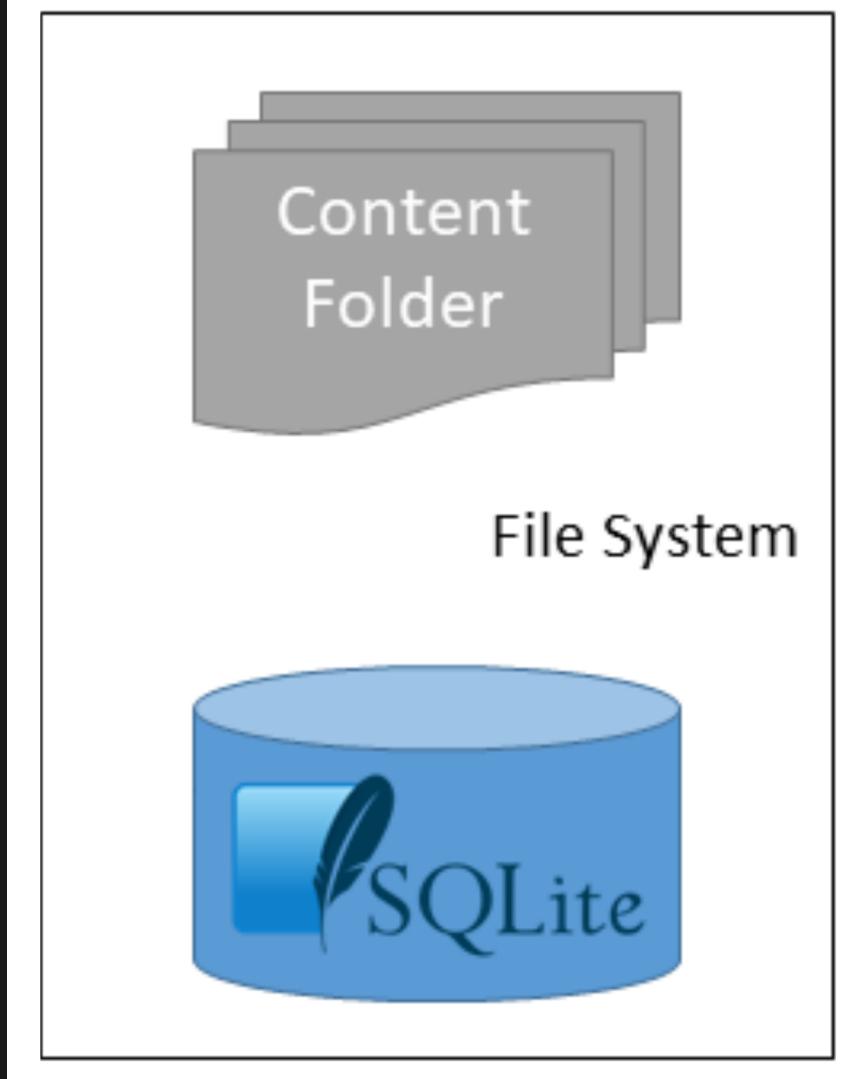
File System



STORAGE BACKEND

Filesystem

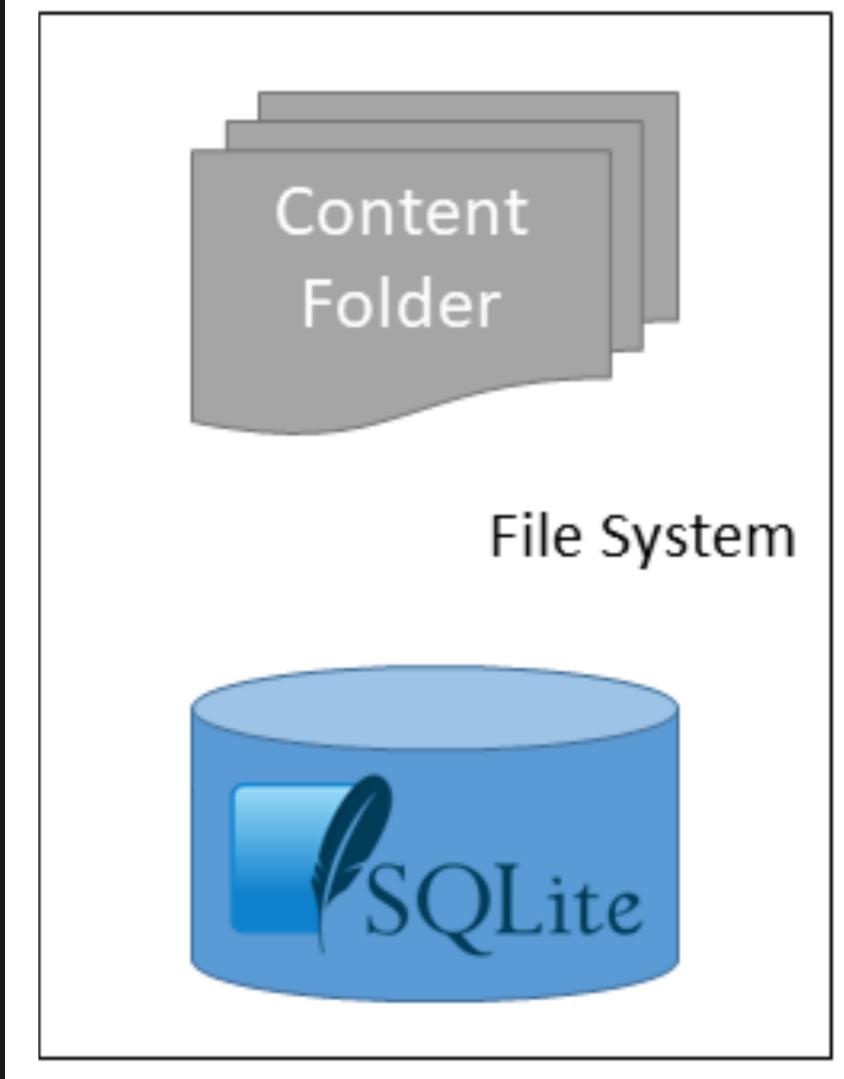
SQLite - DB



STORAGE BACKEND

Filesystem

SQLite - DB
(Mars DB)



FURTHER INFORMATION

<https://owasp.org/www-project-juice-shop/>

<https://pwnning.owasp-juice.shop/>

QUESTIONS?