

# 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.

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# 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

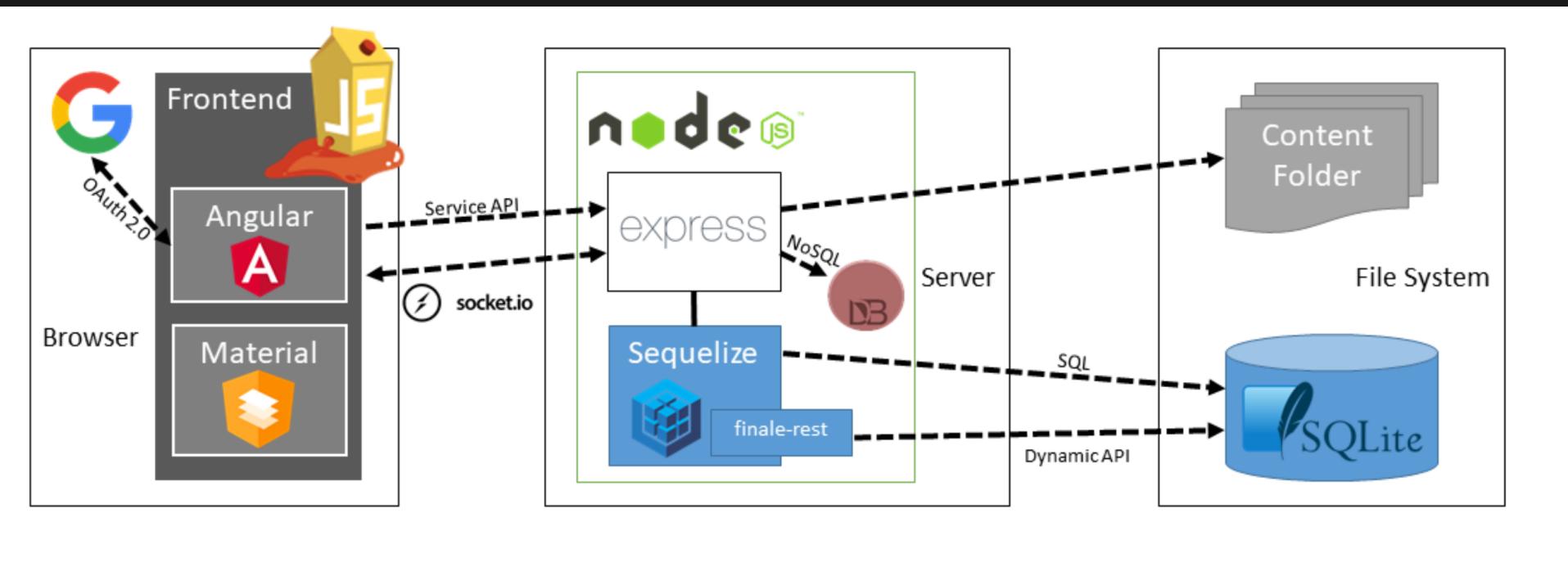
# "OUR SYSTEM"

## 3 Tier Architecture

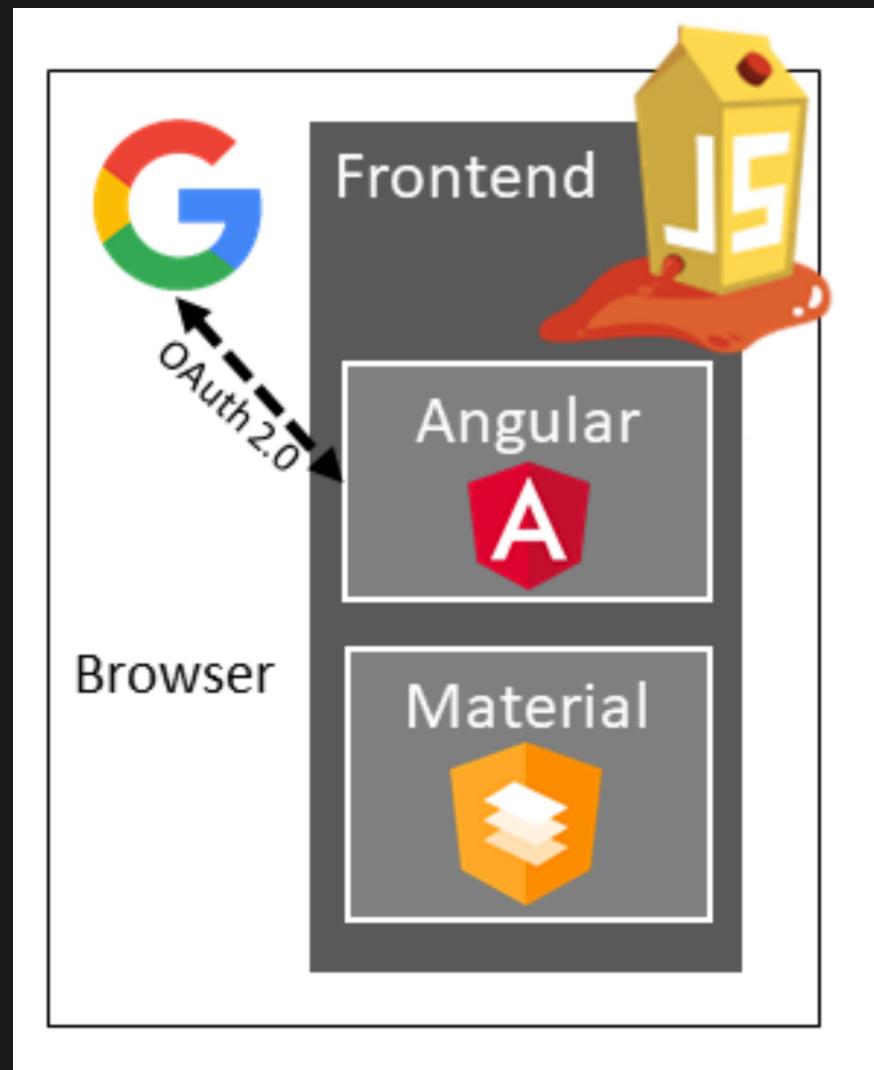
Frontend / User Interface

Application Server

Storage Backend

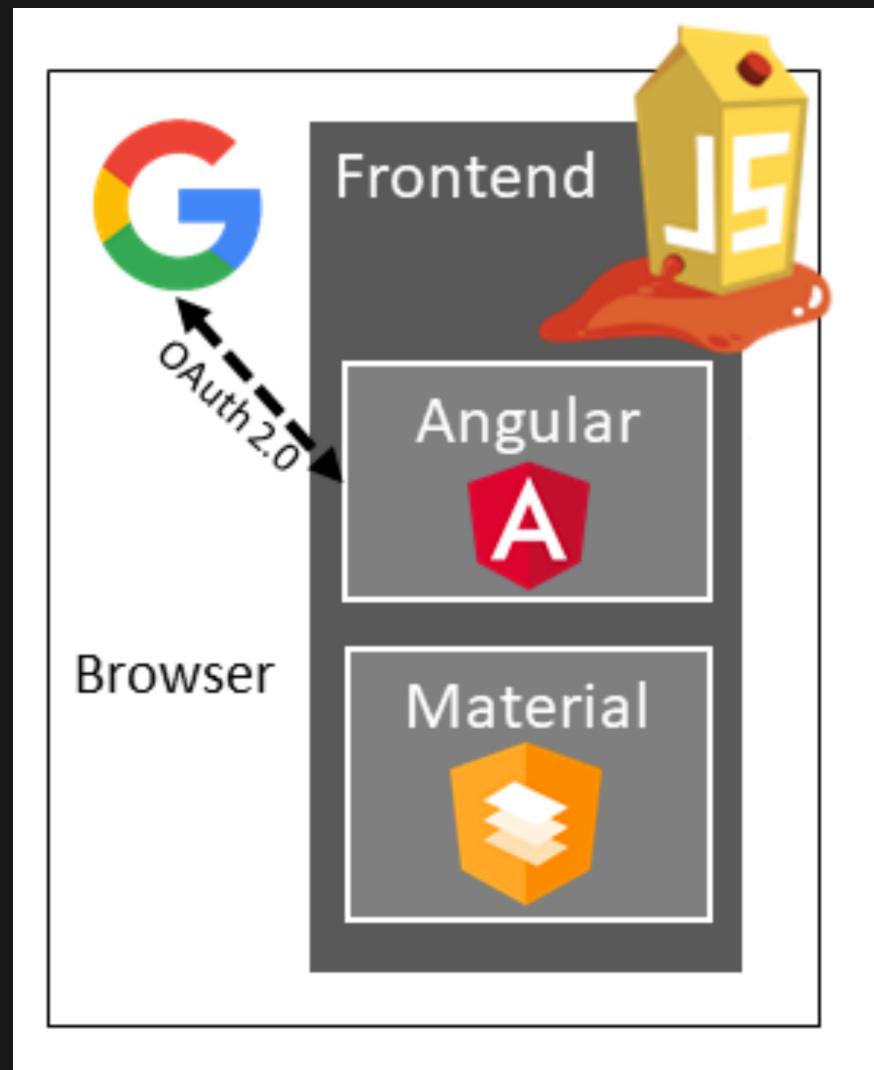


# FRONTEND / USER INTERFACE



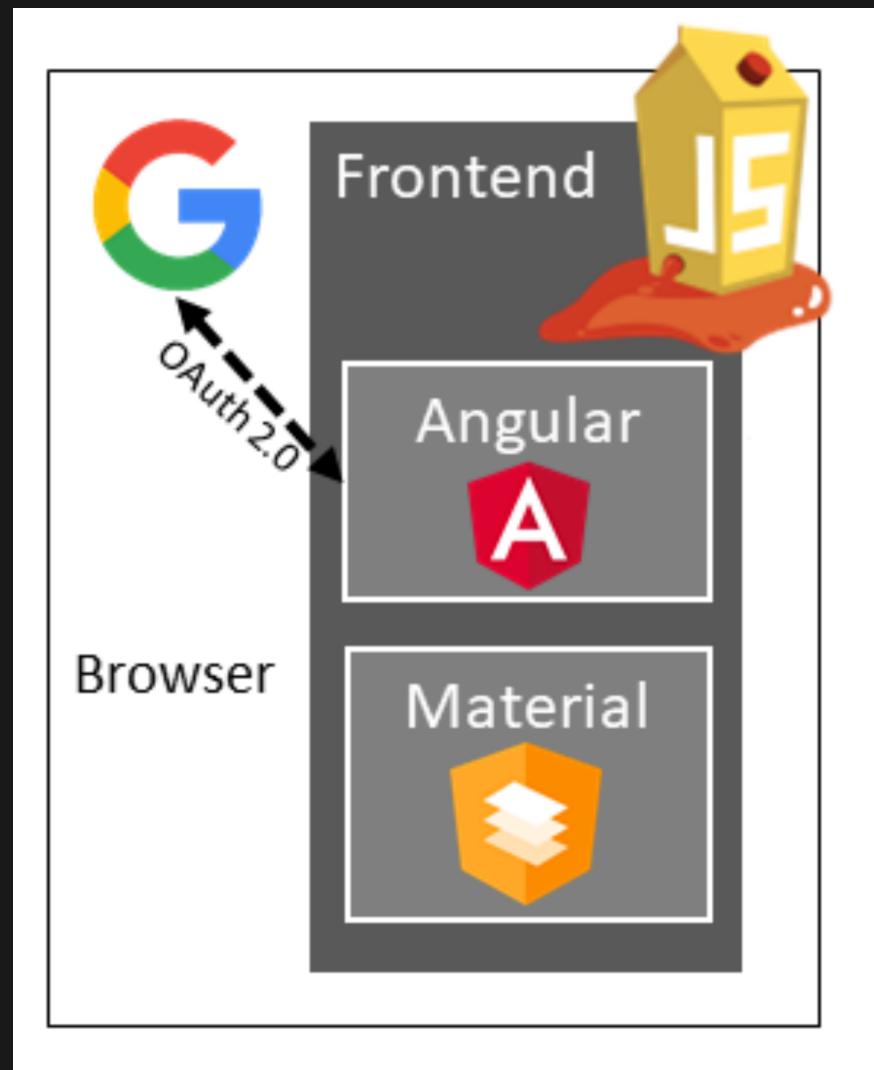
# FRONTEND / USER INTERFACE

Runs in Browser



# FRONTEND / USER INTERFACE

Runs in Browser  
JavaScript SPA

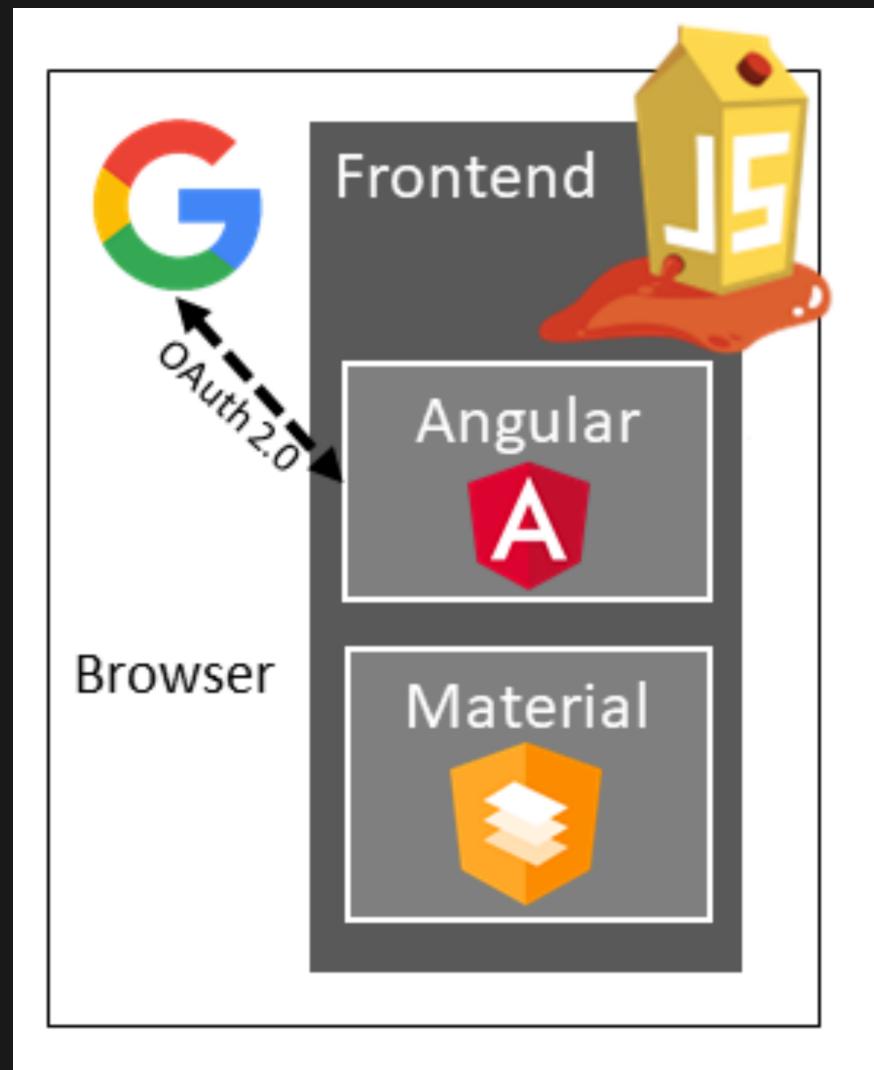


# FRONTEND / USER INTERFACE

Runs in Browser

JavaScript SPA

Angular Framework



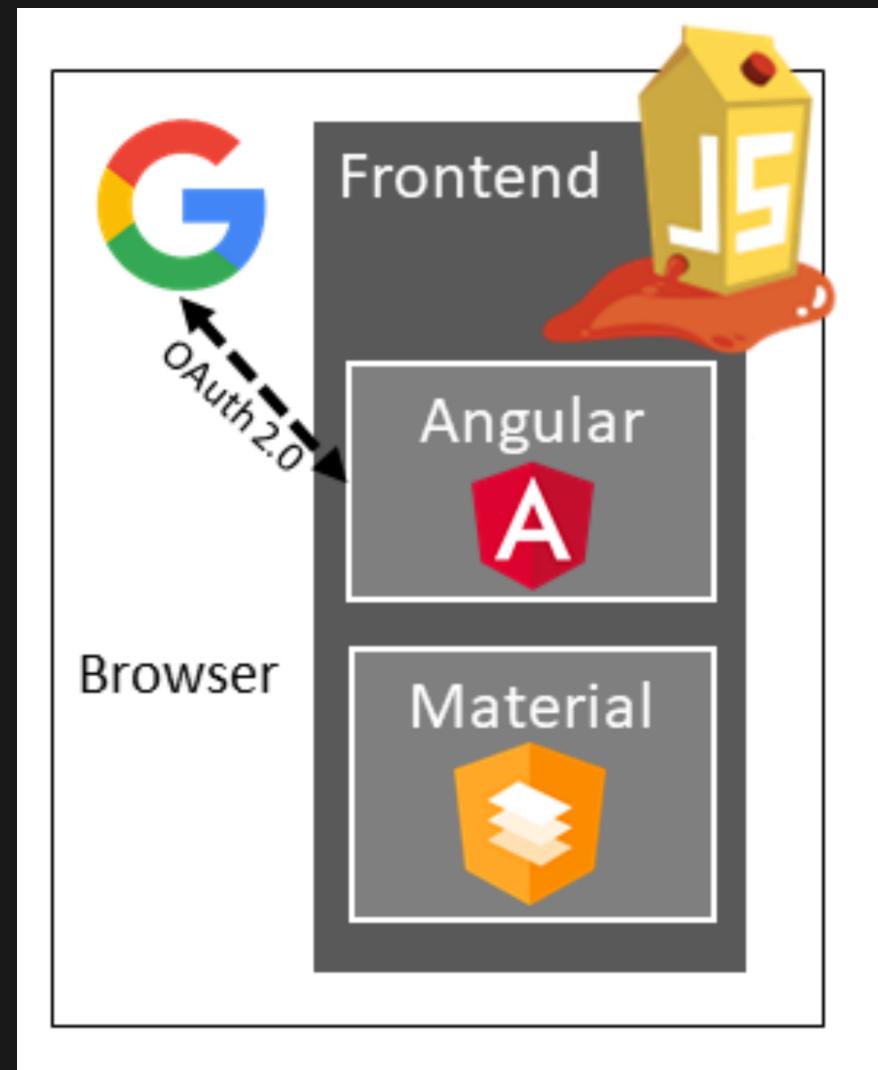
# FRONTEND / USER INTERFACE

Runs in Browser

JavaScript SPA

Angular Framework

Material.io Design



# FRONTEND / USER INTERFACE

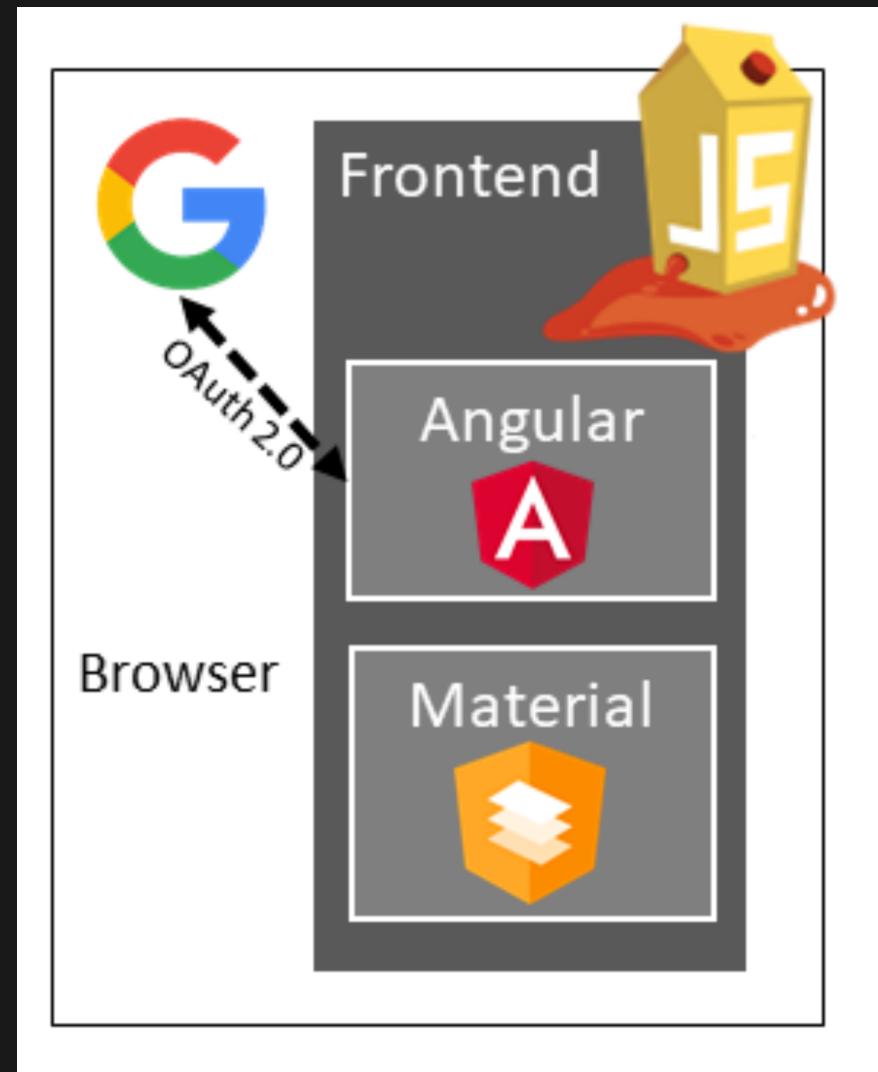
Runs in Browser

JavaScript SPA

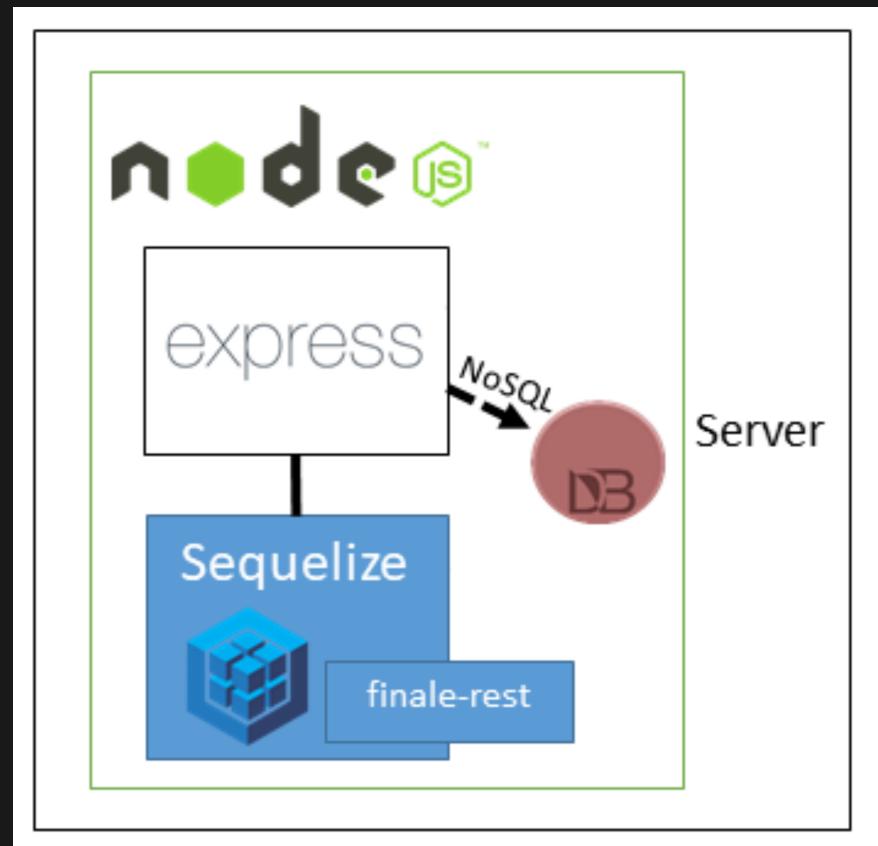
Angular Framework

Material.io Design

External OAuth Provider

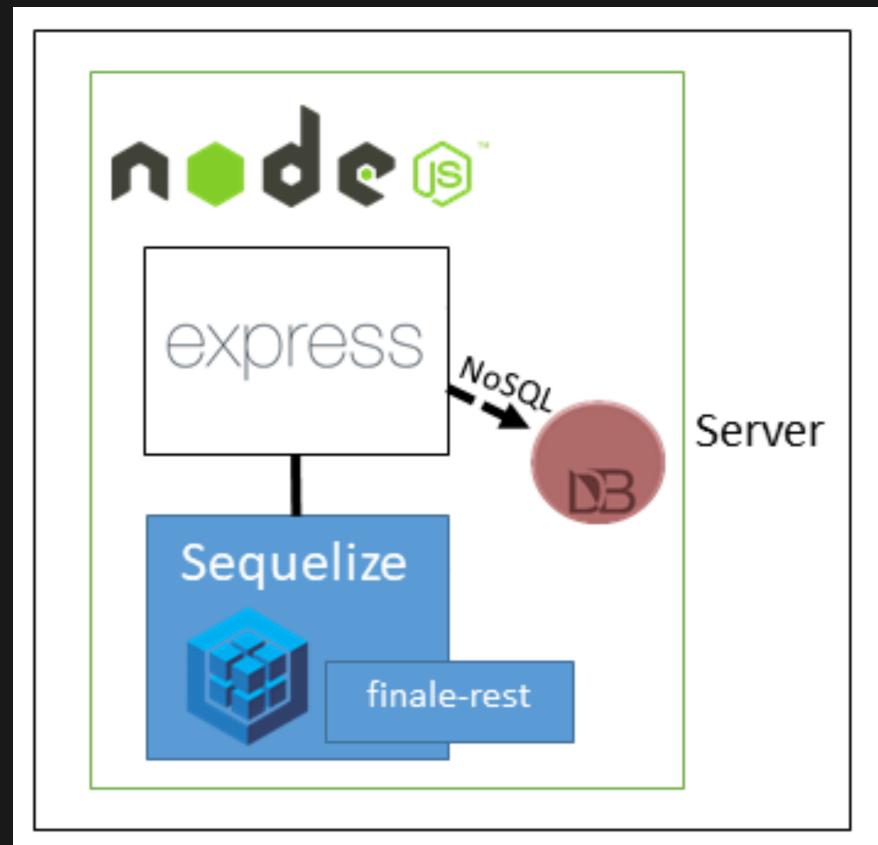


# APPLICATION SERVER



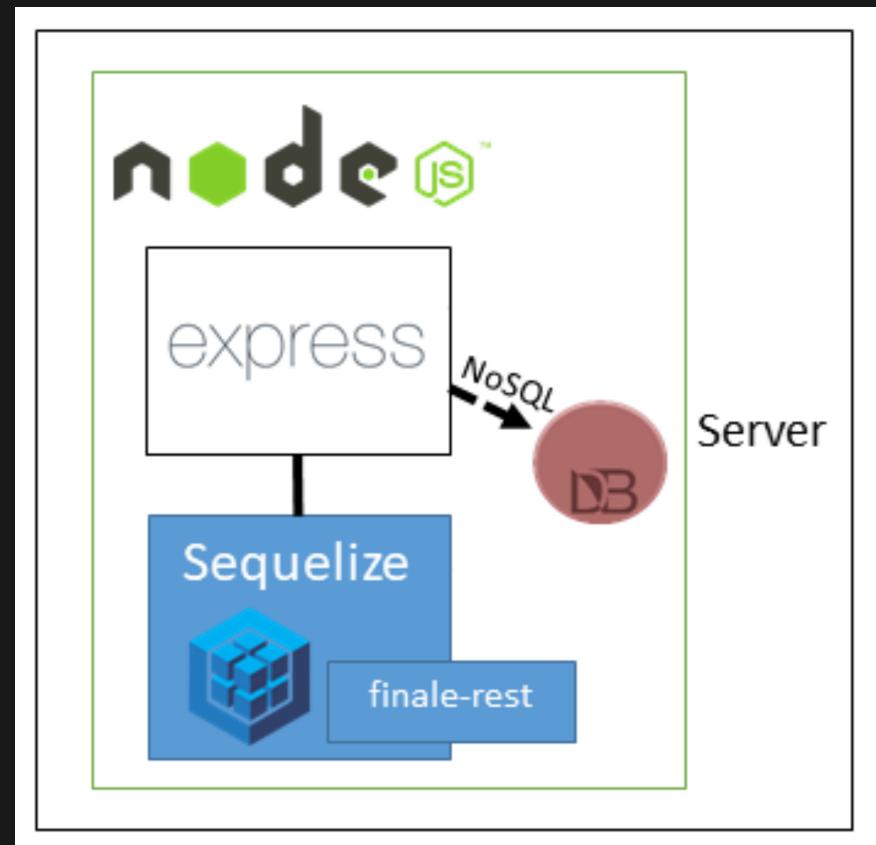
# APPLICATION SERVER

JavaScript



# APPLICATION SERVER

JavaScript  
Node.js

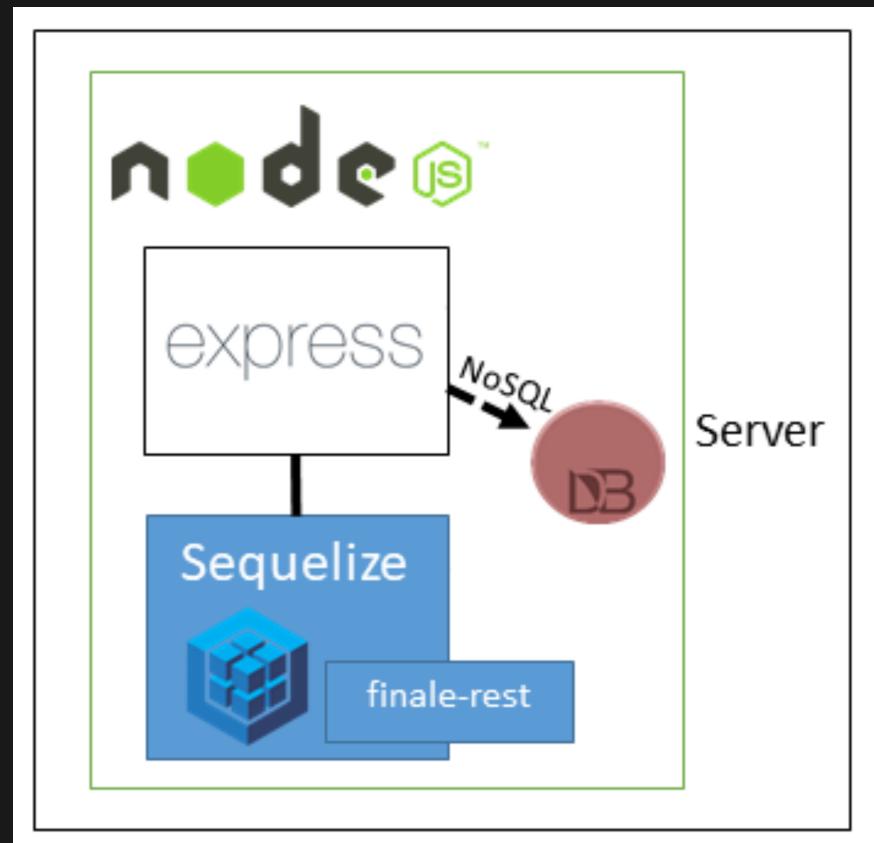


# APPLICATION SERVER

JavaScript

Node.js

Express - Web Application  
Framework



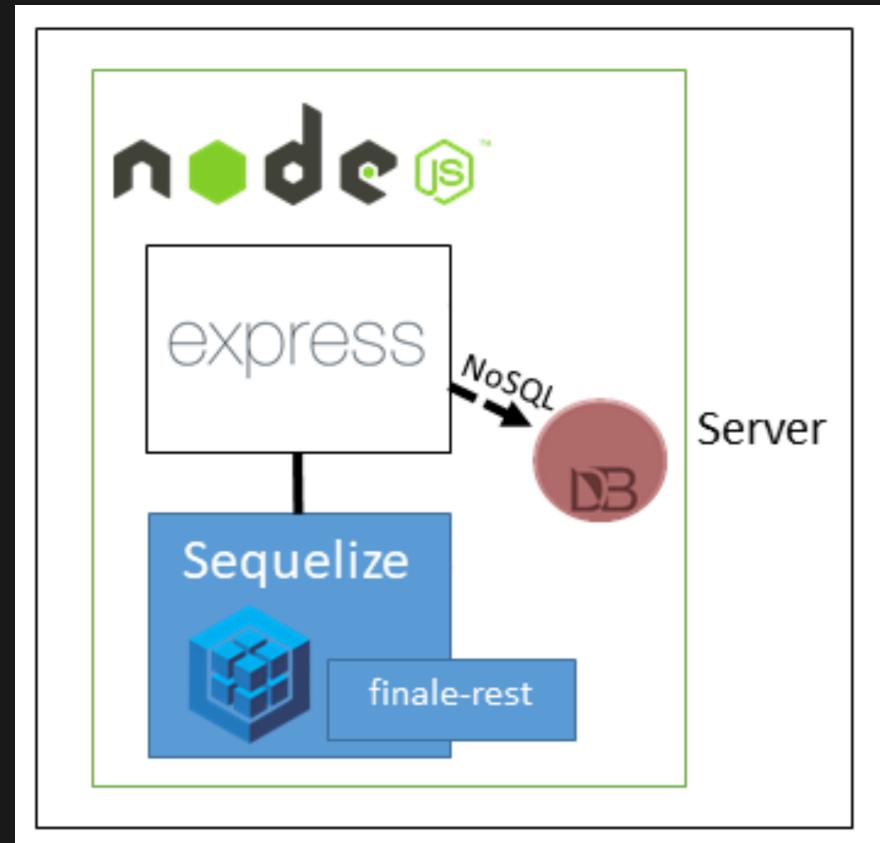
# APPLICATION SERVER

JavaScript

Node.js

Express - Web Application  
Framework

Sequelize - ORM Mapper



# APPLICATION SERVER

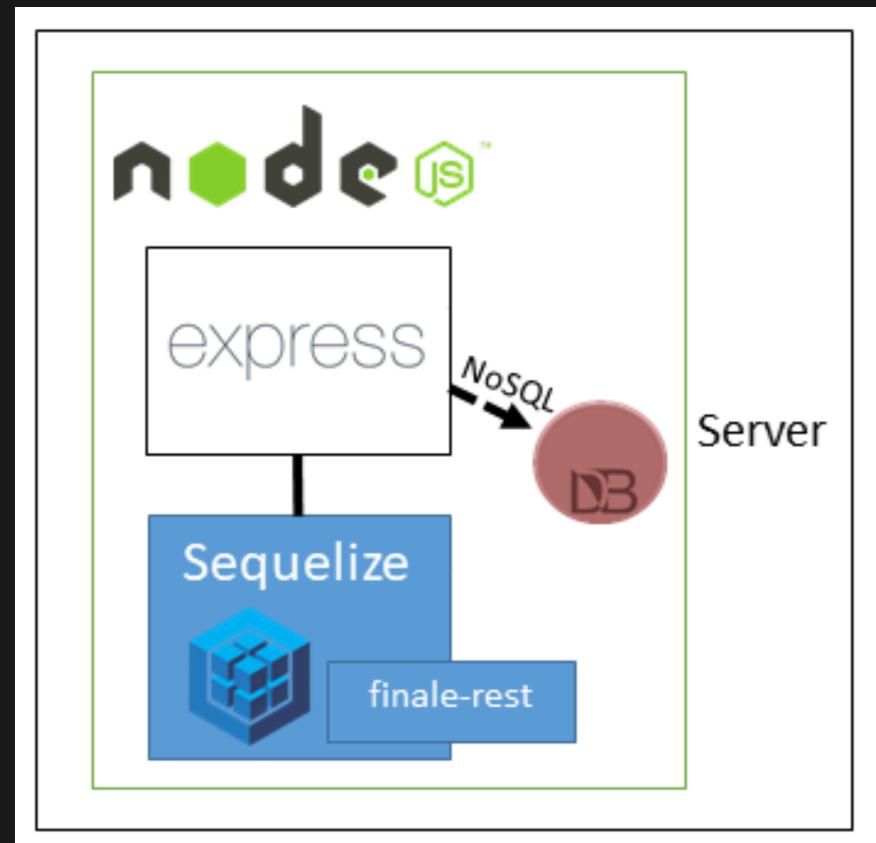
JavaScript

Node.js

Express - Web Application  
Framework

Sequelize - ORM Mapper

Socket.io - Realtime, bidirectional  
communication



# APPLICATION SERVER

JavaScript

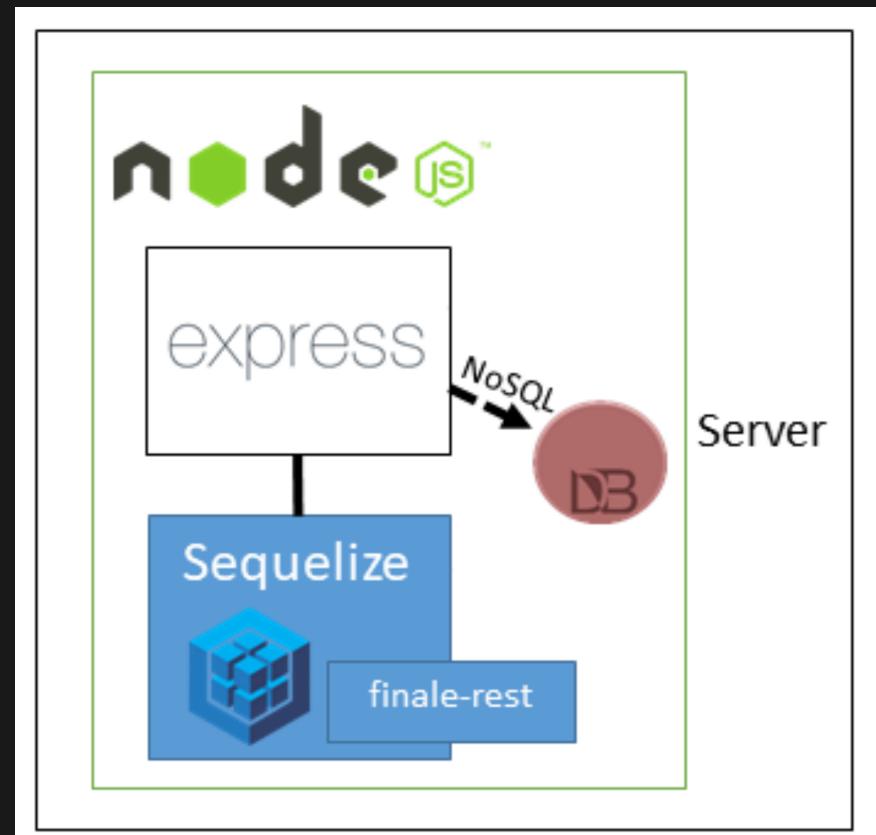
Node.js

Express - Web Application  
Framework

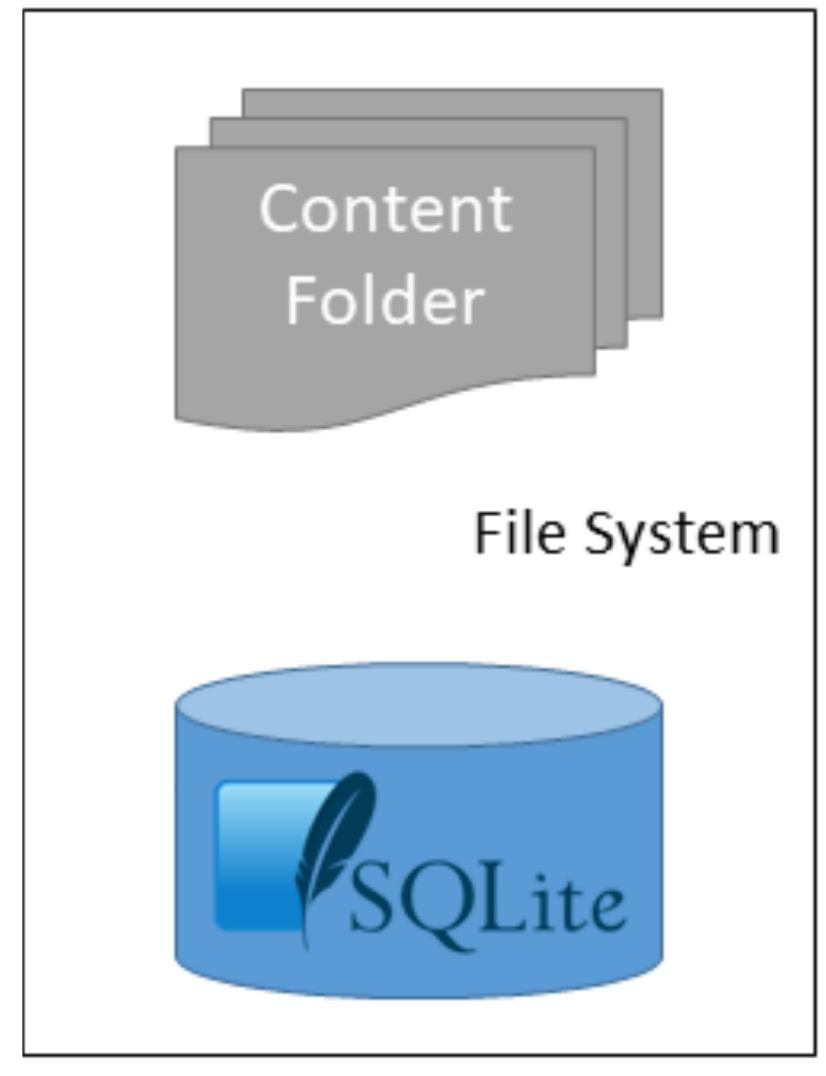
Sequelize - ORM Mapper

Socket.io - Realtime, bidirectional  
communication

REST based Service API



# STORAGE BACKEND



# STORAGE BACKEND

Filesystem

Content  
Folder

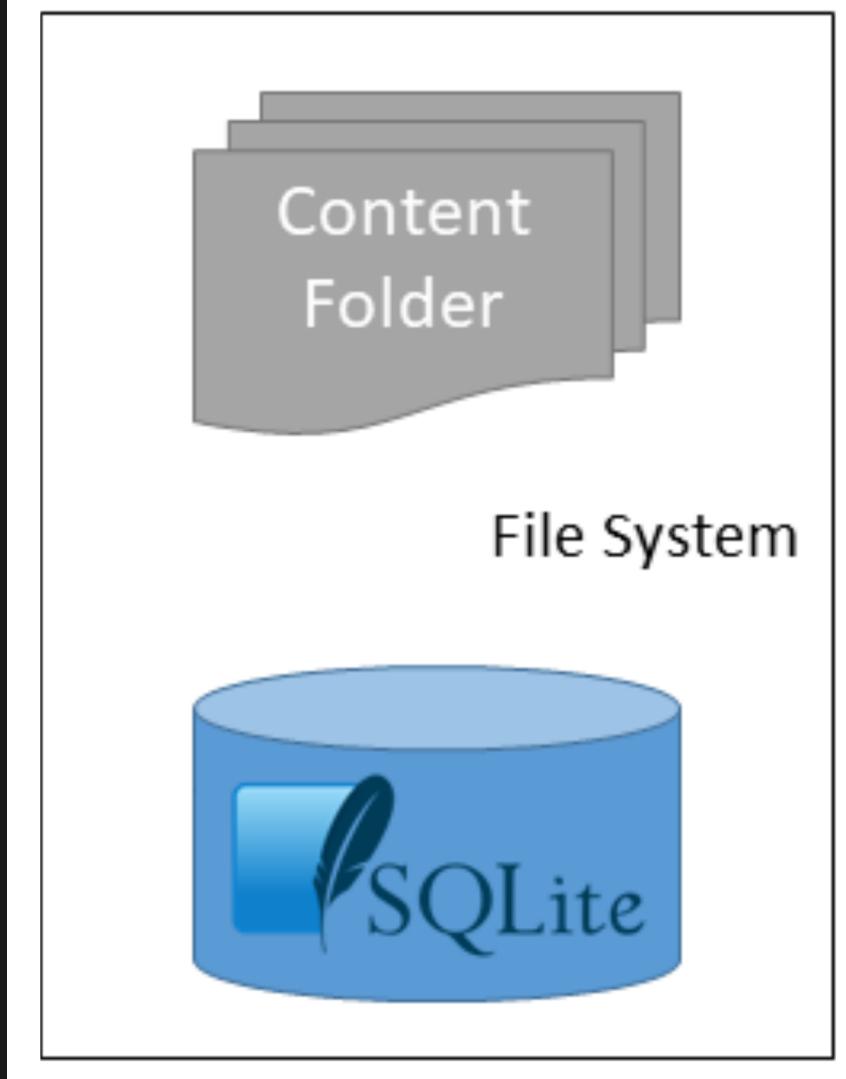
File System



# STORAGE BACKEND

Filesystem

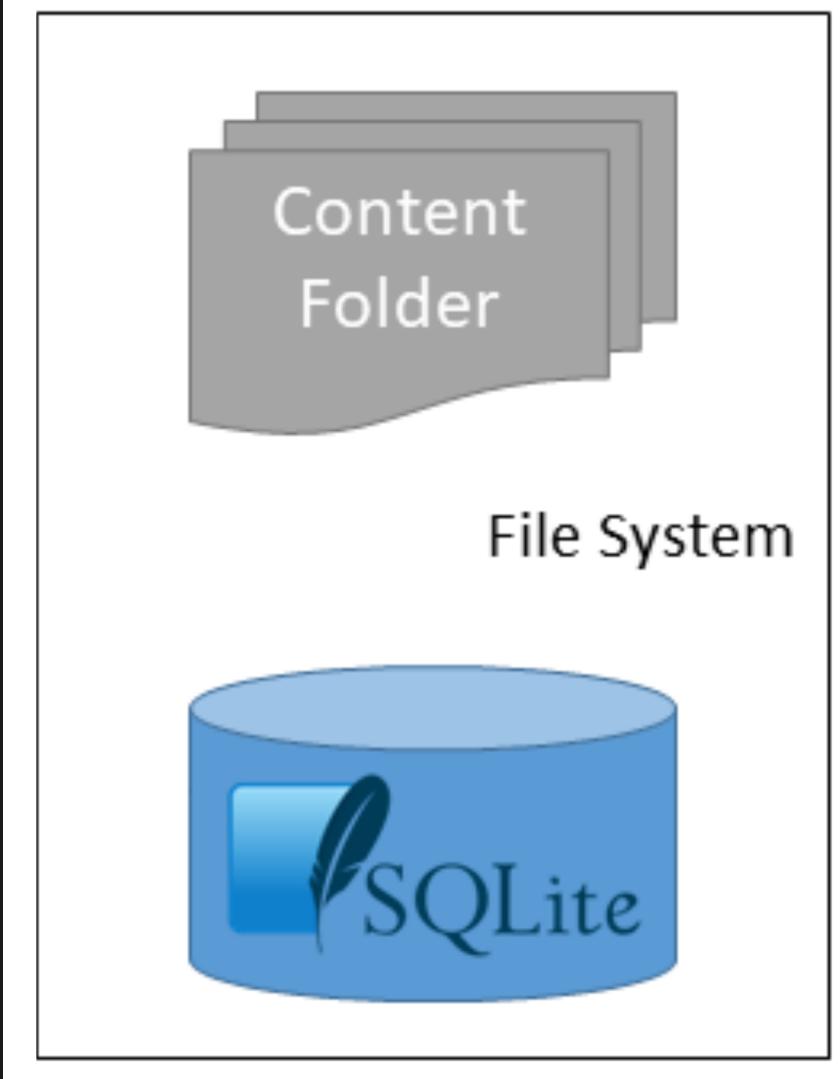
SQLite - DB



# STORAGE BACKEND

Filesystem

SQLite - DB  
(Mars DB)



## FURTHER INFORMATION

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

<https://juice-shop.herokuapp.com/>

# QUESTIONS?