sebis

TLM

SEBA Master: Web Application Engineering
Tutorial 1: Demo & Introduction to overall structure and included files + FAQ
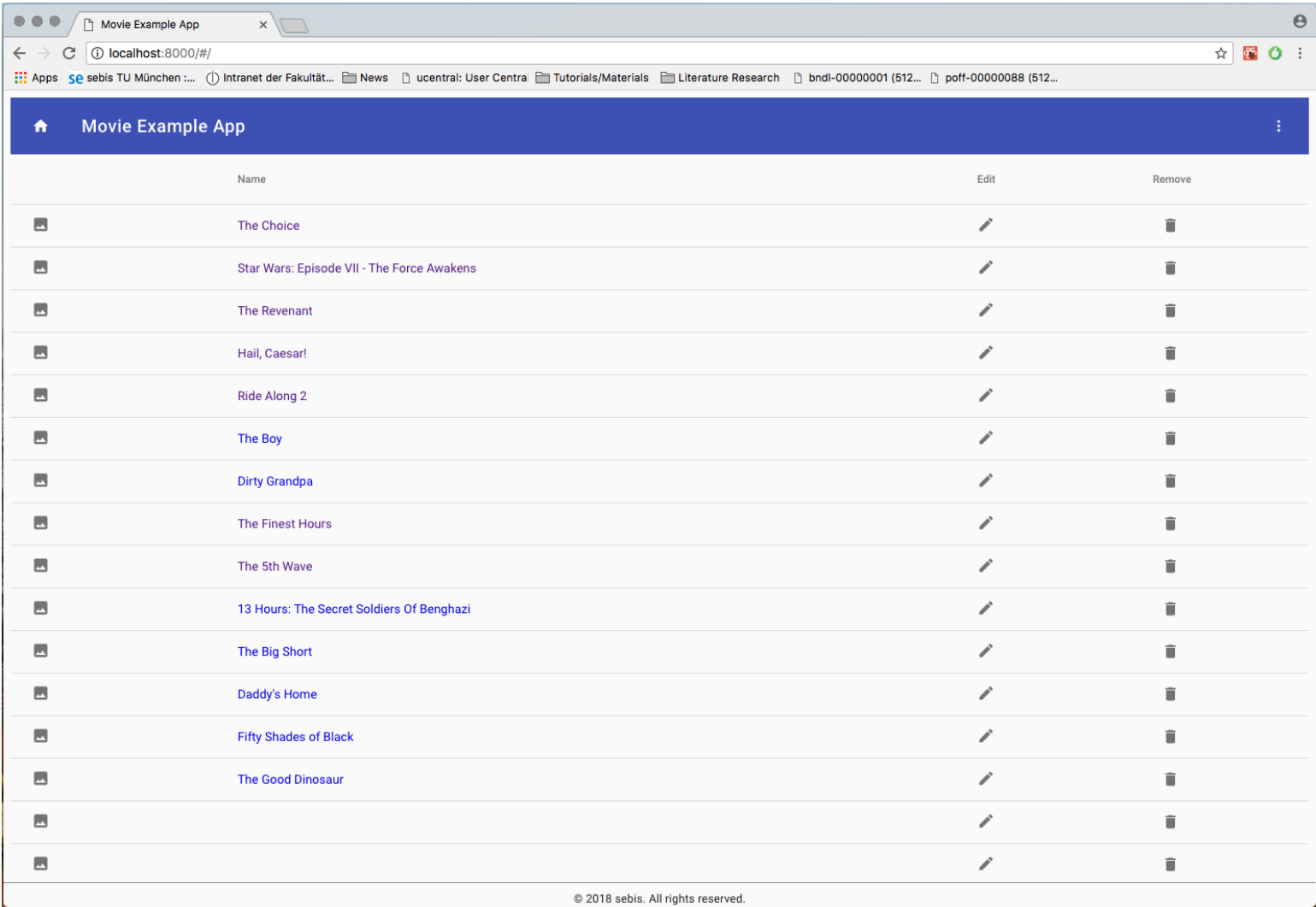
12th of May 2020, Ingo Glaser, Munich

Chair of Software Engineering for Business Information Systems (sebis)
Faculty of Informatics
Technische Universität München
wwwmatthes.in.tum.de

Outline

- **Movie App Use Cases**

- Movie App Architecture

- Dependencies

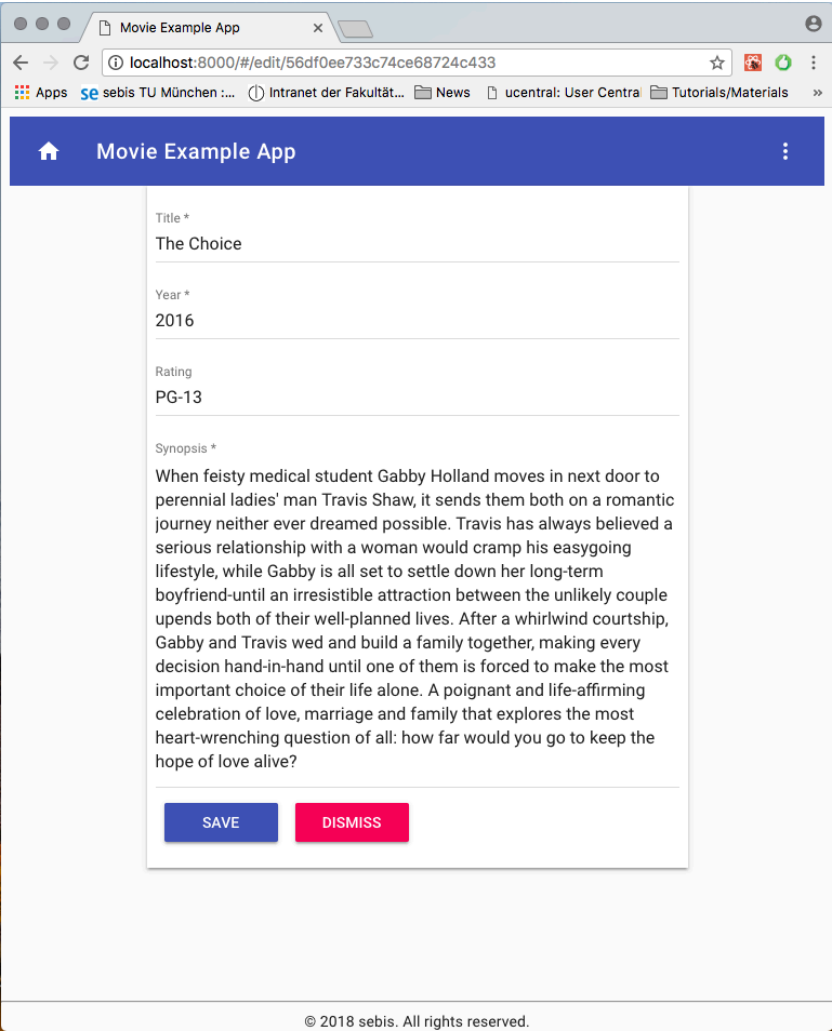- Git Repository

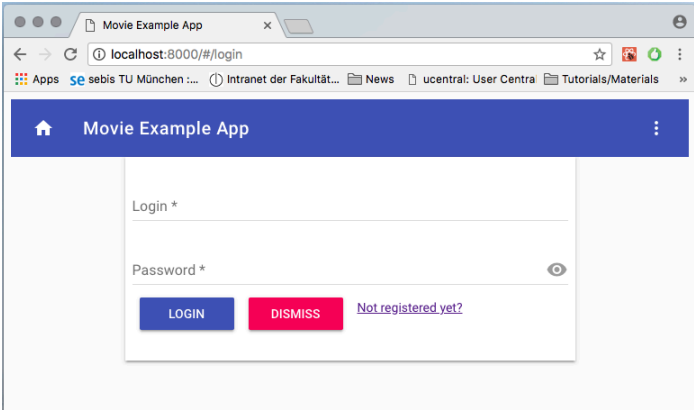- Folder & File Structure

- Demo

- FAQ

Movie App Use Cases
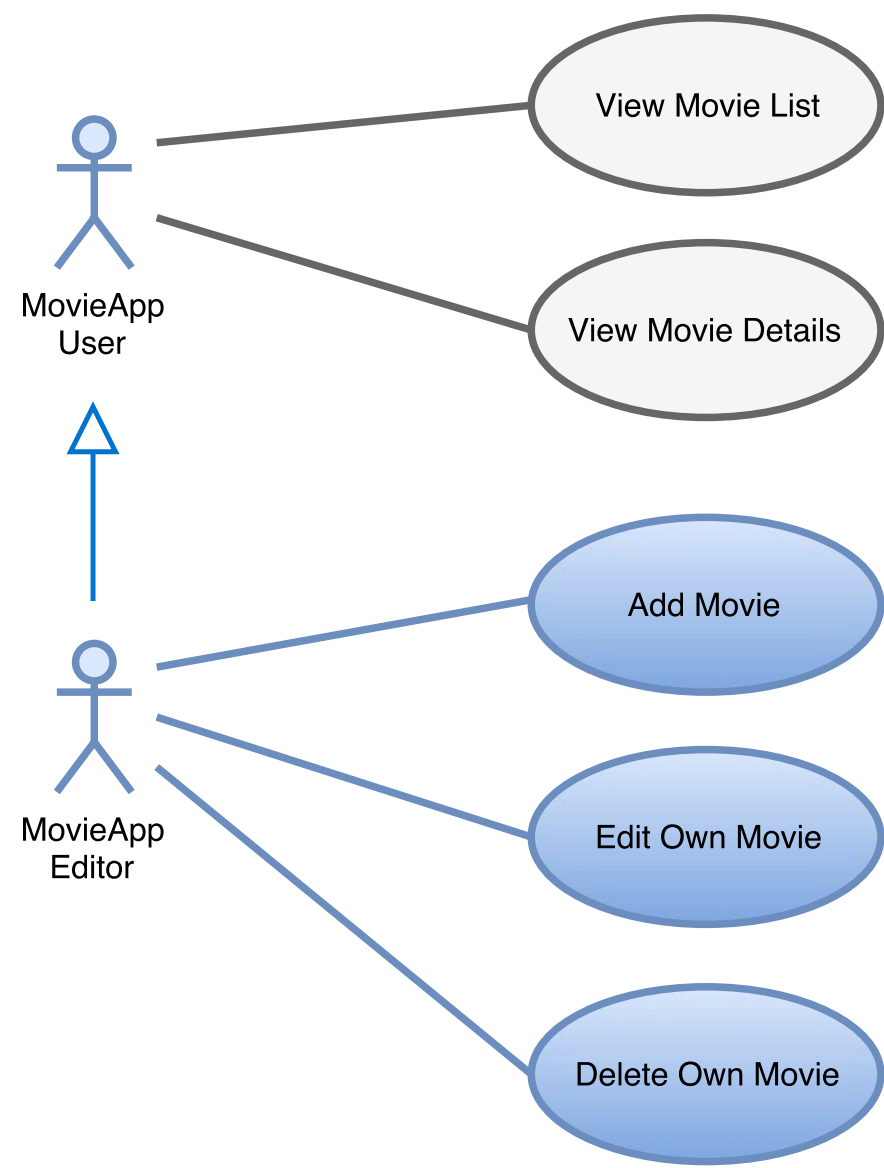
Movie App Screenshots [1]

Movie App Screenshots (2)

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Movie App Logical Architecture

TLN

«client application»
Frontend
(React)

«web service»
Backend
(NodeJS)

«database»
Database
(MongoDB)

Movie App Component Diagram

Movie Application Overview

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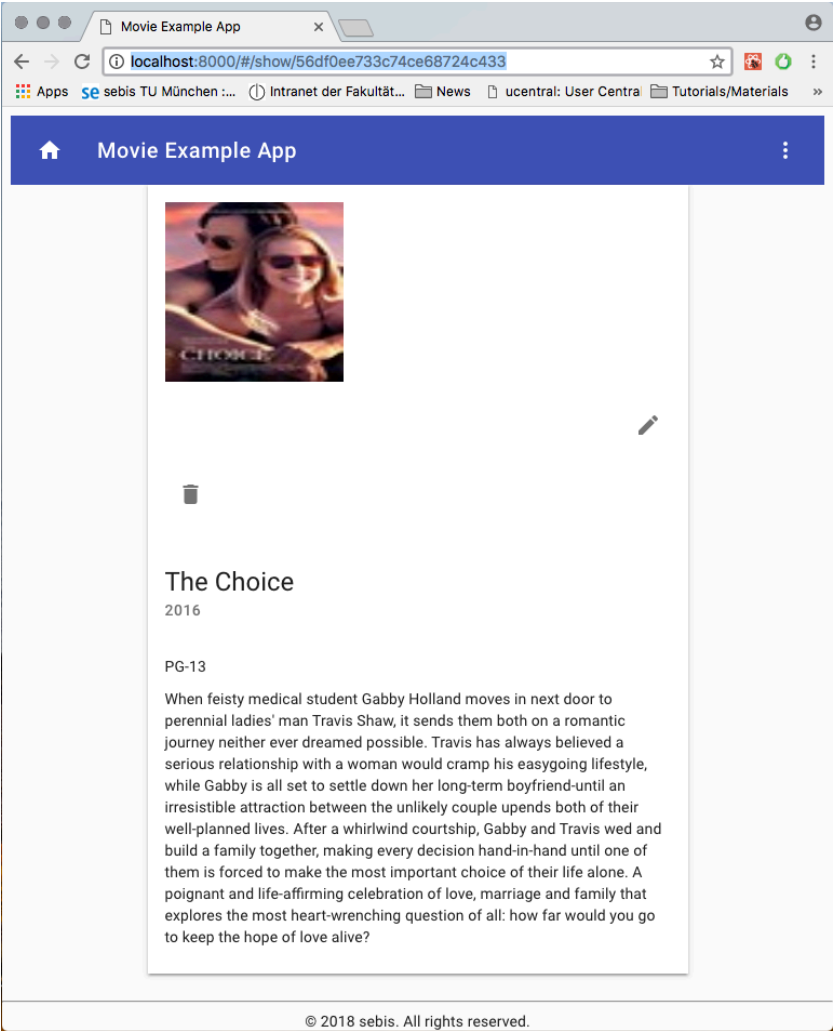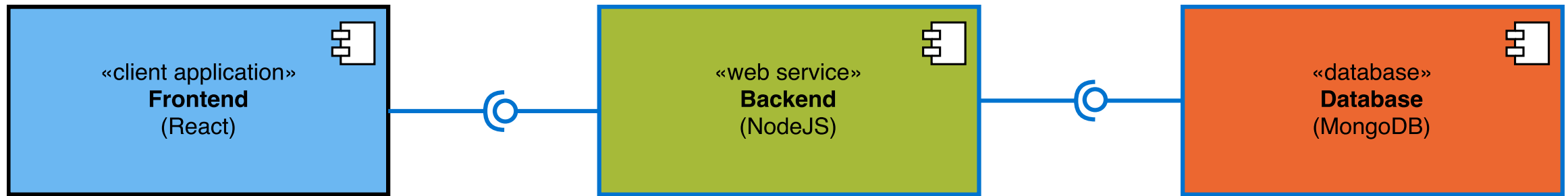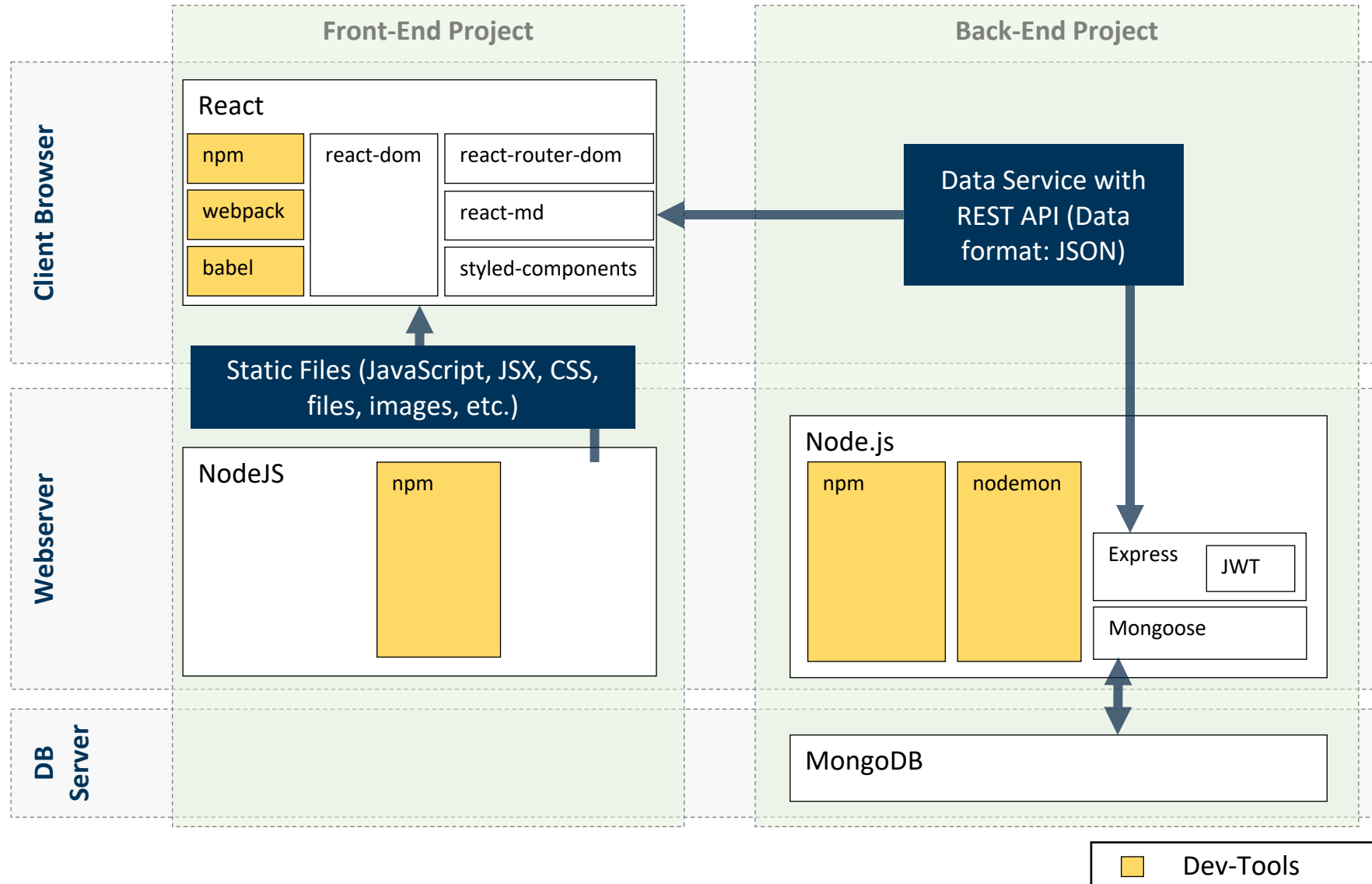# Movie App Frontend: Application and Development Dependencies

Application Dependency	Description
React / React-DOM	The React core libraries
React-Router	React community library that facilitates navigation
React-MD	React community library that provides Google Material Design styles
Styled Components	React community library that facilitates tailored styling of components
Webfont-Loader	Library that facilitates the inclusion of remote web fonts

Development Dependency	Description
Webpack	JavaScript module bundler (generates optimized assets (JS, CSS, Images…) for the production stage, provides different loaders (Babel, CSS, HTML, …) and a development server/middleware for the development stage
Babel	JavaScript transpiler that converts ES6 and JSX into browser-compatible JavaScript (e.g. ES5)
CSS-Loader	Library that loads CSS resources
HTML-Loader	Library that constructs HTML resources and injects CSS & JS resources

Movie App Backend: Dependencies

Dependency	Description
Express	Server-side web framework based on NodeJS
Bcrypt	Library that helps to hash passwords
BodyParser	Library that parses web requests (marshalling/unmarshalling)
JWT	JSON Web Token (JWT) library for authorization
Mongoose	MongoDB object-to-document-mapper including MongoDB access
Helmet	Library for securing Express applications by setting HTTP headers

Development Dependency	Description
Nodemon	Restarts application when changed files are saved

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Git Repositories

Frontend Repository:

Website: https://github.com/sebischair/sebamaster-movie-frontend

Checkout: https://github.com/sebischair/sebamaster-movie-frontend.git

Backend Repository:

Website: https://github.com/sebischair/sebamaster-movie-backend
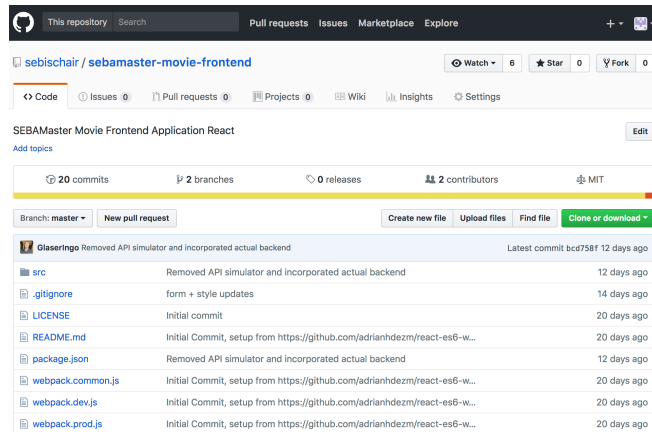
Checkout: https://github.com/sebischair/sebamaster-movie-backend.git

Installation steps

1. Install favorite **IDE**, if none installed yet. We recommend WebStorm: https://www.jetbrains.com/webstorm/ (free license available for TUM students)
2. Clone and install the **SEBAMaster Movie App Backend**
3. Follow the installation instructions given for the Movie App Backend https://github.com/sebischair/sebamaster-movie-backend (provided under link in more detail):
    1. Install nodejs, if not installed yet
    2. Install mongodb, if not installed yet
    3. Run "npm install"
    4. Load sample database data
    5. Run server application with "node server.js" (from backend root directory)
4. Clone and install **SEBAMaster Movie App Frontend**
5. Follow the installation instructions given for the Movie App Frontend https://github.com/sebischair/sebamaster-movie-frontend: (provided under link in more detail):
    1. Run "npm install"
    2. Run "npm run build"
    3. Run frontend application with "npm start"
    4. (Chrome Browser should start automatically, otherwise open http://localhost:8000)

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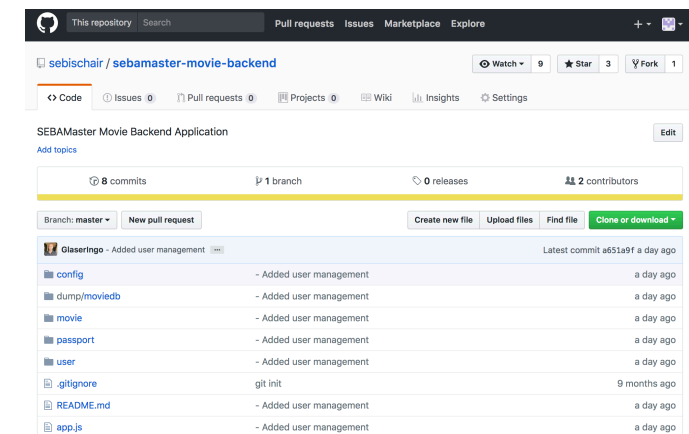- Git Repository
- **Folder & File Structure**
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Movie App Folders & Files: Frontend

TLM

SEBAMaster Movie Frontend Application React   Edit

Add topics

| ⊙ 20 commits | ⑂ 2 branches | ◊ 0 releases | 👥 2 contributors | ⚖ MIT |

Branch: master ▾   New pull request   Create new file   Upload files   Find file   Clone or download ▾

👤 **GlaserIngo** Removed API simulator and incorporated actual backend   Latest commit bcd758f 12 days ago

📁 src	Removed API simulator and incorporated actual backend	12 days ago
📄 .gitignore	form + style updates	14 days ago
📄 LICENSE	Initial commit	20 days ago
📄 README.md	Initial Commit, setup from https://github.com/adrianhdezm/react-es6-w...	20 days ago
📄 package.json	Removed API simulator and incorporated actual backend	12 days ago
📄 webpack.common.js	Initial Commit, setup from https://github.com/adrianhdezm/react-es6-w...	20 days ago
📄 webpack.dev.js	Initial Commit, setup from https://github.com/adrianhdezm/react-es6-w...	20 days ago
📄 webpack.prod.js	Initial Commit, setup from https://github.com/adrianhdezm/react-es6-w...	20 days ago

src contains the source code of the application

package.json contains the project configuration

Movie App Folders & Files: Backend

TUM

🔖 **sebischair** / **sebamaster-movie-backend**

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`<>` Code   ⓘ Issues 0   ⑂ Pull requests 0   📋 Projects 0   📖 Wiki   📊 Insights   ⚙ Settings

SEBAMaster Movie Backend Application   Edit

Add topics

| 🕐 **14** commits	⑂ **1** branch	🏷 **0** releases	👥 **2** contributors	⚖ MIT

Branch: master ▾   New pull request   Create new file   Upload files   Find file   **Clone or download** ▾

👤 **GlaserIngo** - Check if user exists   Latest commit cd32e3d 13 days ago

📁 dump/**moviedb**	- New structure for backend	14 days ago
📁 **src**	- Check if user exists	13 days ago
📄 **.gitignore**	git init	10 months ago
📄 **LICENSE**	- New structure for backend	14 days ago
📄 **README.md**	- Readme fixes	14 days ago
📄 **index.js**	- New structure for backend	14 days ago
📄 **package.json**	- New structure for backend	14 days ago

src contains the source code of the application

package.json contains the project configuration

Movie App Deployment to Heroku (via Continuous Integration)

TLMT
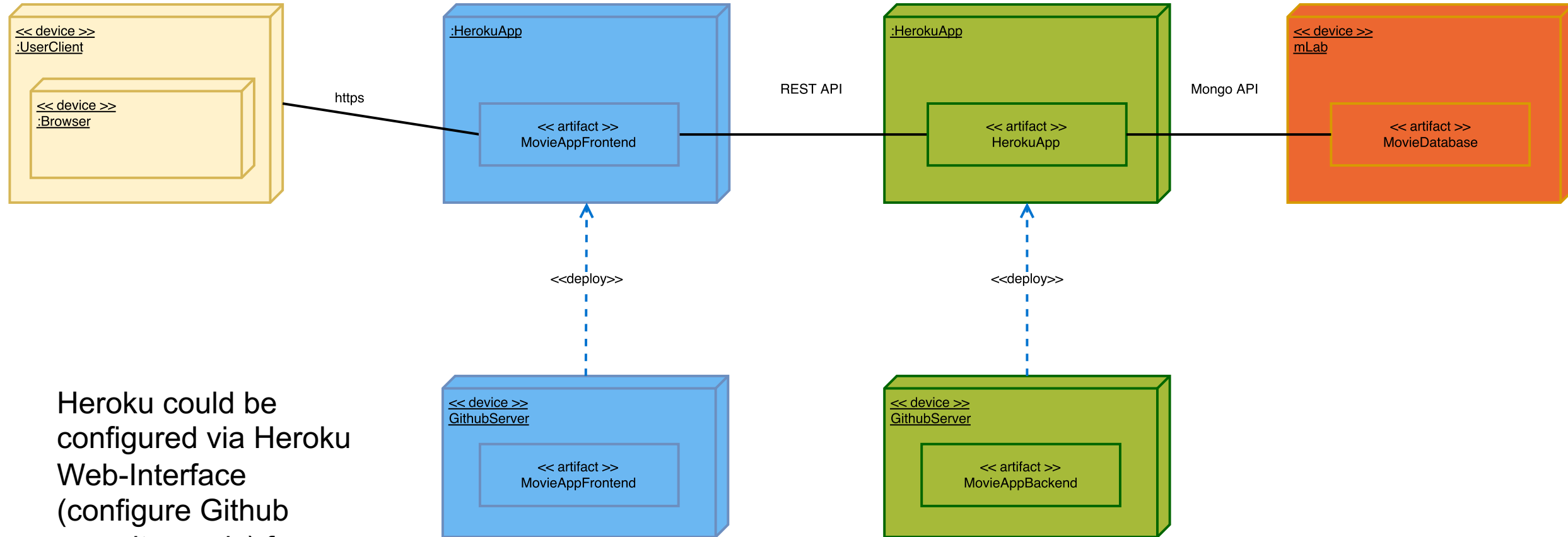
Heroku could be
configured via Heroku
Web-Interface
(configure Github
repository urls) for
Heroku-App).

<< device >>
:UserClient

<< device >>
:Browser

:HerokuApp

<< artifact >>
MovieAppFrontend

https

REST API

:HerokuApp

<< artifact >>
HerokuApp

Mongo API

<< device >>
mLab

<< artifact >>
MovieDatabase

<<deploy>>

<<deploy>>

<< device >>
GithubServer

<< artifact >>
MovieAppFrontend

<< device >>
GithubServer

<< artifact >>
MovieAppBackend

Movie App Deployment Diagram

Movie App Variants & Deployments

We provide the source code for the backend and the frontend application on Github.

The frontend application has two branches:

1. Master branch: Regular Movie App
2. Serverless branch: This version of the Movie App frontend has dummy data and can work without the backend application running

We provide a deployed Backend on Heroku: https://seba-movies-api.herokuapp.com/

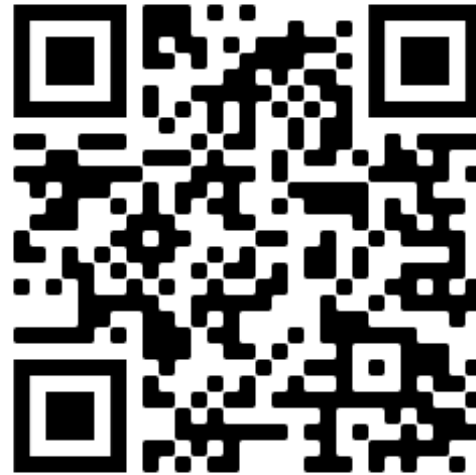You can also host your database on mLab: https://mlab.com/

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DEMO

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Do you have questions?

https://tweedback.de/pf19/

https://tum-conf.zoom.us/j/96371352799?pwd=dHBVZ0tDOUlJTUlmd3R1N3dWaTNZUT09