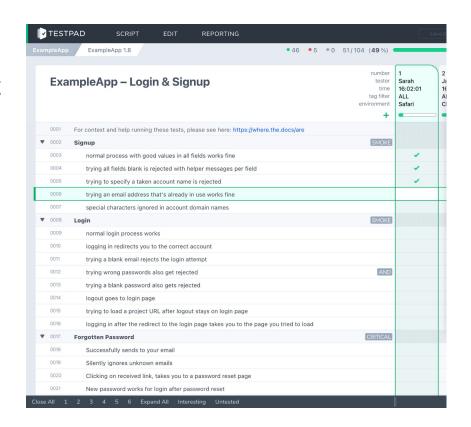
Emerald

Online Guideline Checking Tool

Information Architecture and Web Usability 2023/2024 30 Jan 2024

What is Guideline Checking?

- Manual usability inspection.
- Evaluator checks interface against list of guidelines or criteria.
- Employs dozens of guidelines.
- Answered with "Yes" or "No".
- Example guidelines:
 - "Entry via Primary Display."
 - "Feedback During Data Entry."



Guideline Checking Tool - General Functionality

- Used to maintain and plan manual testing.
- Gather information about findings.
- Streamlining of testing process.
- Collaborative tool.
- Quick access to data analysis.
- Managing all test related activities and documents.

Emerald - Main Features

- Login / Logout.
- Create users:
 - o Admins.
 - Users (Project Owner or Reviewer).
- Create Projects.
- Project Overview.
- Participate in project:
 - Reviewer checks if criteria are Passed or Failed.
- See assigned projects.

Netlify

- Cloud hosting service for web applications.
- Connects to GitHub repository:
 - Build and deploy on push.
- Offers serverless backend functions:
 - Stateless backend.
 - Used to connect to MongoDB.

MongoDB

- Document based database.
- Data is stored in collections of JSON objects:
 - Fields can vary from document to document.
 - Very flexible.
 - Easy to work with.
- Hosted database using MongoDB Atlas:
 - Cloud database service.

Backend

Netlify functions:

- Functions written in JavaScript within codebase.
- Netlify deploys them as full API endpoints.
- Functions called with fetch requests to the endpoints.

User authentication using Java Web Tokens:

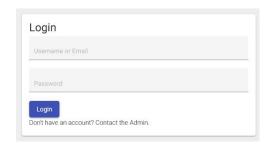
- Works with Netlify's serverless functions.
- Stored in cookie.
- Quick solution.
- Using sessions stored on server better in most cases.
- Cannot revoke token.

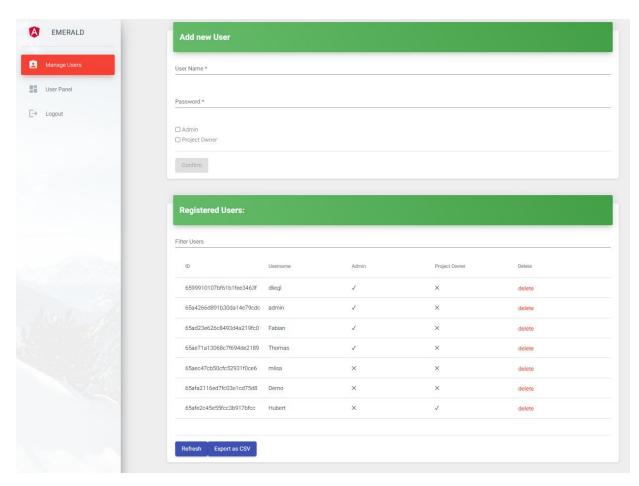
Frontend

- Angular Material:
 - Open source template with MIT license.
 - Login Screen.
 - Three panels:
 - Admin Panel.
 - Project Owner Panel.
 - Reviewer Panel.

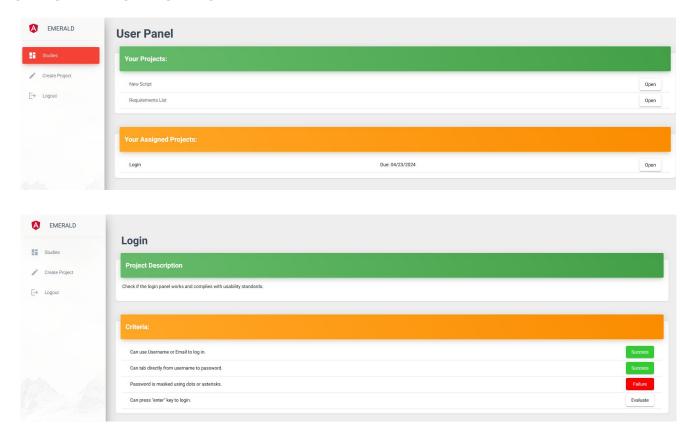
Emerald: https://emerald-23.netlify.app/

Login Screen & Admin Panel

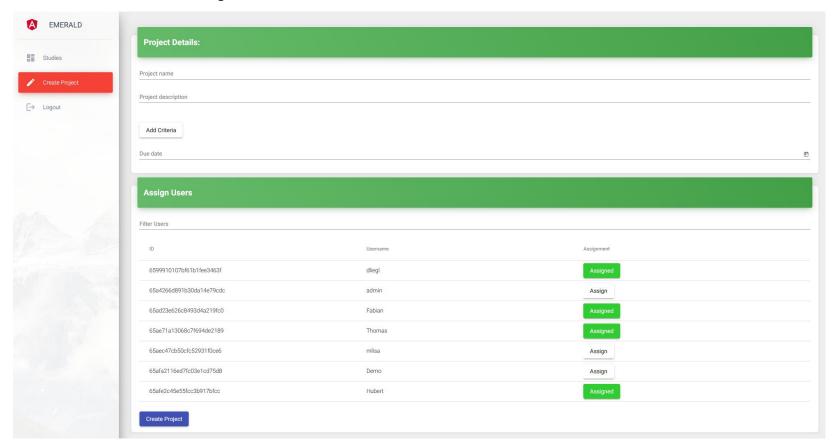




User Panel: Reviewer



User Panel: Project Owner



Limitations and Future Work

- Import projects.
- Full mobile support.
- Password changing.
- User editing.
- Clearer distinction between Project Owner and Reviewer.
- Improve user experience.
- Implement visualization tools.