Document Management System
Implementation Presentation

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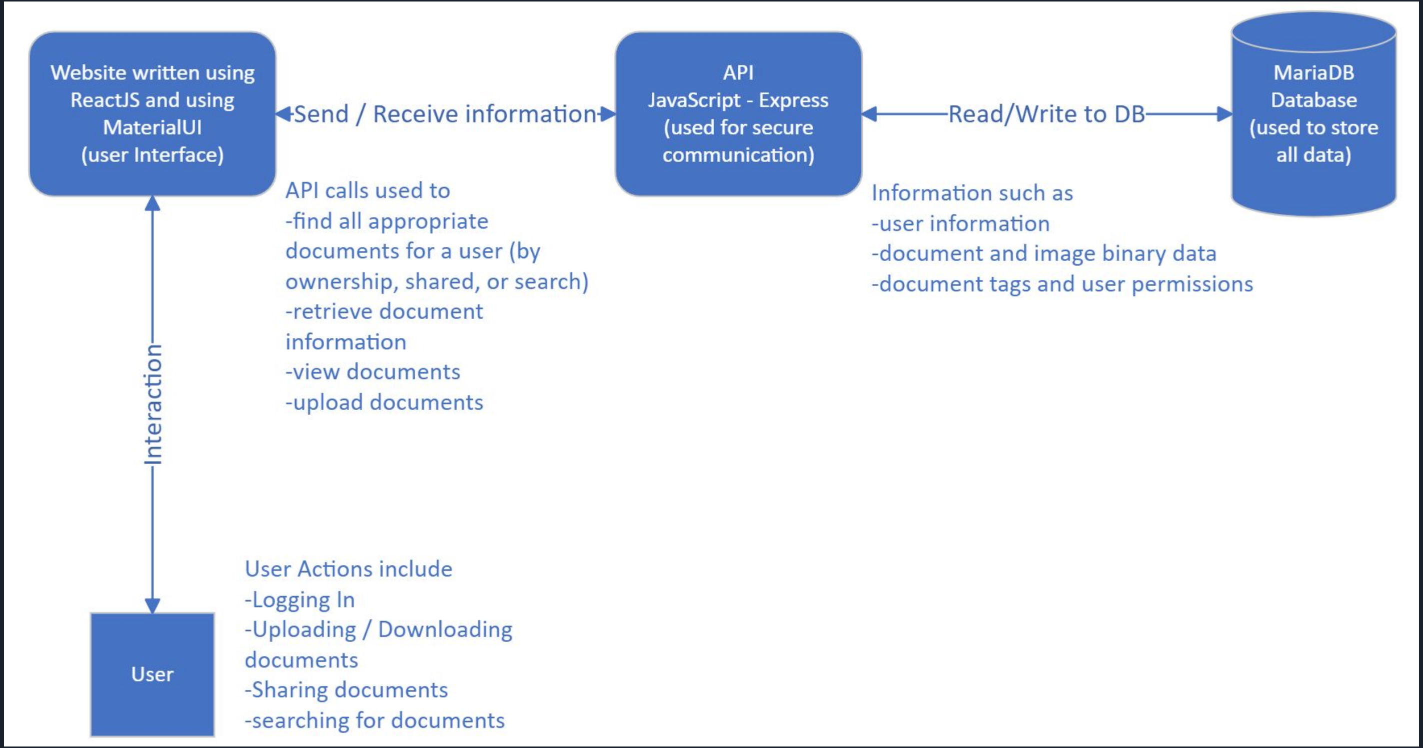
GitHub: github.com/vyltra/docmanagementsys

Vision and Purpose

The program provides an easy-to-use solution to manage and store PDF documents. Such documents are widely used for bank statements to appliance instructions and are often stored permanently as E-Mail attachments or in a Filesystem where they can be hard to retrieve.

The program offers various functionality to retrieve the PDF documents the user is looking for quickly and share them with others. The user can also view documents directly in the application without the need to download them; however, that option is also available.

Architecture diagram

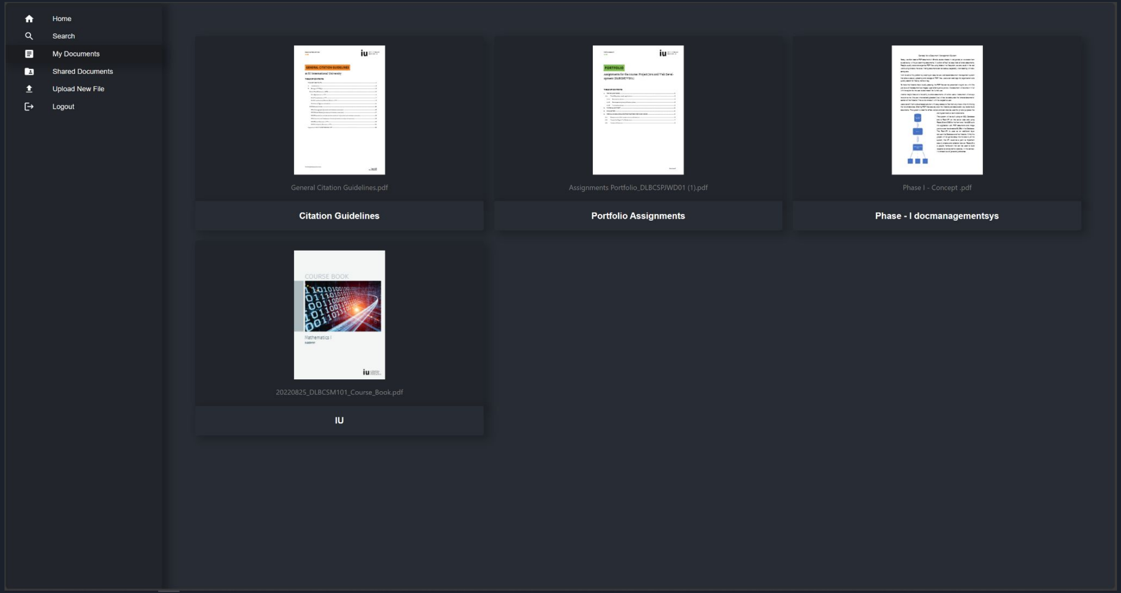

Website written using ReactJS and using MaterialUI (user Interface)
Send / Receive information
API JavaScript - Express (used for secure communication)
Read/Write to DB
MariaDB Database (used to store all data)
API calls used to
-find all appropriate documents for a user (by ownership, shared, or search)
-retrieve document information
-view documents
-upload documents
Information such as
-user information
-document and image binary data
-document tags and user permissions
Interaction
User
User Actions include
-Logging In
-Uploading / Downloading documents
-Sharing documents
-searching for documents

Technology Choices

This is a general overview of the core technologies used in this project. For a detailed list of dependencies, please refer to the package.json in the GitHub repository

Software	Version	Description
MariaDB	11.0	The Database stores all user information, document properties (sharing and tags), and documents with images as binary data
NodeJS	21.1.0	Is a JavaScript runtime environment
Express	4.18.2	Is a Framework used to build the API
ReactJS	18.2.0	Used as a Framework and library to build the Website and UI
Material UI (icons, lab, core)	5 (various)	This project relies on Material UI for design choices, but also responsive components like MUI Grid

Application Screenshots: My Documents


Home
Search
My Documents
Shared Documents
Upload New File
Logout
General Citation Guidelines.pdf
Citation Guidelines
Assignments Portfolio_DLBCSPJWD01 (1).pdf
Portfolio Assignments
Phase I - Concept .pdf
Phase - I docmanagementsys
20220825_DLBCSM101_Course_Book.pdf
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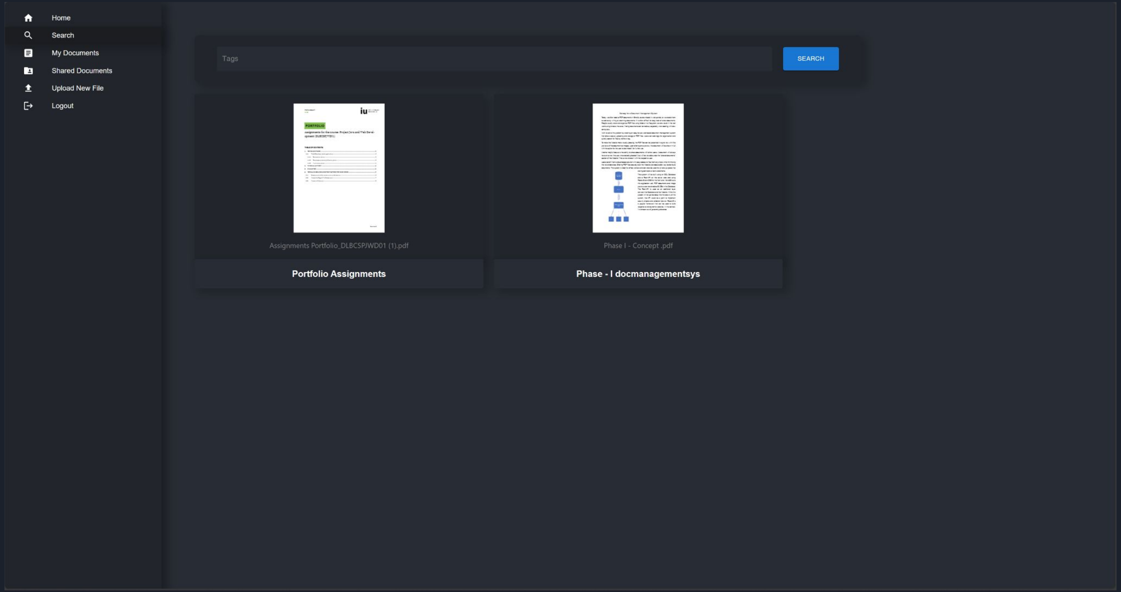
The core component of the Application is the My Documents screen. It shows all Documents that are owned (uploaded) by a User.

The preview images are rendered on the client machine upon upload and stored in the Database next to the document data. This was done in order to enable previews without sending an unnecessary amount of data to the client in this view. The images are low resolution as they only serve a cosmetic purpose. An image is only about 30Kb in size.

The Shared Documents screen looks the same but uses a different API call to show only documents that are shared with the user (not uploaded by them).

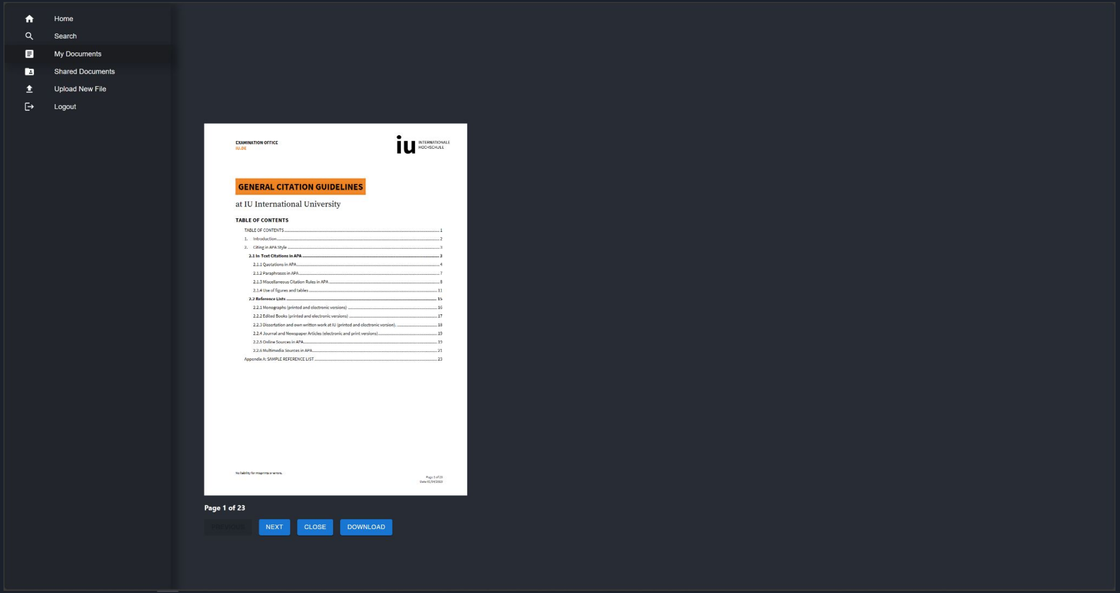
Application Screenshots: Search



The search screen looks the same as My Documents; in fact, it uses the same react component.

The difference is the search bar at the top, in which the user can enter tags that the documents must have. The search bar can be imagined as an “AND” function. Documents that are shown must contain all tags entered in the search.

Application Screenshots: PDF Viewer



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Date 01/04/2023

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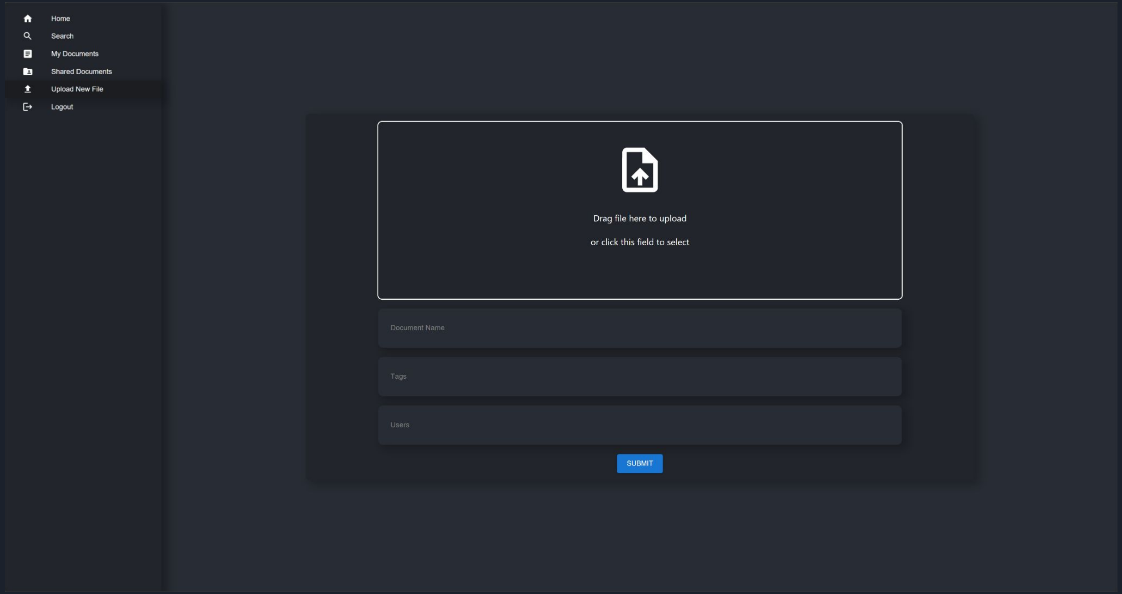
Upon clicking a document in one of the previous screens, the PDF viewer will open.

Here, the client receives the full document from the database via an API call, and the document is presented in full resolution.

The Buttons at the bottom are used to navigate the document and offer the ability to download the document to the user's local machine.

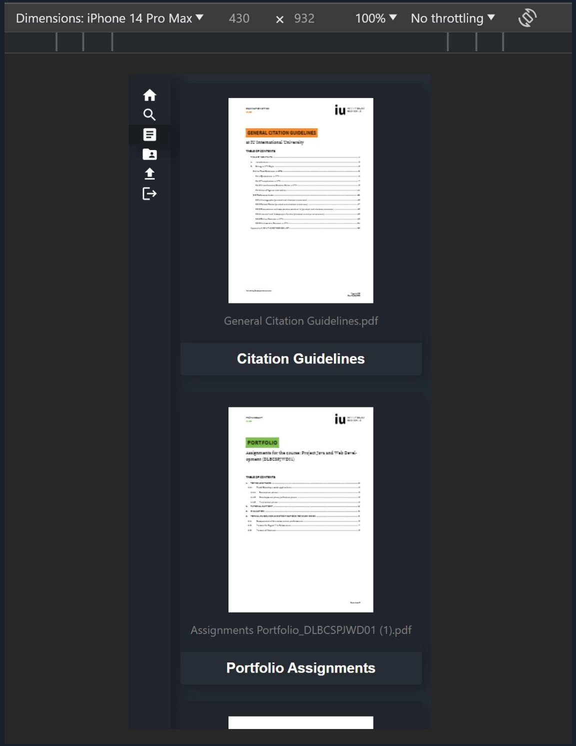
Application Screenshots: Upload



This is the Upload dialog where users can upload their PDF files to the application.

Users can define a custom document name (different from the file name), add tags to the document, and select users for whom the document should be accessible.

Application Screenshots: Responsiveness


Dimensions: iPhone 14 Pro Max
430 × 932
100%
No throttling
General Citation Guidelines.pdf
Citation Guidelines
Assignments Portfolio_DLBCSPJWD01 (1).pdf
Portfolio Assignments

The use of React and Material UI Grid makes the Website responsive without the need for much manual work. The use of relative units like viewport height, width, and percentages further improves responsiveness.

But because I created a lot of custom components, I decided to add a media query to make the Website look better on mobile devices.

Changes to the Proposal

The initial proposal for the system and the implementation have remained the same.

All features that were described are implemented and working. Of course, they can be built out in the future, and a production candidate of the software should receive some additional features. Still, for the purposes of this project, I believe the application is built to specification.

In order to avoid escalating the scope of this project and to manage the workload, security and validation functionality have been omitted. A production version of the application should feature input validation in the front end and API and encrypt passwords, document data, and images.

Screencast

In case there are Problems with this Video, here is a YouTube Link: https://youtu.be/Z8lAofREkMA