

A Discovery Portal for CS 4624 Projects

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Outline

- **Project Problem**
- **Changes in Design**
- **Features**
- **Deliverables**
- **Demo**
- **Issues and Solutions**
- **Future Works**
- **Acknowledgements**
- **References**

Problem Overview

- **Formatting**

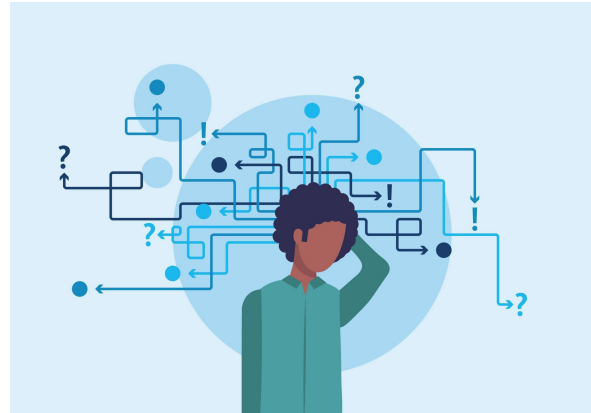
- Excessive/Unnecessary information
- No visible search bar

- **Functionality**

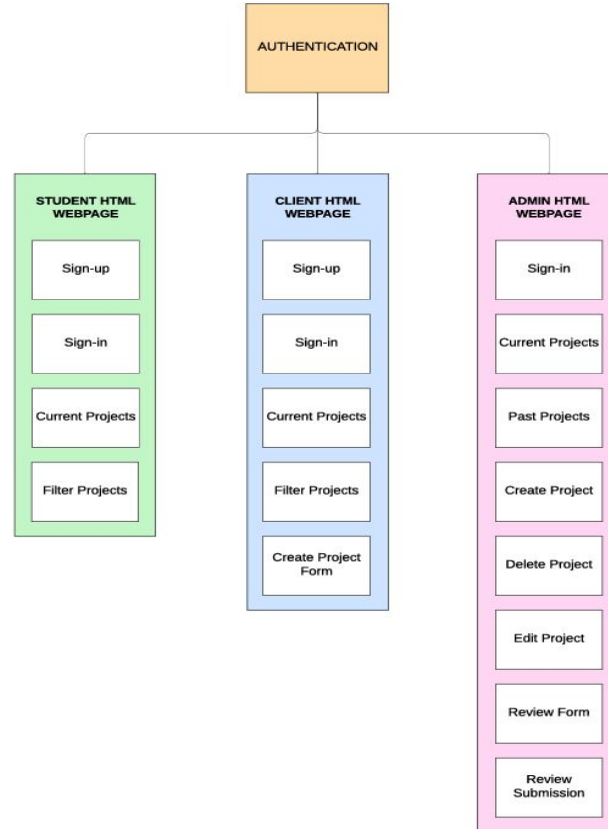
- Filtering is extremely strict and dysfunctional
- Overpopulated/Unused categories
- Missing functions and features

- **User Interface**

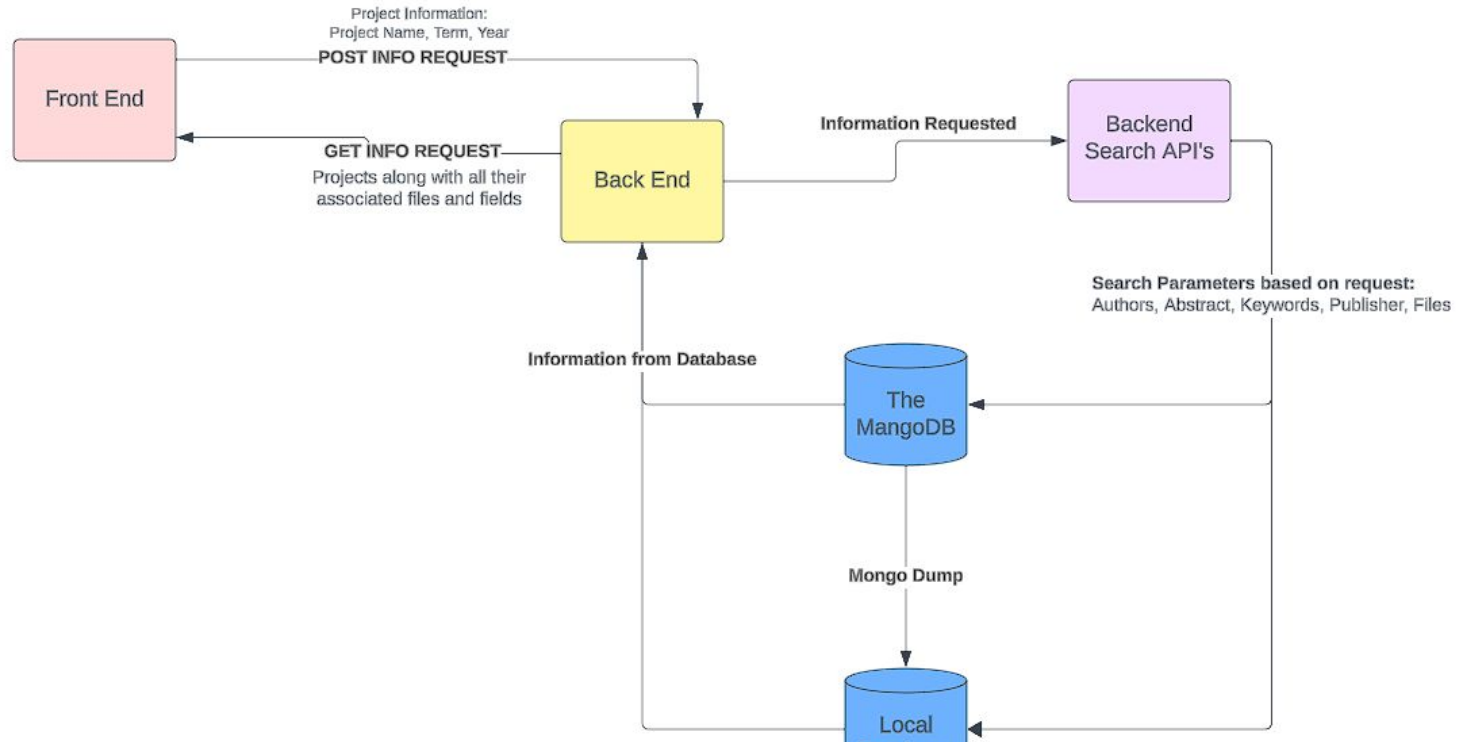
- Not so user friendly
- Limited features
- Unrestricted project view



Final Design (Front End)



Final Design (Back End)



Deliverables

Project Webpage Portal

- Frontend (HTML, CSS, React)
- Backend (Node.js, Axios)

Search Functionality API

- JavaScript Search APIs

Project File Database

- MongoDB & Local Database



Features Exclusive to Admin Role

- View projects from previous/current semesters
- Delete Projects
- Create new projects
- Create new users or clients
- Upload files to existing projects
- Sort projects A-Z, Z-A, by semester + year
- Search projects by name or by author

Features Exclusive to Client Role

- View projects they've created
- Delete projects they've created
- Create new projects
- Upload files to their existing projects

Features Exclusive to Student Role

- View projects from current semester
- Join a max of one project
- Leave project

Live Demo

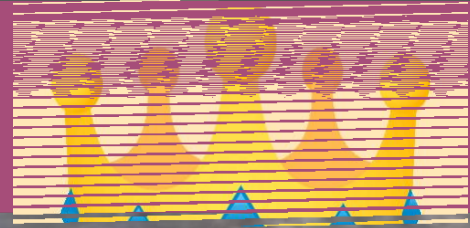
Past Issues and Solutions

- Project creation/form/join
 - Additional features
- Failed to run through rlogin
 - Run locally
- Accessing database separate from MongoDB Atlas
 - MongoDB dump to local
- Clarification of role permissions/access
 - Extensive communication
- Displaying and allowing file downloads
 - Mapping dictionary
- New projects requiring a differing schema
 - non-existent fields to 'null'
- Solr implementation requiring extensive time
 - Temporary API

Future Improvements

- Adding in Solr
- Dockerization of the Project
- Additional security measures
- Formatting options
- Allow for final submissions of current projects when completed (source code, report, presentation, etc.)

Acknowledgements



We would like to thank Dr. Farag and Vedant for working closely with us on this project that will be used by current and future students at Virginia Tech.



References

URLs to follow for additional information:

[CS4624: Multimedia, Hypertext, and Information Access \(vt.edu\)](#)

API's:

Search Functionality: https://solr.apache.org/guide/7_6/searching.html

Authentication: <https://www.freecodecamp.org/news/how-to-secure-your-mern-stack-application/>

Mongo Documentation:

Mongo Shell: <https://www.mongodb.com/docs/mongodb-shell/install/>

Local Install:

<https://www.mongodb.com/docs/manual/tutorial/install-mongodb-on-windows/#std-label-install-mdb-community-windows>

Thank you for your time.