

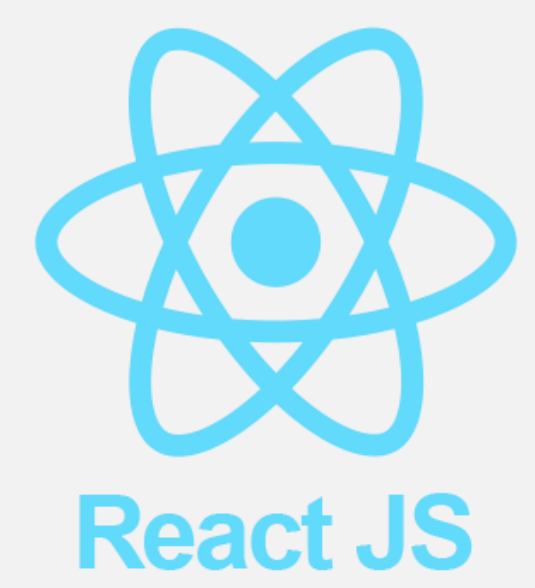


P2P Drive

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PROBLEM

To build an effective peer-to-peer file sharing system, like Google Drive, utilizing Inter Planetary File System (IPFS) technology so that integrity may be assured by using content addressing instead of location addressing.

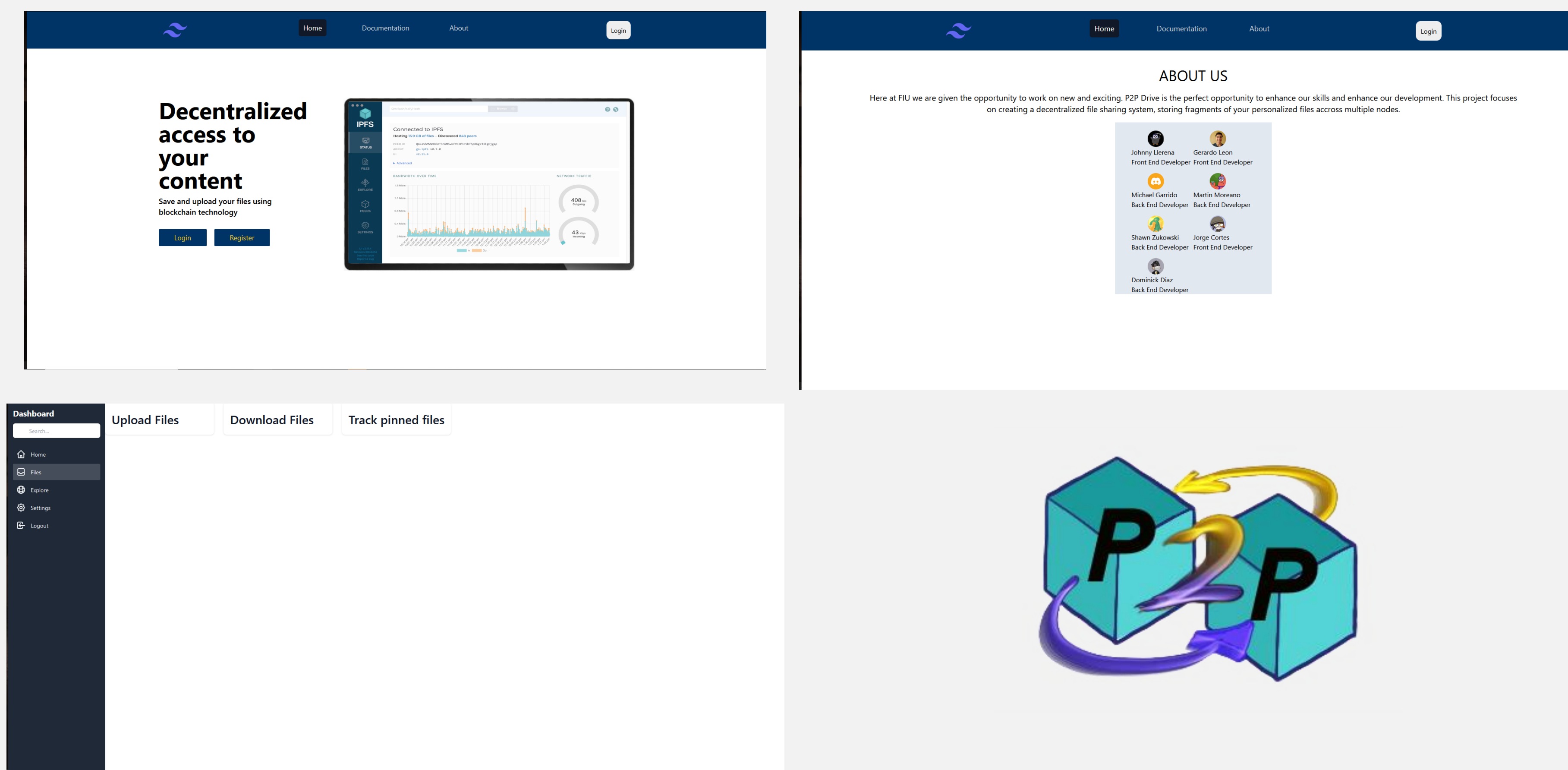
CURRENT SYSTEM

No current system is available to build upon as our team is responsible for creating the foundation of a fast, reliable, and secure peer-to-peer file drive. We create our own back-end and front-end using various existing API's offered by IPFS.

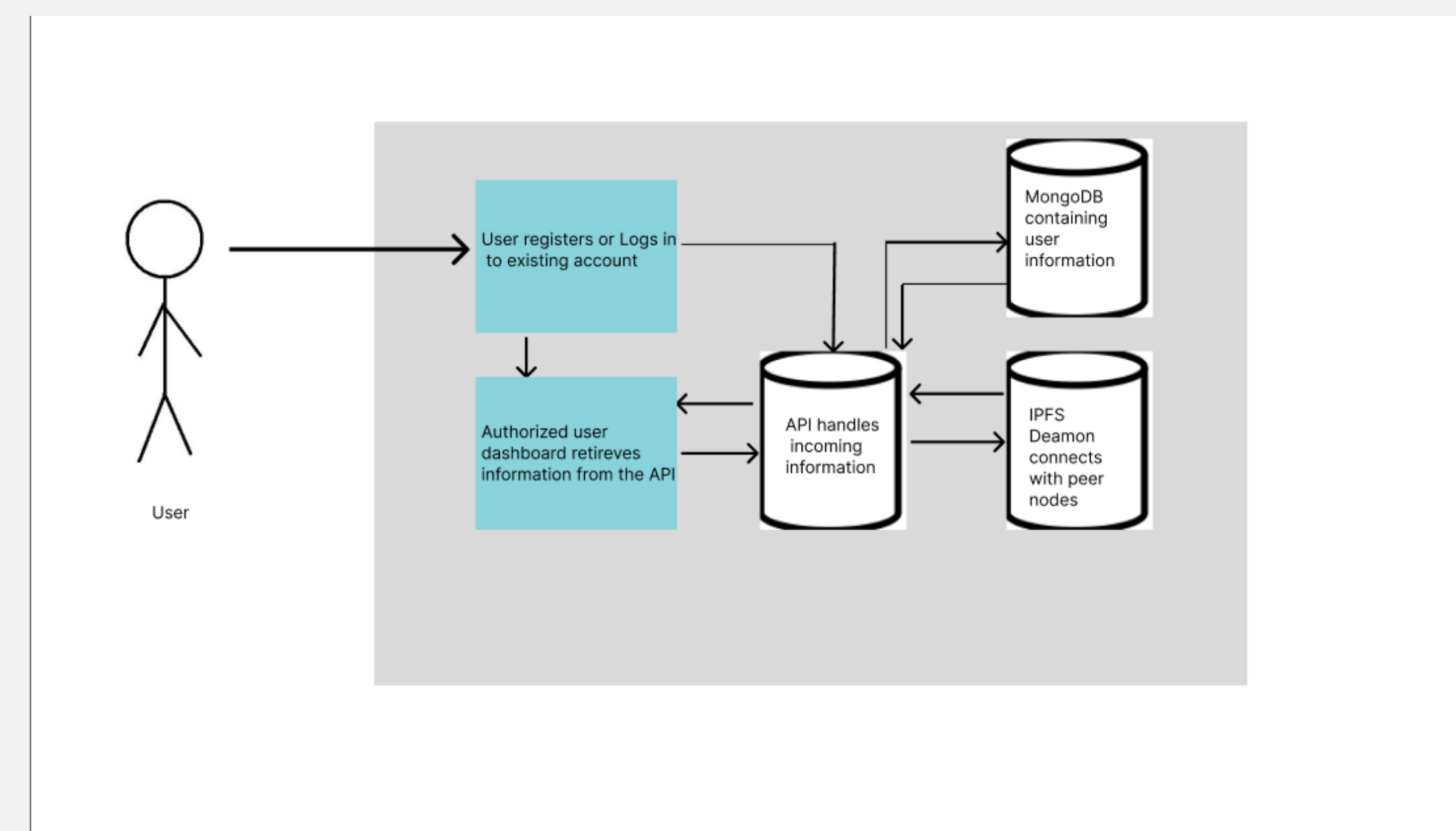
REQUIREMENTS

- Lay the foundation for a peer-to-peer file sharing system
- Implement some form of security
- Design a friendly and easily accessible UI and webpage
- Store user information in a database for login and signup credentials

SYSTEM DESIGN



OBJECT DESIGN



IMPLEMENTATION

- Securely encrypted user credentials and information
- Used MongoDB as our database for storing user data
- Connected different endpoints from back-end using GoLang and front-end using ReactJS
- Designed a webpage with our custom logo using ReactJS and Figma
- Used Swagger UI to document our API's
- File upload and download designed with Fiber framework

VERIFICATION

We used Postman to verify API's supplied to us by the IPFS API CLI section on their website, listed in our references

SUMMARY

- Built peer-to-peer IPFS drive from the ground up
- Added encryption security
- Designed functional webpage for user sign-up and login

REFERENCES

- <https://ipfs.io/>
- <https://docs.ipfs.tech/>
- <https://github.com/mmoreano/P2P-Drive/tree/main>
- <https://docs.ipfs.tech/reference/kubo/rpc/>
- <https://proto.school/tutorials>

ACKNOWLEDGEMENT

The material presented in this poster is based upon the work supported by Farsheed Atef. We/I thank Farsheed Atef and Dr. Masoud Sadjadi for his/her/their assistance and mentorship that I/we received throughout the senior design project.