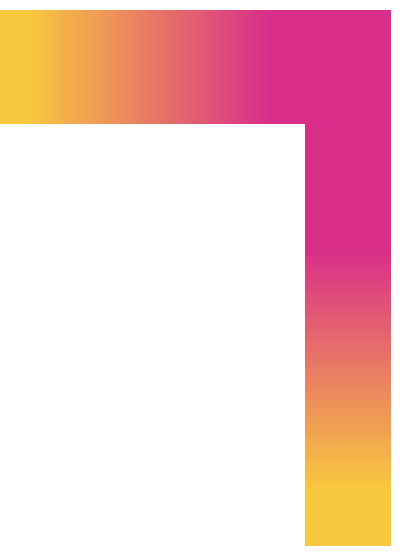




Knight foundation School of Computing and Information Sciences

Fall 2022 Senior Design Project



P2P DRIVE

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PROBLEM

We strive to build a reliable, available, fast, and secure peer-to-peer "drive", like Google Drive or Microsoft One Drive.

CURRENT SYSTEM

There are no current existing Drive systems which operate using content addressing localization

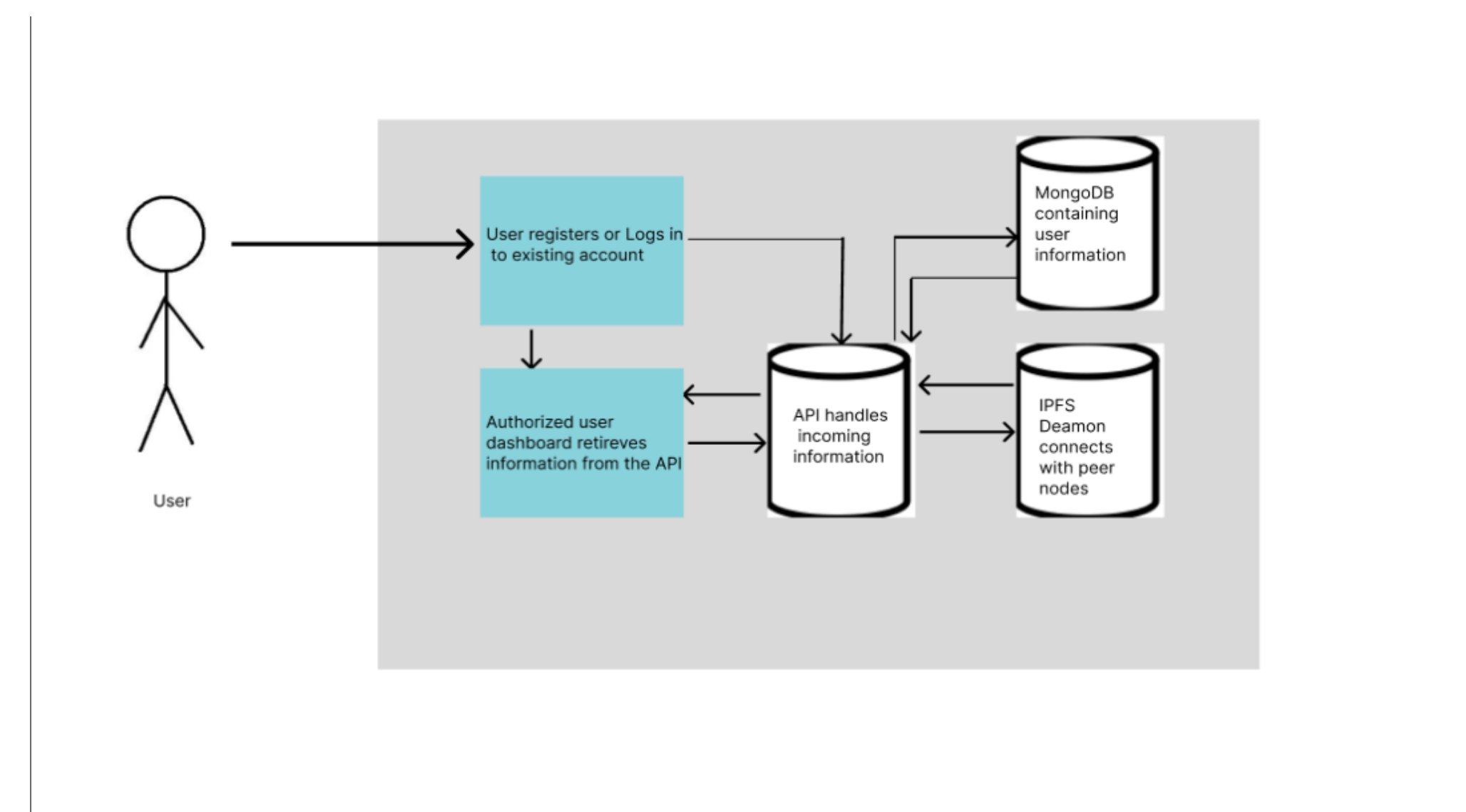
REQUIREMENTS

Developing a web application that securely stores a user's data by content addressing instead of location addressing in a decentralized process.

SYSTEM DESIGN

Content addressing is supported by IPFS, and the reliability and availability of data to be assured by the replicas offered at two levels or cluster and cloud by Ceph and IPFS, respectively.

OBJECT DESIGN



*5

IMPLEMENTATION

The Web App frontend is implemented using reactJS and Fiber for the backend. IPFS and Ceph are used for file storage.

VERIFICATION

Postman was used to create test points for verifying usability, and reliability.

SUMMARY

Drive storage system that securely stores data with content addressing, creating a decentralized storage system.

REFERENCES

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6. <https://github.com/fazo96/ipfs-drive>
7. <https://share.ipfs.io/#/>
8. <https://docs.ipfs.tech/how-to/websites-on-ipfs/single-page-website/#pinning-files>
9. <https://ipfs.io/ipfs/QmSLoHumxHbaFLSk5tZCvJhhEwt5iNy7P5aPdmWWCjDdKx/#/>

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