

PROJECT REPORT
ON
ONLINE VIDEO/AUDIO STREAMING SERVICE
BASED ON DECENTRALIZED ARCHITECTURE

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In partial fulfillment for the award of the degree

Of

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Of

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IN

INFORMATION TECHNOLOGY



MIT COLLEGE OF ENGINEERING, PUNE

2018-19

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Certificate

This is to certify that,

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Date: - 1ST June 2019

Place: - Pune

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ABSTRACT

Over the last decade internet-based services have trended towards centralization. Today, a handful of companies control the platforms we use to search for information, store our personal data, manage our online identities, and communicate publicly and privately. Advancement in web technology has led to the concept of decentralized network, thus allowing the rise of peer to peer communication. The peer to peer communication circumvents this problem by relaying traffic through peers instead of a dedicated server. Our platform is built on decentralized architecture which overcomes the limitations posed by the conventional client server architecture. Since decentralized and distributed web is not controlled by any third party, it is extremely beneficial in solving the above mentioned problems. Furthermore, this will enable users from remote areas with low bandwidth internet to access the multimedia published on our platform in real time, thereby, enabling them to access multimedia content from all over the world. This project focuses on the development of a progressive web app to accomplish our goal of video and audio streaming on decentralized platform.

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LIST OF SYMBOLS, ABBREVIATION AND NOMENCLATURE

- 1. DDoS** : Distributed Denial of Service
- 2. DAG** : Directed Acyclic Graph
- 3. dApp** : Decentralized App
- 4. P2P** : Peer to peer
- 5. DHT** : Distributed Hash Tables
- 6. IP** : Internet Protocol
- 7. IPFS** : InterPlanetary File System
- 8. SFS** : Self-Certifying File System
- 9. Pow** : Proof of Work
- 10. DPoS** : Delegated Proof of Stake
- 11. PoA** : Proof of Activity
- 12. PoS** : Proof of Stake
- 13. LLL** : Lisp- like Language
- 14. HTTP** : Hyper Text Transfer Protocol
- 15. CSS** : Cascading Style Sheets
- 16. iOS** : Apple Operating System
- 17. QR** : Quick Response
- 18. JSX** : JavaScript Extended
- 19. URL** : Uniform Resource Locator
- 20. DFD** : Data Flow Diagram
- 21. UML** : Unified Modeling Language
- 22. PERT** : Program Evaluation Review Technique