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The Essentials 3.0 dApps for Developers and Entrepreneurs

Developers

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Problem Statement : Blockchain technology has emerged as a revolutionary tool for decentralizing various industries, including finance, supply chain management, and voting systems. However, there is still a need for innovation in the software development industry to adopt decentralized technologies to solve problems of collaboration and funding.

The problem statement for this thesis project is to design and develop a blockchain-based decentralized GIT CLI tool and a decentralized crowdfunding platform. The primary objective of this project is to provide a secure and decentralized way for developers to collaborate and manage their software projects while also enabling entrepreneurs to raise funds for their projects in a decentralized manner.

The current centralized model of software development and crowdfunding platforms suffers from several issues, including the risk of data breaches, censorship, and the lack of transparency in fundraising. Decentralized technologies, such as blockchain, can mitigate these problems by providing a secure, transparent, and censorship-resistant platform for software development and crowdfunding.

This thesis project will aim to solve these problems by developing a decentralized GIT CLI tool that utilizes blockchain technology to enable secure collaboration, version control, and distribution of software code. The decentralized crowdfunding platform will utilize smart contracts to enable transparent and secure fundraising without the need for intermediaries.

The success of this thesis project will provide a significant contribution to the software development industry by facilitating secure collaboration and transparent fundraising, thereby promoting innovation and creativity.

Work done till 7th Semester:

Up until the 7th Semester, the project stood up with a front UI that could log the transactions in any block and then it can also be used to send and receive currency from any part of the word.

Technologies we have used :

In this project, we developed a decentralized application (DAPP) using Next.js for the front-end development. The DAPP is designed for public use and allows users to interact with it. To facilitate virtual wallet functionality for cryptocurrency minting and exchange, we incorporated MetaMask wallet. Additionally, we utilized GROQ standards to fetch and store data securely and efficiently using Sanity.io CMS.

- To enable secure transactions for cryptocurrency exchange, we implemented the use of Web 3 SDK. This allowed us to create a secure transaction forum where users can conduct transactions with confidence.
- Next.js is a popular JavaScript framework used for building front-end web applications. It offers several features that make it ideal for developing DAPPs, including server-side rendering, automatic code splitting, and simplified routing. By using Next.js, we were able to build a scalable, high-performance application that provides a seamless user experience.
- MetaMask wallet is a virtual wallet that allows users to store, manage, and exchange cryptocurrencies. By incorporating MetaMask into our DAPP, we were able to provide users with a secure and convenient way to mint and exchange cryptocurrencies. This also allowed us to implement features such as secure authentication and access control.
- GROQ is a query language used for fetching and storing data. It offers a simple and intuitive syntax, making it easy to write and understand queries. By utilizing GROQ standards, we were able to fetch and store data efficiently, which is essential for a high-performance application.
- Sanity.io CMS is a content management system that offers a flexible and scalable solution for storing and managing data. By using Sanity.io, we were able to store data securely and efficiently. It also offers several features that make it easy to manage content, such as versioning and collaborative editing.
- Web 3 SDK is a software development kit that provides a set of tools and libraries for building decentralized applications. By implementing the use of Web 3 SDK, we were able to create a secure transaction forum for cryptocurrency exchange. This allowed users to conduct transactions with confidence, knowing that their transactions were secure and tamper-proof.

In conclusion, this project involved developing a DAPP using Next.js for the front-end development. We incorporated MetaMask wallet to provide virtual wallet functionality for cryptocurrency minting and exchange. We used GROQ standards to fetch and store data securely and efficiently using Sanity.io CMS. The use of Web 3 SDK allowed us to create a secure transaction forum for cryptocurrency exchange. Together, these technologies allowed us to build a scalable, high-performance, and secure application that provides a seamless user experience.

Work done in 8th Semester:

Our team has taken up the challenge of solving the problems faced by the centralized software development and crowdfunding platforms by revamping our blockchain platform. Our focus is on providing simple and accessible user experiences while utilizing the potential of blockchain technology to promote innovation, security, and transparency.

With our platform, we have integrated crowdfunding, which will allow us to tap into a wider network of transactions and increase platform usage. Additionally, we have developed a blockchain-based decentralized GIT CLI tool that provides an easy-to-use interface for developers to collaborate and manage their software projects securely. The CLI platform authenticates files by creating a hash of each file and storing it on the blockchain, thus detecting any changes made to the file, ensuring its integrity.

Furthermore, we have taken a step further to create unique NFTs that can be minted from any third-party platform, enabling the creation of much more unique and powerful NFTs that can be used to build a powerful NFT marketplace. This feature is designed to enhance transparency and facilitate secure fundraising without the need for intermediaries, thus creating a decentralized crowdfunding platform.

Our revamped blockchain platform is a significant contribution to the software development and crowdfunding industry, showcasing the potential of blockchain technology to revolutionize daily transactions and digital record-keeping. We are proud to be at the forefront of this technological revolution, providing simple, secure, and innovative solutions for our users.

Final Deliverables to be Submitted:

- ❖ Project report
- ❖ Ppt
- ❖ Poster
- ❖ Paper
- ❖ Output / Website / CLI Tool
