SYNOPSIS

Report on

CrowdFunding

by

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Session:2023-2024 (III Semester)

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GHAZIABAD-201206
(2023-2025)

ABSTRACT

Crowdfunding has emerged as a revolutionary method for raising capital, allowing individuals and startups to gain financial support from a global audience. This project proposes the development of a decentralized crowdfunding platform utilizing Web3 and blockchain technology, enabling individuals to share their innovative ideas while attracting investors who can support these projects using cryptocurrency. The platform will be built with Solidity, a smart contract programming language, which ensures a secure, transparent, and automated environment for handling funds and agreements between project creators and investors.

The decentralized nature of the platform leverages the power of blockchain technology to eliminate intermediaries, thus reducing costs and increasing the trust factor. Every transaction will be recorded on the blockchain, providing real-time transparency and immutability, which is essential for maintaining investor confidence. The use of smart contracts will further automate the entire process—from initiating a project to collecting investments and distributing returns—based on predefined conditions agreed upon by both parties. This automation not only enhances security but also removes the potential for fraud or disputes.

The platform will primarily operate on a Web3 interface, providing a seamless and user-friendly experience for both project creators and investors. Users can connect their digital wallets to the platform to contribute cryptocurrencies such as Ethereum or other supported tokens. By integrating blockchain and Web3 technologies, the platform fosters a trustless environment where participants can engage without needing to rely on centralized authorities or third-party services.

This solution addresses the inefficiencies of traditional crowdfunding models by offering a decentralized, secure, and accessible platform for global participation. Through this innovation, we aim to empower individuals with promising ideas and investors seeking cutting-edge opportunities, thereby fostering an ecosystem of creativity and financial growth.

**** to be done(Keywords: 3-5 Keywords)**

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CHAPTER 1: INTRODUCTION

The rise of blockchain technology and decentralized finance (DeFi) has opened new avenues for industries across the globe, including the crowdfunding space. This project presents a decentralized crowdfunding platform designed to connect idea creators with potential investors through the use of cryptocurrency, blockchain, and Web3 technologies. Unlike traditional crowdfunding platforms, which rely heavily on centralized entities and involve high transaction fees and processing delays, this platform harnesses the power of decentralization to provide a more secure, transparent, and cost-effective solution for both creators and investors.

The platform will be built using JavaScript, React for the frontend, and Web3.js to interact with the blockchain, while Solidity will be used to write smart contracts on the Ethereum network. By utilizing blockchain technology, the platform ensures that every transaction is immutably recorded, and the decentralized nature of Web3 eliminates the need for intermediaries, allowing creators and investors to engage directly. This setup also guarantees transparency, as all investments and funding actions can be monitored on the blockchain.

For creators, the platform provides a global stage to showcase their ideas, whether it be for innovative products, community initiatives, or creative projects. They can raise funds through cryptocurrency, offering a more efficient and borderless way to reach backers. Investors, on the other hand, can easily discover promising projects and support them with their digital assets. The integration of smart contracts ensures that funds are only released when certain conditions are met, protecting both parties and building trust within the ecosystem.

By utilizing blockchain and Web3, this project offers a decentralized alternative to traditional crowdfunding platforms, with a focus on user empowerment, security, and transparency. The platform aims to reshape the crowdfunding model, providing a secure and innovative way to connect creators and investors in the evolving landscape of decentralized finance.

CHAPTER 2: LITERATURE REVIEW

Table: 2.1 Literature review

S.No.	Year	Name	Contribution
1	2014	Paul Belleflamme [2]	The paper explores preferences between pre-ordering and profit-sharing crowdfunding, highlighting implications for early-stage managerial decisions and community building.
2	2021	Alexa Böckel [2]	The article reviews crowdfunding and sustainability research, identifies gaps, and recommends focusing on environmental and post-funding impacts for sustainable development.
3	2017	Douglas J. Cumming[2]	The paper reveals that cleantech crowdfunding is influenced by cultural and economic factors, with higher success tied to campaign characteristics like video pitches.
4	2016	Benjamin Gaddy [3]	The paper assesses the high-risk, low-return profile of cleantech VC investments and advocates for broader support and policy measures to foster innovation.
5	2021	Maria Manganiello1 [1]	The paper analyzes the impact of COVID-19 on green equity crowdfunding success, highlighting sustainability's growing investor appeal.

CHAPTER 3: PROJECT OBJECTIVES

3.1 FUNDRAISING

The primary objective of a crowdfunding platform is to facilitate fundraising for Entrepreneurs, startups, artists, and individuals can create campaigns to raise funds for their projects, causes, or ventures.

By connecting creators with a large pool of potential backers, crowdfunding platforms enable them to gather financial support.

3.2 EXPANDING REACH

It allows creators to reach a global audience, going beyond their immediate network of friends, family, and local investors.

The objective is to tap into a broader community of supporters who resonate with the project's goals.

3.3 EMPOWERING SMALL CONTRIBUTORS

Instead of relying solely on large investors or venture capitalists, creators can receive contributions from a large number of small backers.

Even modest donations add up and collectively make a significant impact.

3.4 DECENTRALIZATION AND TRANSPARENCY

Blockchain ensures transparency by recording all transactions on an immutable ledger.

The project aims to create a transparent ecosystem where backers can track how their contributions are used.

3.5 VALIDATION

Creators can gauge interest and demand for their product, service, or project before fully committing resources. A successful campaign validates the concept and provides confidence to move forward.

3.6 ENABLING EARLY-STAGE FUNDING

For startups and innovative ventures, early-stage funding is critical. Crowdfunding provides an alternative to traditional bank loans or venture capital. It allows creators to secure initial capital without giving up equity.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 PROBLEM STATEMENT

The goal of this project is to create a decentralized crowdfunding platform using modern web technologies on the frontend and blockchain technologies on the backend. The platform allows users to create campaigns, contribute funds securely, and withdraw funds if a campaign is successful. The use of blockchain ensures transparency and trust.

4.2 FRONTEND DEVELOPMENT

The frontend is built using **React**, a JavaScript library for building user interfaces. **Vite** is chosen for its fast bundling and hot reloading capabilities. Key technologies and tools used are:

- **React**: Provides component-based architecture, enabling the efficient development of reusable UI components.
- **Vite**: Offers fast build times and optimized development experience for the React framework.
- **JavaScript (JS)**: Handles the interactive elements of the platform, such as user inputs, event handling, and integration with the blockchain.
- **HTML & CSS**: HTML structures the application while CSS is used for styling, ensuring a responsive, user-friendly interface.

The frontend interacts with the backend via smart contracts, allowing users to create, view, and contribute to campaigns in a secure and decentralized manner.

4.3 BACKEND DEVELOPMENT (BLOCKCHAIN)

The backend logic is implemented using **Solidity**, the programming language for writing smart contracts on the Ethereum blockchain. The decentralized nature of blockchain ensures:

- **Security**: The use of Ethereum blockchain guarantees that funds are secure and that contributors have full transparency over fund allocation.

- **Smart Contracts**: These contracts manage the entire lifecycle of crowdfunding campaigns, from creation to fund allocation and withdrawal, based on predefined conditions.

The smart contract handles:

- Campaign creation and validation.
- Receiving contributions from users.
- Ensuring withdrawal conditions are met before releasing funds to the campaign creator.

4.4 INTEGRATION

The frontend and backend are integrated through **web3.js** or **ethers.js**, libraries that allow React to communicate with the Ethereum blockchain. Users interact with the frontend, which in turn sends requests to the smart contracts deployed on the blockchain. This interaction ensures that all transactions are recorded and validated on the blockchain, providing transparency and immutability.

CHAPTER 5: PROJECT OUTCOME

5.1 ENHANCED TRANSPARENCY AND TRUST

- By leveraging blockchain, your crowdfunding platform ensures transparency and immutability.
- Backers can verify transactions, track fund usage, and gain confidence in the process.
- The outcome is increased trust between creators and backers.

5.2 DIRECT PEER-TO-PEER TRANSACTIONS

- Web3 allows direct interaction between backers and campaign creators.
- Backers can contribute directly to projects without intermediaries.
- The outcome is financial empowerment and a more efficient funding process.

5.3 GLOBAL PARTICIPATION AND INCLUSION

- Blockchain transcends borders, enabling global participation.
- Backers from different countries can support projects they believe in.
- The outcome is a diverse and inclusive crowdfunding ecosystem.

5.4 SMART CONTRACT AUTOMATION

- Smart contracts automate campaign processes (e.g., fund release, goal tracking).
- Creators can focus on their projects while the platform handles logistics.
- The outcome is streamlined operations and reduced administrative overhead.

5.5 EDUCATIONAL IMPACT

- The project can educate users about blockchain, cryptocurrencies, and decentralized finance (DeFi).
- Learning becomes an integral part of the crowdfunding experience.

5.6 COMMUNITY BUILDING

- Successful campaigns foster communities around shared interests.

- Backers become advocates, spreading the word about projects.
- The outcome is a supportive network that extends beyond funding.

5.7 SCALABILITY AND FUTURE EXPANSION

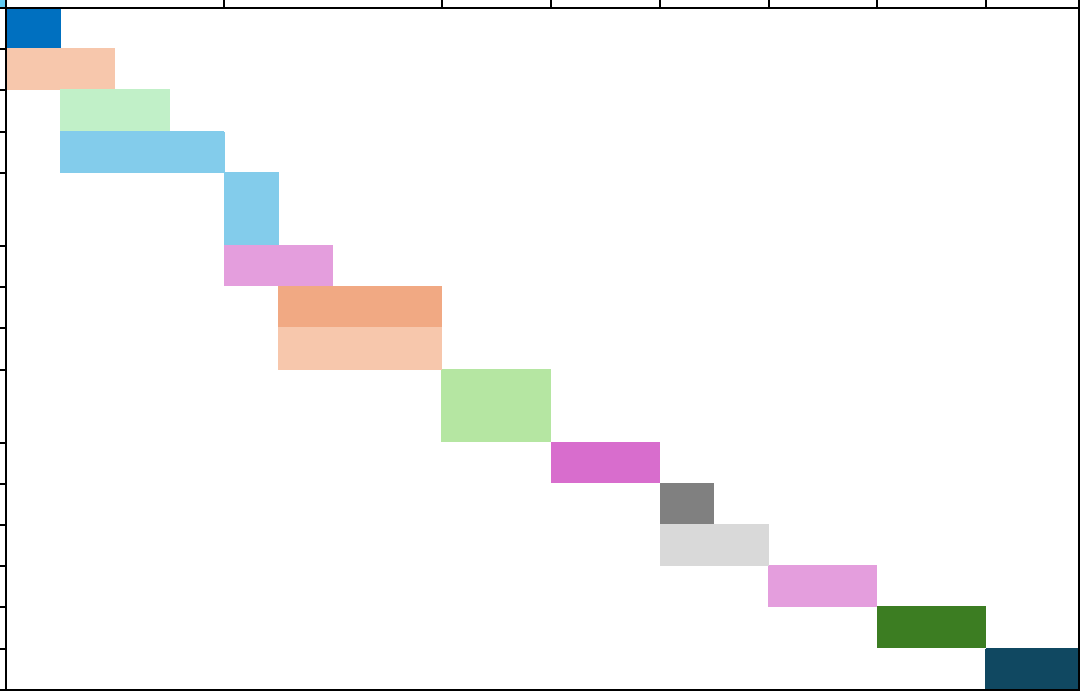
- The objective is to build a robust platform that can handle a growing number of campaigns.
- Future enhancements might include NFT-based rewards or decentralized governance.

CHAPTER 6: PROPOSED TIME DURATION

Table: 6.1 Gantt Chart

TASK	START DATE	END DATE	DURATION
Project Title	9-Sep-24	9-Sep-24	1
Project Planning	9-Sep-24	10-Sep-24	2
Resources & info Collection	10-Sep-24	11-Sep-24	2
Synopsis & PPT work	10-Sep-24	16-Sep-24	7
Synopsis Submission & Presentation 1	17-Sep-24	17-Sep-24	1
MERN Stack Setup	17-Sep-24	18-Sep-24	2
Smart Contract Development	18-Sep-24	28-Sep-24	11
Blockchain Integration	18-Sep-24	28-Sep-24	11
Frontend and Backend Development	28-Sep-24	10-Oct-24	13
Report and Presentaion Work	10-Oct-24	15-Oct-24	6
Project and Presentation 2	15-Oct-24	15-Oct-24	1
Testing and Deployement	15-Oct-24	20-Oct-24	6
Completing Final Report	20-Oct-24	30-Oct-24	10
Research Paper	30-Oct-24	5-Nov-24	7
Internal Presentation	10-Nov-24	10-Nov-24	1

TASK	DURATION							
	1st Week	2nd week	3rd week	4th week	5th week	6th week	7th week	8th week
Project Title								
Project Planning								
Resources & info Collection								
Synopsis & PPT work								
Synopsis Submission & Presentation 1								
MERN Stack Setup								
Smart Contract Development								
Blockchain Integration								
Frontend and Backend Development								
Report and Presentaion Work								
Project and Presentation 2								
Testing and Deployement								
Completing Final Report								
Research Paper								
Internal Presentation								



CHAPTER 7: REFERENCES/ BIBLIOGRAPHY

1. Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. Journal of Business Venturing, 29(5), 585–609. https://doi.org/10.1016/j.jbusvent.2013.07.003

2. Böckel, A., Hörisch, J., & Tenner, I. (2021). A systematic literature review of crowdfunding and sustainability: Highlighting what really matters. Management Review Quarterly, 71(2), 433–453. https://doi.org/10.1007/s11301-020-00189-3

3. Cumming, D. J., Leboeuf, G., & Schwienbacher, A. (2017), Crowdfunding Cleantech. Energy Economics, (accepted manuscript). https://ssrn.com/abstract=2985703

4. Gaddy, B. E., Sivaram, V., Jones, T. B., & Wayman, L. (2016). Venture Capital and Cleantech: The Wrong Model for Energy Innovation. SSRN Electronic Journal. Published. https://doi.org/10.2139/ssrn.2788919

5. Manganiello, M., & Dragulanescu, I.-V. (2021). Sustainable Equity Crowdfunding Projects: Are They A Driving Force to Revitalise Italy After Global Socio-Economic Consequences of The COVID-19? SHS Web of Conferences, 92(01030). https://www.shs-conferences.org/articles/shsconf/pdf/2021/03/shsconf_glob20_01030.pdf