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Decentralized Crowdfunding Platform using Blockchain: A Review

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Abstract: *In developing countries, many people face difficulties in accessing financial support for higher education, medical treatment, or social causes due to a lack of transparency and trust in traditional fundraising systems. To address this issue, this project proposes a Blockchain-Based Crowdsourcing Platform that ensures transparency, security, and trust between donors and recipients. The system will be developed using Java technology with a custom blockchain framework that records every transaction securely and immutably. Each donation or fund request is stored as a block, which cannot be tampered with or deleted. The blockchain ensures that funds are used for their intended purpose, increasing donor confidence. This platform enables individuals, NGOs, and communities to raise funds efficiently while donors can track where their contributions go. It helps build a transparent, decentralized, and corruption-free crowdfunding environment to support education, healthcare, and emergency needs. The proposed solution not only simplifies the process of raising funds but also increases accountability and efficiency. By using blockchain technology, the platform ensures that funds are used only for their intended purposes, providing a reliable and fair environment for both donors and recipients in developing nations.*

Keywords*:* Custom Blockchain, Crowdsourcing, Fundraising, Transparency, Smart Contracts, Java Web Application, Secure Transactions, etc.

I. INTRODUCTION

Crowdfunding has become a powerful way to raise money for personal and social causes, but traditional platforms often face problems such as lack of transparency, high service fees, and misuse of funds. Many donors hesitate to contribute because they cannot verify whether the money is actually reaching the right person. In developing countries, these issues are even more critical due to low trust and limited financial infrastructure.

Blockchain technology offers a solution by providing a decentralized, tamper-proof ledger that records every transaction transparently. Each donation can be verified and tracked, ensuring that the collected funds are used only for genuine purposes. Donors, organizations, and beneficiaries interact through a transparent system, removing the need for intermediaries.

This project aims to design and develop a secure blockchain-based crowdfunding system using Java, which helps users raise funds for education, medical emergencies, and social needs. The integration of blockchain ensures trust, data integrity, and accountability, making it ideal for use in developing countries.

II. RELATED WORK

Several blockchain-based crowdfunding models have been proposed in recent years. Existing systems like Ethereum-based fundraising and smart-contract platforms have shown potential in improving transparency and reducing fraud. However, many of these platforms are complex, require cryptocurrency knowledge, and are not user-friendly for non-technical users.

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Researchers have also developed decentralized donation platforms, but most of them lack an integrated mechanism to verify beneficiary authenticity or ensure that funds are used correctly. Some projects focus only on education or healthcare, but not on a unified platform that can serve multiple purposes.

This project improves on earlier work by combining blockchain transparency, donor verification, and beneficiary authentication in a single, easy-to-use web application. The custom blockchain ensures that data is stored securely while maintaining system efficiency and affordability.

III. PROBLEM STATEMENT

In many developing countries, users struggle to pay for needs because of limited access to fund, lack of transparency, and high chances of fraud or misuse of funds. Traditional funding systems are slow, centralized, and often fail to reach the users who need help the most. There is a need for a secure, transparent, and reliable platform where users can get financial support, and donors, source of funding's, and governments can track their contributions with trust. To solve this, we propose a blockchain-based crowdsourcing funding platform built in Java, with modules for users, donors, charities, and government/admins, ensuring fair distribution of funds and trustworthy transactions.

IV. PROPOSED SYSTEM

The proposed system aims to develop a secure blockchain-based crowdfunding platform where donors can fund various social and personal causes such as education, healthcare, and emergencies. The entire system operates through a web-based Java application that leverages a custom blockchain to maintain transparency and ensure the traceability of every transaction.

In this system, both donors and campaign creators are verified before any transaction takes place. Campaigns are created by users with valid documentation, while donors can browse and contribute securely using blockchain smart contracts. Each transaction is recorded on the blockchain ledger, ensuring that funds cannot be tampered with or misused.

The platform has three main users — Donor, Beneficiary, and Admin. Donors can browse verified campaigns and contribute funds securely. Beneficiaries can register, submit fund requests with proof, and receive approved donations. The Admin verifies all user details and ensures that no fraudulent campaigns are listed.

Moreover, the platform provides real-time updates on campaign progress, transaction histories, and fund distribution. By automating these operations using smart contracts, the system minimizes human intervention and the risk of corruption. This proposed solution therefore promotes trust, transparency, and inclusivity, enabling people from across the world to support meaningful causes in developing regions safely.

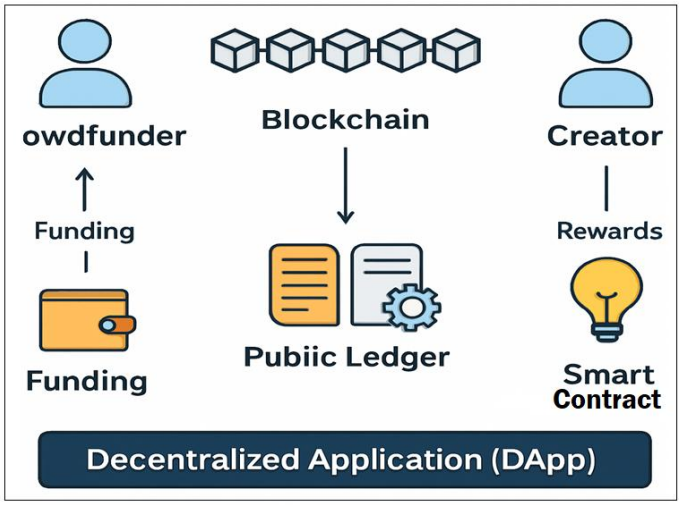

Fig.1: Proposed System Architecture

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V. RESEARCH METHODOLOGY

The above fig.1 illustrates the system architecture; the expected results of this project is a secure, transparent, and decentralized crowdfunding platform that promotes trust between donors and recipients. It will enable users in developing countries to raise funds for important causes quickly and safely without relying on intermediaries or centralized authorities. The system will ensure that every donation is recorded, verified, and traceable using blockchain technology. This helps build donor confidence and encourages more people to contribute. Beneficiaries will receive funds more efficiently, while the admin can monitor all activities for authenticity. The system follows a structured methodology for secure and efficient crowdfunding operations using blockchain technology.

Step-wise Methodology:

- **User Registration:** Donors and beneficiaries register and verify their identity on the platform.
- **Campaign Creation:** Verified users can create fundraising campaigns for education, health, or emergencies.
- **Transaction Recording:** Donations are processed and securely recorded using blockchain blocks.
- **Smart Contract Validation:** Smart contracts ensure that funds are released only when specific conditions are met.
- **Transparency & Monitoring:** The blockchain ledger provides a transparent record of transactions accessible to all users.
- **Reporting & Analytics:** System generates reports for donors and administrators to ensure accountability.

VI. CONCLUSION

In this paper, we have proposed a Blockchain-Based Crowdsourcing Platform system provides a secure, transparent, and efficient alternative to traditional fundraising systems. It enhances trust among donors and recipients by leveraging blockchain's immutable ledger and smart contracts to ensure that funds are utilized appropriately. The decentralized nature of blockchain eliminates the need for intermediaries, reducing both operational costs and the risk of fraud.
This project demonstrates how technology can empower social good by bridging the gap between people who need help and those willing to offer it. In the future, this system can be extended with AI-based fraud detection, global payment integration, and support for multiple cryptocurrencies to make donations faster and more accessible worldwide.

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