Project Name: TasksBlock

Project Overview: Tasksblock

Introduction

Tasksblock is an innovative task management platform designed to foster collaboration and accountability among its users. By integrating blockchain technology, Tasksblock ensures transparency and security in task management and decision-making processes. This platform empowers users to create and manage tasks within a group, known as a "TaskBlock." A TaskBlock is analogous to a chat group, where users can invite friends, vote on tasks, and earn rewards for positive behavior. The ultimate goal is to create a productive and collaborative environment where users can efficiently manage tasks and work together to achieve common goals.

User Stories

1. **User Registration and Login**
    a. **As a new user,** I want to create an account so that I can log in to the Tasksblock platform.
    b. **As a returning user,** I want to log in to my account so that I can access my TaskBlocks and continue working on my tasks.
2. **TaskBlock Creation**

   a. **As a logged-in user,** I want to create a new TaskBlock so that I can organize tasks and collaborate with others, similar to creating a chat group.

3. **Inviting Friends to TaskBlock**
   a. **As a TaskBlock creator,** I want to invite friends to join my TaskBlock so that we can work together on tasks, just as I would invite friends to a chat group.
4. **Voting System**
   a. **As a member of a TaskBlock,** I want to push tasks to a vote so that the group can collectively decide on task priorities.
   b. **As a member of a TaskBlock,** I want to vote for new members and the sharing of the TaskBlock so that I can have a say in the group's decisions.
5. **Behavior-based Wallet System**
   a. **As a member of a TaskBlock,** I want to earn rewards for positive behavior so that my wallet balance increases, enhancing my standing in the group.
   b. **As a member of a TaskBlock,** I want to be aware that if my wallet balance reaches zero due to negative behavior, I will be automatically removed from the TaskBlock.
6. **Rejoining a TaskBlock**
   a. **As a user removed from a TaskBlock,** I want to rejoin the group so that I can participate again, knowing that my wallet and status will be reset.

Technology Used:

Use of Blockchain Technology for Voting on Task Addition in Tasksblock

In Tasksblock, blockchain technology plays a crucial role in ensuring that the process of voting on new tasks within a TaskBlock is secure, transparent, and tamper-proof. Here's how blockchain is integrated into the voting system:

1. Immutable Voting Records

- When a new task is proposed in a TaskBlock, each member of the group has the opportunity to cast a vote. This vote is recorded on the blockchain, where each vote is encrypted and linked to the previous one, creating a secure and immutable chain of records. Once a vote is cast and added to the blockchain, it cannot be altered or deleted, ensuring that the voting history remains transparent and trustworthy.

2. Decentralized Consensus

- Blockchain operates on a decentralized network, meaning that there is no single point of control or failure. In the context of Tasksblock, this decentralization ensures that the voting process is fair and not subject to manipulation by any single participant or external party. All members of the TaskBlock can independently verify the integrity of the voting process through the blockchain.

3. Smart Contracts for Automatic Execution

- Smart contracts, which are self-executing contracts with the terms of the agreement directly written into code, are used to automate the voting process. When a task is proposed and a vote is initiated, a smart contract is triggered to manage the voting process. Once all votes are cast or the voting period ends, the smart contract automatically tallies the votes and determines the outcome (e.g., whether the task is approved or rejected). This automation eliminates the need for a central authority to oversee the voting process, reducing the risk of errors and bias.

4. Enhanced Security and Privacy

- Blockchain technology provides a high level of security through cryptographic techniques. Each user's vote is encrypted, protecting their privacy while still allowing their vote to be counted accurately. Additionally, because the blockchain is distributed across multiple nodes, it is highly resistant to hacking and fraud, ensuring that the voting process remains secure.

5. Transparency and Accountability

- The use of blockchain ensures that every vote is transparent and can be audited by any member of the TaskBlock. The entire voting process is recorded on the blockchain, allowing users to review the voting history at any time. This

transparency fosters accountability, as all actions taken during the voting process are visible and traceable.