

# Decentralized Time Banking System for Volunteering

Team 3

Vinit Mehta **2022111001**Kunal Bhosikar **2022121005** 

### Problem<br/>Statement

- Lack of Recognition for Volunteer Contributions
- No Standardized Tracking Mechanism
- Limited Incentives for Volunteering
- Lack of Transparency and Accountability





### Project Idea

#### **Solution:**

A **Decentralized Time Banking System** that tracks and rewards volunteer efforts using blockchain technology. Volunteers will earn tokens based on the time they contribute to activities or causes, and these tokens can be used as verifiable proof of their contributions.

#### **How It Works:**

- Time Tokens
- Reputation System
- Immutable Records

### **Key Features:**

- Transparency
- Incentivization
- Verification



## Why is it Important?

- Fair Recognition of Volunteer Efforts
- Encouraging Participation in Volunteering
- Transparency and Accountability
- Building a Culture of Service



### Key Technologies and Tools

01
Solidity

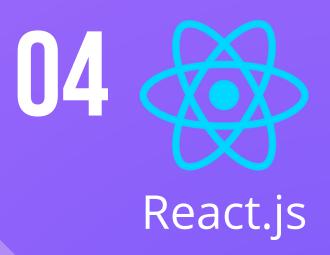
for building smart contracts to track and manage volunteer hours on the blockchain.



for creating an immutable ledger of volunteering efforts and ensuring transparency.



for integrating the front end with the blockchain, enabling students and organizations to track and record hours seamlessly.



for the user interface where students can log hours, view their balance of time credits, and redeem them for rewards.



### Technologies to be Used



Metamask

for user authentication, allowing students and organizations to connect their wallets and interact with the smart contracts for logging and verifying hours.

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**IPFS** 

for decentralized storage of records related to events, volunteering activities, and associated documentation.

### Tentative Timeline



#### **Smart Contract (Solidity) (W2)**

Write smart contracts for managing volunteer hours, rewards, and tokens.

### Frontend Development (React.js, Web3.js) (W4)

Create UI with React.js for logging hours, tracking rewards, and event management, integrating Web3.js and Metamask for blockchain interactions.

#### Project Planning (W1)

Identify use cases, define key features, gather UI and contract requirements.

### Blockchain Backend (Ethereum, IPFS) (W3)

Testnets, IPFS for decentralized storage, and test contract interactions.



# Initial Implementation Details

- Smart ContractsDevelopment
- Security Concerns
- Token Allocation Model
  - Rate of Conversion
  - Token Usage
- Blockchain Platform (Ethereum)
- Front-end and Blockchain
   Interaction
- IPFS Integration
- User Experience (UX)



### Thank You

Questions?