AsarChain

Blockchain-based Charity Crowdfunding Platform

Course: Blockchain 1

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Problem

Charity is based on trust. People donate money expecting that it will be used honestly and for its intended purpose. However, in traditional charitable systems, the donor does not have a direct way to verify what happens to his donation after the transfer of funds.

Risks in centralized platforms

- All financial data is stored on the servers of the same organization
- Reports can be modified or submitted selectively
- The donor cannot independently verify the transactions

Our solution

AsarChain: charity on the blockchain

We have proposed the AsarChain platform, inspired by the Kazakh tradition of "asar", which symbolizes collective mutual assistance. Our goal is to transfer this principle to the digital environment, using blockchain as a tool to ensure transparency, immutability of data and open access to information.

Why we used Blockchain?

Transparency

All transactions are public and verifiable.

Absence of intermediaries

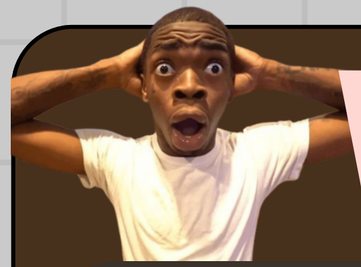
A smart contract replaces a centralized administrator

Immutability

After recording, the data cannot be faked.

Automation of trust

Rules are implemented by code, not by people.

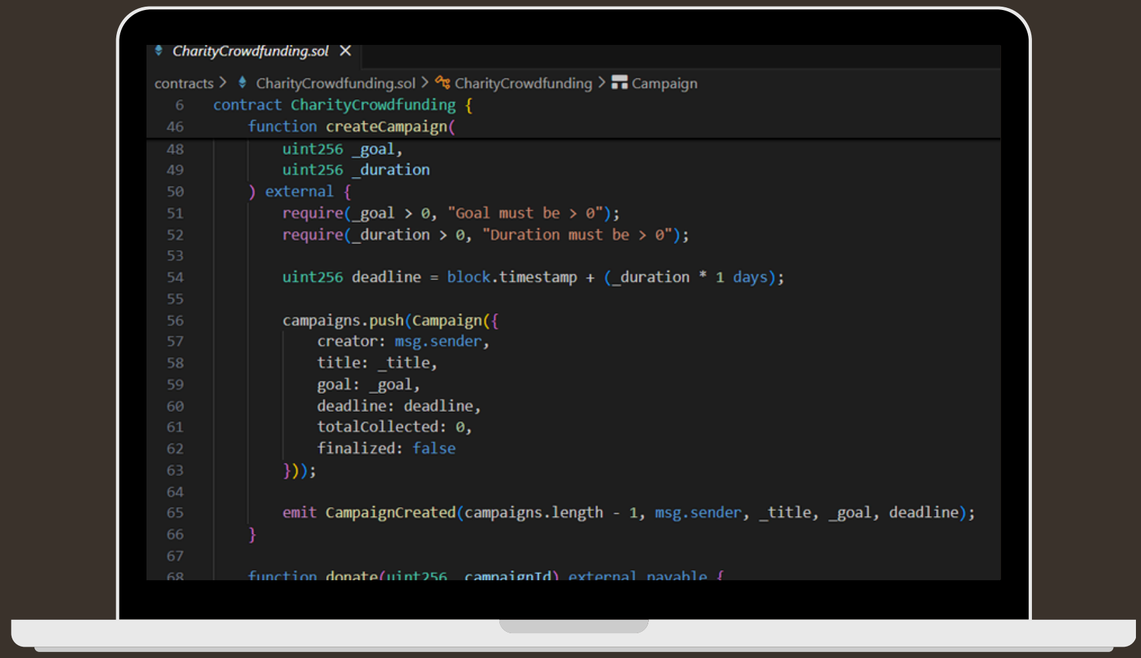


What is implemented

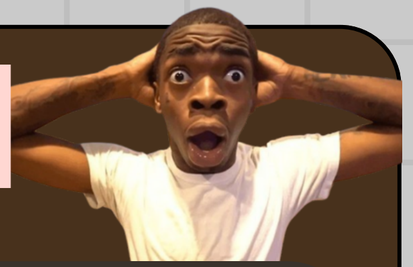
Smart Contracts

CharityCrowdfunding.sol

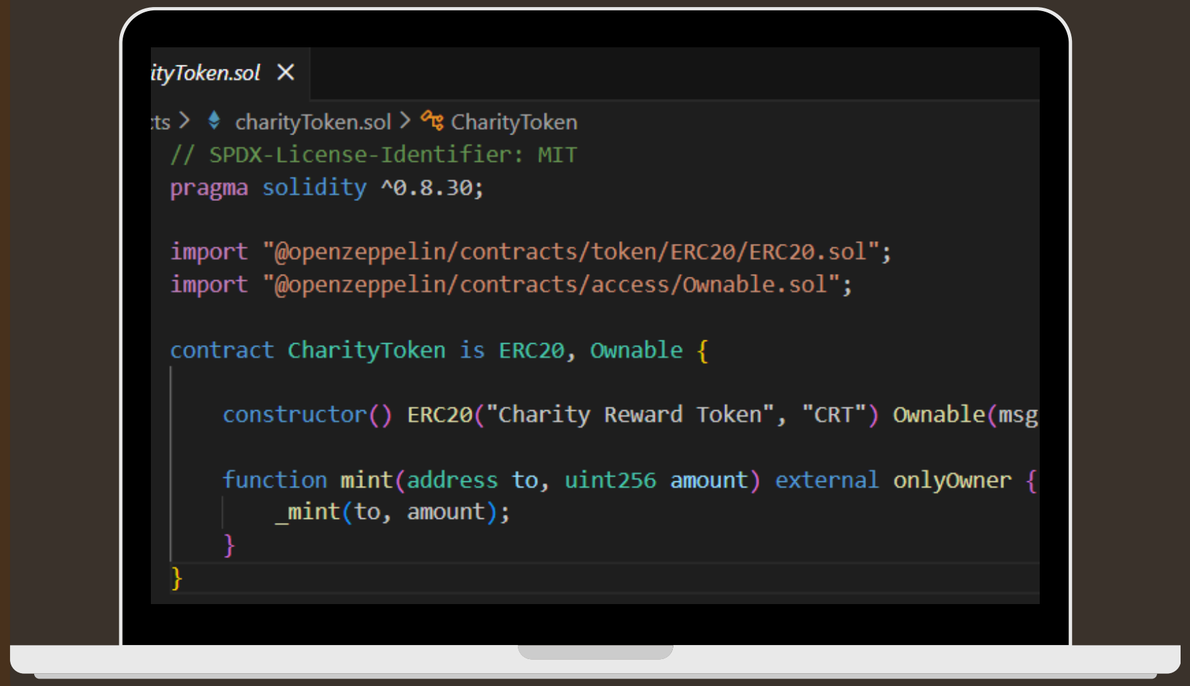
Manages charity campaigns;
Accepts donations (ETH);
Completes campaigns and disburses funds;
Integrates with the reward token;
Provides data for the frontend;



What is implemented



Smart Contracts



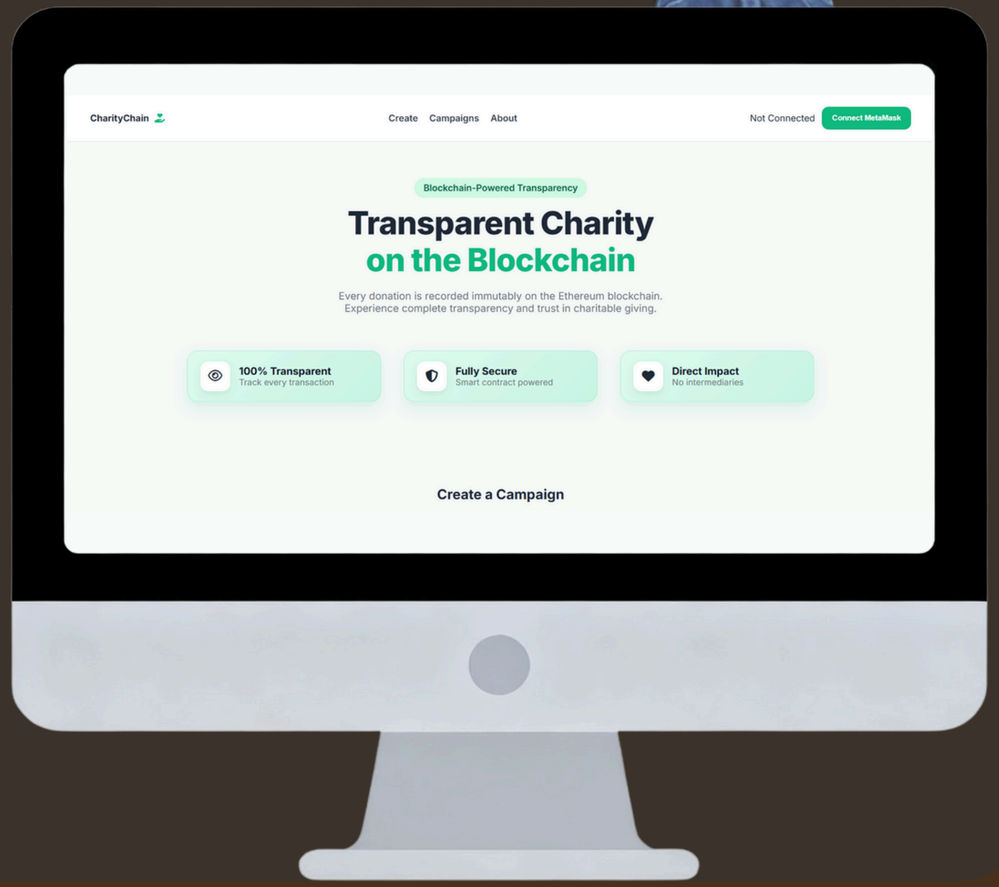
charityToken.sol:

This contract creates a token called the "Charity Reward Token".
This is an internal token of our platform.
It inherits the ERC-20 standard from OpenZeppelin. Adds the mint function

What is implemented

Frontend

Displays the platform in the browser;
Interacts with MetaMask to connect wallets;
Communicates with smart contracts via JavaScript;
Provides a UI for creating campaigns and donations

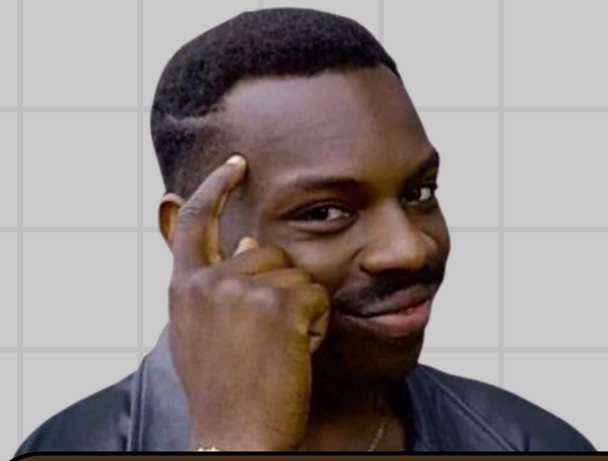


What is implemented

Metamask connection

```
async connectWallet() {
  if (window.ethereum) {
    try {
      const accounts = await window.ethereum.request({ method: 'eth
      const provider = new ethers.BrowserProvider(window.ethereum);
      signer = await provider.getSigner();
      contract = new ethers.Contract(CONTRACT_ADDRESS, contractABI,
      return accounts[0];
    } catch (error) {
      console.error("Connection failed", error);
      return null;
    }
  } else {
    alert("Please install MetaMask!");
    return null;
  }
},
```

Checks for MetaMask in the browser;
Requests access to user accounts;
Creates a connection to the Ethereum network via ethers.js;
Initializes access to your smart contract;
Returns the wallet address to display in the interface



Crowdfunding Logic

Creating campaigns:

Users create charity campaigns via the web interface by specifying the campaign name, purpose, and deadline.

Goal and deadline:

The goal is the minimum amount to collect. Deadline automatic completion of the campaign after the deadline

Donations in ETH:

Donations are made in ETH, with each contribution recorded as a separate on-chain transaction and confirmed by MetaMask.

How it works

User
(Browser)

Frontend
(HTML/CSS/JS)

MetaMask
(Wallet)

Connect wallet / Action

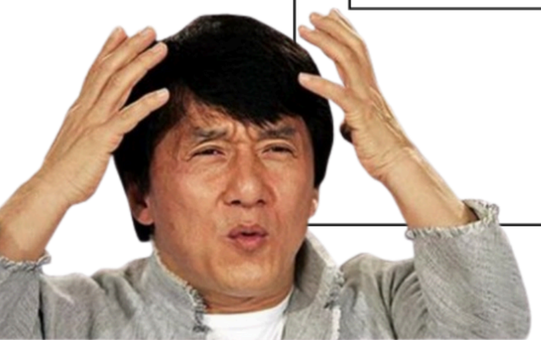
Contract calls via ethers.js

Sign & send transaction

Ethereum Blockchain

CharityCrowdfunding

CharityToken
(ERC-20)



Current limitations

1 Lack of KYC/AML procedures:

Blockchain anonymity allows participation without identity verification, creating potential misuse risks.

2 The educational scope:

Simplified architecture without production-level features such as contract upgrades or advanced error handling.

Lack of verification of offline events: 3

Smart contracts cannot verify how collected funds are used in the real world.

Working only on the testnet: 4

Uses free test ETH and does not reflect real gas fees or economic risks.

Possible extensions:

DAO governance: token-based voting and delegated fund management

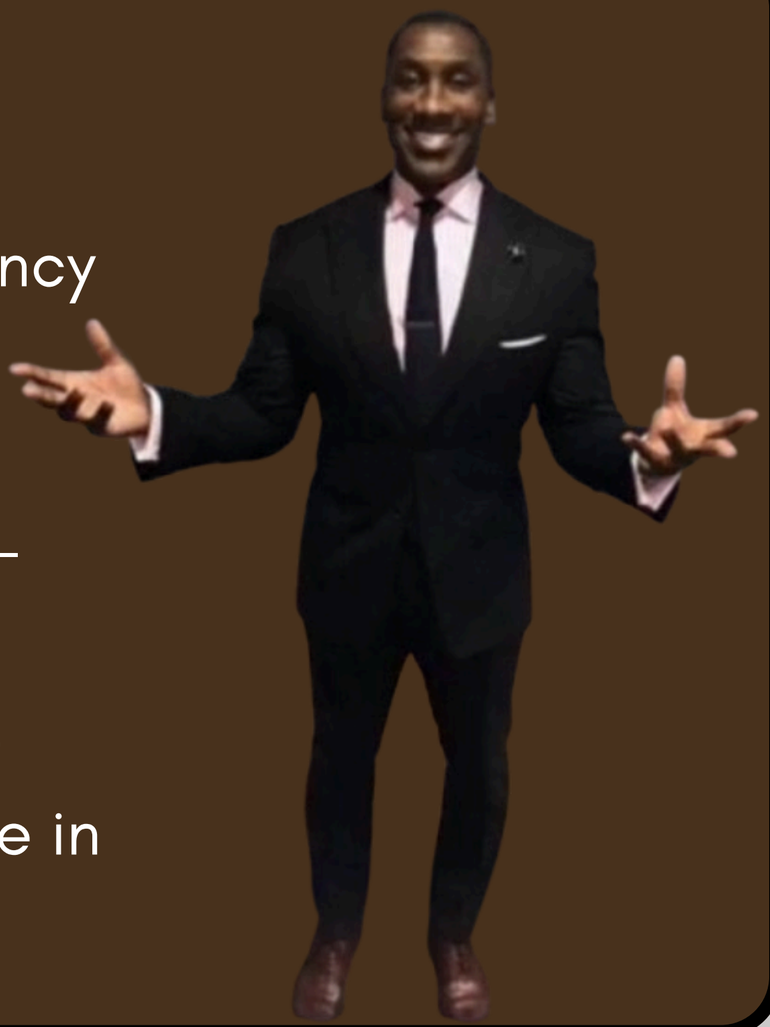
NFT donor badges: achievement-based and tiered reputation NFTs

KYC/AML integration: decentralized identity verification and transaction monitoring

Mainnet deployment: audited contracts, multisig wallets, and insurance mechanisms

Coclusion

The AsarChain project addresses the lack of transparency in charitable donations and the need for blind trust in intermediaries. By moving donation logic to a public blockchain, each contribution becomes a verifiable on-chain transaction. This approach replaces trust in organizations with trust in transparent and predictable code, demonstrating how Web3 can restore confidence in charitable initiatives.



Thank You!

My mom said that we deserve 100 points