

# EDUFUND

## PRESENTATION

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EduFund

Blockchain 1

## PROJECT OVERVIEW

### FROM CONCEPT TO REALITY

Centralized crowdfunding platforms lack transparency and user control. This project demonstrates how blockchain and smart contracts enable a decentralized crowdfunding model. The goal is to practice DApp development, MetaMask integration, and tokenization concepts.

This project is a decentralized crowdfunding application built on an Ethereum test network (Sepolia). Users can create campaigns, contribute test ETH, and receive ERC-20 reward tokens. All blockchain interactions are handled securely through MetaMask.



# ARCHITECTURE

## PROJECT STRUCTURE

The application follows a decentralized architecture consisting of a Solidity smart contract deployed on an Ethereum test network, a JavaScript-based frontend, and MetaMask for wallet interaction. The frontend communicates directly with the blockchain to execute and monitor transactions without a centralized backend.

01 FRONTEND (HTML CSS  
JAVASCRIPT)

02 SMART CONTRACTS  
(SOLIDITY)

03 WALLET (METAMASK)



# SMART CONTRACTS

## CROWNFUNDING CONTRACT LOGIC

The crowdfunding smart contract manages campaign creation, accepts test ETH contributions, tracks individual user contributions, and enforces campaign deadlines. After the deadline, the contract finalizes the campaign and triggers the appropriate logic for fund handling and reward token issuance.

```
contract EduFundCrowdfunding {  
    // some clever code  
}
```

# 03

# 04

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Blockchain 1

**01** The ERC-20 standard is used because it is widely adopted and easy to integrate with wallets and tools.


**02** Reward tokens are automatically minted when a user contributes to a campaign.

**03** The amount of tokens issued is proportional to the contribution.

**04** These tokens have no real value and are used only for educational purposes.

# SMART CONTRACTS

## ERC-20 REWARD TOKEN

 EduToken.sol



# METAMASK INTEGRATION

## CONNECT, VALIDATE, EXECUTE

The application integrates MetaMask to allow users to securely connect their Ethereum wallets and approve blockchain interactions. Users must grant permission for account access before performing any actions within the DApp.

MetaMask is also used to validate that the user is connected to the correct Ethereum test network. All transactions, including campaign creation and contributions, are executed and signed directly through MetaMask.

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# 05

EduFund Crowdfunding

Connect MetaMask

Wallet: 0x198FF21BaFdbAbB6E30A7C393939b0AC6B76Ab1B

Network: Sepolia

Balances

ETH: 0.0453

EduTokens: 1002.0

Create Campaign

title

0.1

1

Create Campaign

Contribute

Account 1

Wallet 1

Transaction request

Estimated changes ⓘ

No changes

Network

Sepolia

Request from ⓘ

HTTP 127.0.0.1:5500

Interacting with ⓘ

OxA0b62...91920

Method ⓘ

Create Campaign

Network fee ⓘ

0.0003 s SepoliaETH

< \$0.01

Speed

Market ~12 sec

Max fee ⓘ

0.0004

Cancel

Confirm

EduTokens: 1003.0





This project demonstrates the practical use of blockchain technology for building a decentralized crowdfunding application. It combines smart contracts, ERC-20 tokens, and MetaMask integration on an Ethereum test network.

Through this project, core concepts of DApp architecture, smart contract logic, and secure blockchain interaction were applied in a hands-on environment. The experience provides a strong foundation for further development in decentralized applications.

# CONCLUSION

## FINAL THOUGHTS





# THANK YOU



ANY QUESTIONS?