



Problem Statement Title: Blockchain Based : Loyalty and Rewards Program using Fungible Tokens

Team Name: TheDarKnights

Indian Institute of Engineering Science and Technology, Shibpur

Team Name - The DarKnights

1. Manas Bihani - 2025
(Team Leader)

2. Rajiv Soren - 2025

3. Bhawuk Kaushik - 2025

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This section focuses on the limitations of our project

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This section focuses on the advanced improvements that can be made in the project

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WHY THIS PROJECT ?

This section focus on the why this project stands out.

Deliverables

Idea Component:

- **Project Proposal**: Present a comprehensive overview of our loyalty program, including the problem statement, solution, key features, tokenomics.
- **Tokenomics and Rules**: Define token value, issuance rules, and how users earn/redeem tokens.
- **User Interface**: Provide visual mockups of the user-friendly interface for managing points and rewards.

Code Component:

- **Solidity Code**: Submit well-structured Solidity code for generating tokens, managing transactions, and settlements.
- **User Interface Prototype**: Deliver a functional web prototype of the user interface.
- **Testing and Completion**: Demonstrate essential functions, ensure clean code, integration, and testing.

USE CASES

P0: Token Generation & Tokenomics

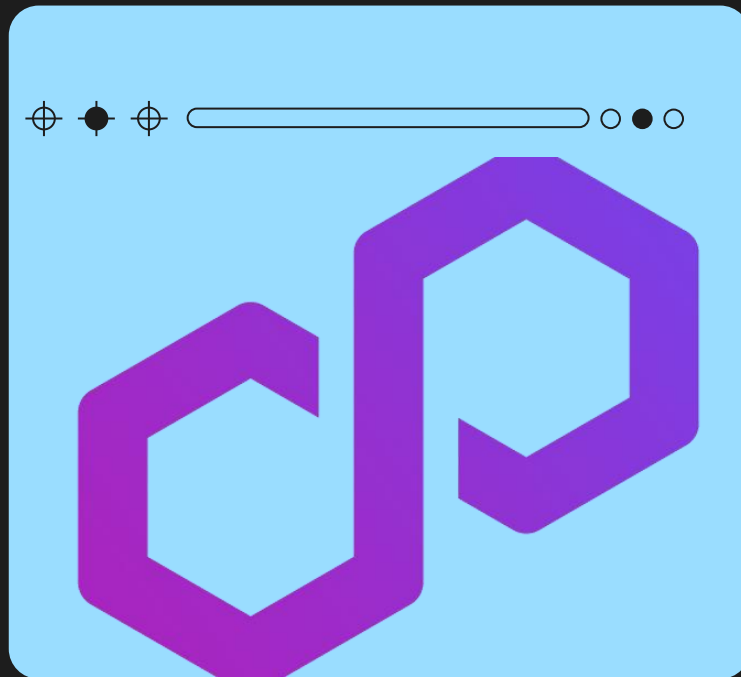
- Users receive tokens for purchases, boosting customer loyalty.
- Record settlements transparently on-chain

P1: Earning Tokens & Partner Issuance

- Referral rewards in tokens promote user referrals.
- Partners reward tokens for high-value purchases.

P2: Rewards Redemption

- Tokens used for discounts and coupons.



Token.sol

Contract used to generate
LYT tokens

Used the ABI
and contract
address

Block Diagram and Website UI

DEPLOY
ON SEPOLIA
TESTNET

INTEGRATION

EVENT
HANDLING

Faucet.sol

Contract used to maintain the
distribution of LYT tokens

Used the method of
deployed contracts

The rewards or loyalty tokens that you customer get on our website



Your Loyalty Token: 20.0

Your Wallet Address:

0x262f33b0ea8fc998659ad592c5980a06eebc698e

The screenshot shows a web browser with two tabs: 'localhost:3000/offers' and 'localhost:3000/loyalty'. The 'offers' page displays a '20% OFF' discount coupon for 'FABSIDE.COM' with a 'Redeem Now!' button. The 'loyalty' page shows the user's 'Loyalty Token: 20.0' and 'Wallet Address: 0x262f33b0ea8fc998659ad592c5980a06eebc698e'. A MetaMask notification is visible on the right, showing a 'Deposit Tokens' transaction. A blue arrow points from the 'ONE TOKEN' coin to the '20% OFF' coupon, and an orange arrow points from the MetaMask notification to the 'Metamask wallet' text.

Available Offers

Whatever cardigan tote bag tumblr hexagon brooklyn asymmetrical gentrify, subway tile poke farm-to-table. Franzen you probably haven't heard of them man bun deep jianbing selfies heirloom.

DISCOUNT COUPON

20% OFF

20% Off

Get the 20% OFF coupon and use it in your next purchase.

Redeem Now! →

FREE SHIPPING

WWW.FABSIDE.COM

Your code : ALL20V

Discount coupon

MetaMask Notification

Account 1

Sepolia test network

0x5d8...c4c

https://localhost:3000/0x5d8...c4c : DEPOSIT TOKENS

DETAILS DATA HEX

1 Network is busy. Gas prices are high and estimates are less accurate.

Market →

Gas estimated 0.00471531 SepoliaETH

Liberty in c. 30 seconds

Max fee: 0.00633102 SepoliaETH

Total 0.00471531 SepoliaETH

Coupons based on tokens

Metamask wallet

Transaction done using fungible tokens

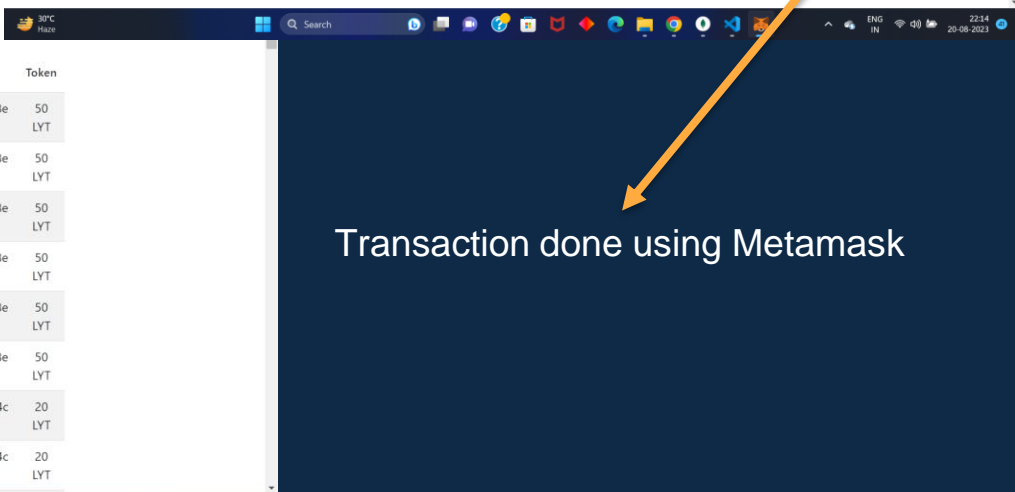
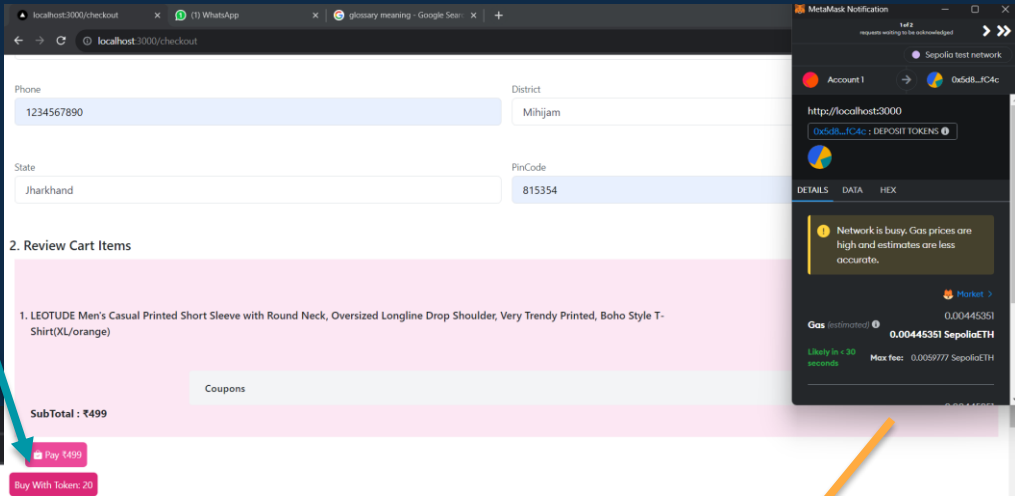
Transaction history recorded on blockchain



Your Token Logs

Your Token Transaction log is safe with us.

Method	Time	From	To	Token
Received	12/8/2023 1:05:00 PM	0x5f503fab0811d4defb3bad1d3c843e452cd9bec3	0x262f33b0ea8fc998659ad592c5980a06eebc698e	50 LYT
Received	12/8/2023 1:19:00 PM	0x5f503fab0811d4defb3bad1d3c843e452cd9bec3	0x262f33b0ea8fc998659ad592c5980a06eebc698e	50 LYT
Received	12/8/2023 4:14:48 PM	0x5f503fab0811d4defb3bad1d3c843e452cd9bec3	0x262f33b0ea8fc998659ad592c5980a06eebc698e	50 LYT
Received	12/8/2023 4:28:00 PM	0x5f503fab0811d4defb3bad1d3c843e452cd9bec3	0x262f33b0ea8fc998659ad592c5980a06eebc698e	50 LYT
Received	12/8/2023 11:21:24 PM	0x5f503fab0811d4defb3bad1d3c843e452cd9bec3	0x262f33b0ea8fc998659ad592c5980a06eebc698e	50 LYT
Received	14/8/2023 9:08:36 PM	0x5f503fab0811d4defb3bad1d3c843e452cd9bec3	0x262f33b0ea8fc998659ad592c5980a06eebc698e	50 LYT
Transfer	16/8/2023 12:20:36 PM	0x262f33b0ea8fc998659ad592c5980a06eebc698e	0x5d8cb78e658541775683198f91920d0c3c8bfc4c	20 LYT
Transfer	16/8/2023 12:27:24 PM	0x262f33b0ea8fc998659ad592c5980a06eebc698e	0x5d8cb78e658541775683198f91920d0c3c8bfc4c	20 LYT



LIMITATIONS



GAS FEES

Polygon's Layer 2 solutions may not fully prevent gas fees, impacting loyalty points' value and user appeal during network congestion.



DATA PRIVACY

Public blockchain storing sensitive data raises privacy concerns; balancing transparency and user privacy is crucial.



NETWORK RELIABILITY

While blockchains strive for high reliability, unexpected network downtime or delays could impact the user experience and real-time interactions.

FUTURE SCOPE



AI INTEGRATION

Incorporating artificial intelligence for personalized rewards, predictive analytics, and user behavior analysis to optimize the rewards program's effectiveness.



NFT INTEGRATION

Introducing non-fungible tokens (NFTs) for exclusive rewards and experiences, adding uniqueness and collectibility to the loyalty program.



PARTNERSHIPS

Cross-chain compatibility and partnerships with diverse networks and industries broaden program reach and versatility.

WHY OUR PROJECT?

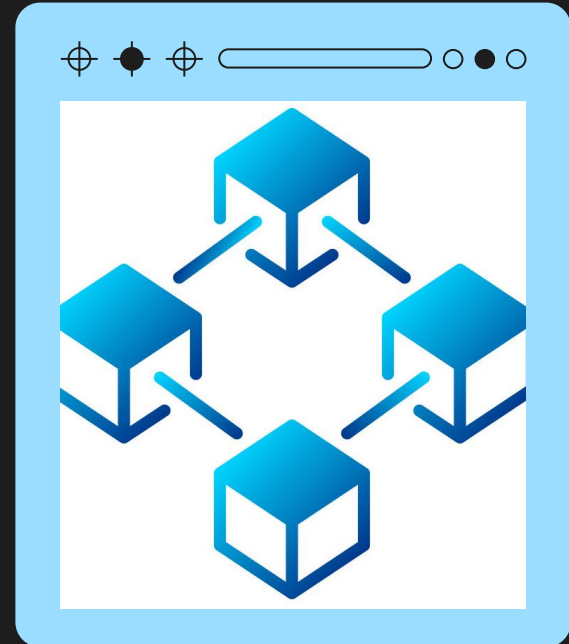
Enhanced User Engagement: Our Project provides transparent and rewarding user experience, fostering increased engagement and loyalty.

Transparency and Trust: Transactions recorded on the blockchain ensure transparency, building trust between users, brands, and platforms.

Innovation and Differentiation: Implementing blockchain sets the program apart, attracting tech-savvy users and positioning brands as innovative.

Secure and Efficient Settlement: On-chain settlements streamline transactions, reducing reconciliation time between brands and E-commerce platforms.

Global Accessibility: Blockchain's borderless nature enables global participation, appealing to a wider audience and expanding market reach.





Thank You