



Problem Statement Title: FlipMart
Team Name: SIUUU Tokens

Team members details

Team Name	FlipMart		
Institute Name/Names	Thapar Institute Of Engineering and Technology		
Team Members >	1 (Leader)	2	3
Name	Sanjoli Agarwal	Tanisha Parkash	Taruna Jain
Batch	4 th Year	4 th Year	4 th Year
Branch	Computer Engineering	Computer Engineering	Computer Engineering

Deliverables/Expectations for Level 2 (Idea + Code Submission)

Topic: SIUU COINS

Problem Statement: Blockchain-based: Loyalty and Rewards Program using Fungible Tokens

- Please follow guidelines as mentioned in the problem statement Doc.

Glossary

- Describe/ Expand abbreviations if you have used any in the slides below
- SIUU: World-renowned Cristiano Ronaldo uses siuu which originates from Spanish word 'yes', for goal celebration and happiness.
- Github Link to code:https://github.com/tarunajain19/Siuu_Coins

Youtube video in github

Instructions (You Can Delete this Slide)

Dear Team,

Congratulations on reaching this stage - We look forward to some amazing & innovative solutions.

Please find some important instructions before you begin to prepare our submission decks.

Slide Limit : 10 Slides of Content **post (after)** this Slide
Saving Format : Save the file as a PDF to ensure our formatting remains intact
Submission Guide: Only the '**Team Leader**' will be able to submit the Deck.
Only the latest submission will be considered as final
(You can keep updating our deck within the deadline)

Wishing you all the very best !

Team Flipkart GRiD

Brief Description of the Project

The overview covers the main features, functionalities, and benefits of our blockchain-based e-commerce project named 'FlipMart', showcasing its potential to create a dynamic and engaging ecosystem for users.

•Token Creation and Distribution:

1. Introduced a new token called **SIUU COIN** for transactions and engagement.
2. Created SIUU COIN tokens on the **Polygon network**.
3. Distributed tokens to registered users of FlipMart.

•E-commerce and Blockchain Integration:

1. Integrated SIUU COIN as a payment method for **purchasing** products on the platform.
2. Adjusted product prices based on the **real-time value** of SIUU COIN tokens.
3. Provided a **seamless and secure** payment gateway using blockchain.

•User Engagement and Rewards:

1. Introduced a **rewards** system, offering tokens for more transactions, referrals, and mining.
2. Introduced a **referral** program, rewarding users for inviting friends.

•Social Impact and Donations:

1. Allowed users to **donate** SIUU COIN tokens to NGOs to create a positive impact.

- Token Purchases with money:**

1. Enabled users to **acquire** SIUU COIN tokens using traditional currency (INR) via UPI payments.
2. Expanded user involvement and token **ownership**.

- Community Mining Pool:**

1. Established a decentralized **mining pool** involving users to partner with FlipMart for network security.
2. Enhanced the platform's robustness and decentralization.

- Token Decay Mechanism:**

1. Implemented a time-based **token decay** mechanism to promote ongoing engagement.
2. Encouraged users to stay active and participate in the ecosystem.

- Startup Support and Partnerships:**

1. Provided discounts and visibility to startups on the platform.
2. Supported **new businesses** and encouraged innovation.

- Personalized Shopping Experience:**

1. Utilized AI-driven **recommendations** for personalized product suggestions.
2. Enhanced user satisfaction and shopping experience.

- Long-Term Expansion and Sustainability:**

1. Stored transaction data securely on blockchain nodes.
2. Planned for platform **scalability**, future integrations, and technological advancements.
3. Aimed for continuous growth, adoption, and adaptation.

Use-cases

Po: Core Functionalities and Value Proposition

1. Implementing **tokenized payments** as the core functionality sets our e-commerce platform apart from traditional options. Items can be purchased with partial money and SIUU coins.

1 SIUU coin = 50 rupees.

1. **Rewarding** our users for no. of transactions completed, referrals, and mining to establish engagement. Additional rewards will be available on special occasions, days, and times of sale.

P1: Expansion and Community Building

1. Allowing users to **acquire** more SIUU tokens using fiat currency thus expanding their stake in the ecosystem.

2. **Adding tokens** to the user's account on the basis of their current balance to ensure self-sustainability and growth.

3. Collaborating with **NGOs** for token-based donations and purchases, promoting social good and community engagement.

P2: Enhanced Engagement and Differentiation

1. **Supporting startups** with more discounts on their products and visibility. Users can earn more SIUU coins on buying products offered by new businesses.
2. Empowering users to **refer** friends and expand the user base, creating a sense of community.
3. Encouraging ongoing engagement with a **token decay** mechanism to maintain user activity and platform growth.
4. Utilizing AI-driven recommendations for a **personalized shopping** journey, enhancing user satisfaction.

P3: Future Expansion and Long-Term Impact

1. Ensuring **data privacy and security** by decentralization, i.e. storing transaction data on blockchain nodes.
2. Demonstrating the **cost-efficiency and advantages** of blockchain-based transactions.
3. Allowing users to be **part** of the broader cryptocurrency ecosystem, contributing to token adoption and awareness.

Solution statement/ Proposed approach

Sub-Problem 1: SIUU Token Creation and Distribution to FlipMart Members

Solution: Developed a smart contract written in Solidity on the Polygon which generates a fixed amount of tokens. The user needs to have a blockchain wallet before registration, after which 20 coins will be transferred to the user's wallet.

Sub-Problem 2: E-commerce Integration and Product Payments using SIUU coins

Solution: Items that can be purchased with coins are available as a combination of rupees and coins. The user's wallet is checked before payment, if it has a sufficient balance, then the platform proceeds with automatic payment. Else error is generated.

Sub-Problem 3: User Engagement and Rewards for transactions, referrals, and mining

Solution: On every transaction, user can get additional SIUU coins based on the current balance:

0-10 coins: +0.5 coin

10-50 coins: +1 coin

>50 coins: +2 coins.

Apart from this, user earns 1 coin on every referral they provide. Users involved in blockchain mining can collaborate with FlipMart mining pool to increase rate of mining and earn more coins.

Sub-Problem 5: Gas Fees and Transactions

Solution: The platform will educate users about gas fees and integrate a mechanism that prompts users to cover gas fees during transactions.

Sub-Problem 6: Token Decay Mechanism (Burning)

Solution: After every 6 months from the last date of transaction by the user, 5% tokens from their wallet will be transferred to NULL address, i.e. their value will decay to 95%.

Sub-Problem 8: Startup Support and Partnerships

Solution: The platform will charge a commission fee from Start-Ups and new businesses, and in return provide extra SIUU coins on to users on buying their products. Their products are also featured on top of user's recommendation thus increasing reach.

BLOCKCHAIN

Smart
Contract in
Solidity
deployed on
Remix

METAMASK

Wallet
creation on
Polygon
Network

FLASK

Python
Framework
to connect
with Backend

FLIPMART

FAUCET

Mumbai
Testnet
network used
for
transaction.

ORACLE SQL

Database to
store user's,
NGO and
Item data

FRONTEND

HTML/CSS
and JS used
for interface
development.

Limitations

1. User Adoption and Education:

- Users **unfamiliar** with blockchain and cryptocurrency might find the platform complex and challenging to use.
- Educating users about token usage, gas fees, and other blockchain-related concepts could be **time-consuming**.

2. Regulatory and Legal Challenges:

- The regulatory environment for cryptocurrencies and blockchain can be **uncertain** and might vary across jurisdictions.
- Navigating legal compliance, taxation, and reporting requirements can be **complex**.

3. Token Volatility:

- The value of SIUU COIN tokens might be **volatile**, impacting user confidence and purchasing power.
- Sudden fluctuations could **discourage** users from using tokens for transactions.

4. User Data Security:

- Ensuring the **security** of user wallets, private keys, and personal data is crucial to prevent hacking and unauthorized access.

5. Gas Fee Burden:

- Users covering **gas fees** for transactions might be an additional financial burden, especially during periods of high network congestion.

Future Scope

This project holds great potential for expansion and impact. Here are some avenues for future growth and development:

1.Token Adoption and Integration:

- As blockchain technology becomes more widely adopted, the use of tokens in various industries could **expand** beyond e-commerce, potentially allowing our SIUU COIN to be used in multiple contexts.

2.Cross-Chain Compatibility:

- Considering cross-chain compatibility could enable users to utilize SIUU COIN across **different blockchain networks**, increasing its utility and reach.

3.Expanded Payment Partnerships:

- Forming partnerships with a broader range of **companies** to accept SIUU COIN for products and services could increase its usefulness and adoption.

4.Global Reach:

- Expanding our platform's reach to **international markets** could open up new customer bases and create a more diverse ecosystem.

5.Integration with DeFi Protocols:

- Integrating SIUU COIN with **decentralized finance (DeFi) protocols** could allow users to earn interest, lend, or stake their tokens for additional returns.

6. NFT Integration:

- Exploring the integration of **non-fungible tokens (NFTs)** could create new avenues for users to interact with our platform, such as purchasing unique digital assets or limited-edition products.

7. Enhanced Features:

- **Deepening partnerships** with NGOs and other social impact organizations could expand our platform's positive influence on various causes.
- **Expanding** the rewards system to include more tiers or types of rewards could keep users engaged and motivated to participate.
- **Collaborating** with other blockchain projects, startups, or platforms could create a larger ecosystem with mutual benefits.

8. Token Utility Beyond Purchases:

- Exploring ways in which SIUU COIN could be used for additional purposes within the platform, such as accessing **premium content** or features, could expand its use cases.

9. Community Governance:

- Implementing a **decentralized governance** mechanism could allow token holders to have a say in the platform's future decisions.

10. Continuous Innovation:

- Staying up-to-date with technological **advancements** and market trends will be crucial for adapting and innovating our project.



Thank You