Applied and Action Learning
(Learning by Doing and Discovery)

Name of the Experiement : Tokenomics 101 – Analyzing Crypto Economics

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

Introduction:

Consider the below pseudocode for Bitcoin

- **1. Initialize Token Supply:**
  Begin by defining the **total token supply** — for example, **1,000,000 tokens**. This represents the maximum number of tokens that will ever exist and forms the foundation of the project's **monetary policy**.
- **2. Token Allocation:**
  Distribute the total supply among different stakeholders to ensure fair participation and long-term sustainability.
  Example distribution:
  - **Team:** 20% (for development and operations)
  - **Investors:** 30% (for early backers and seed funding)
  - **Public Sale:** 40% (for community access and liquidity)
  - **Reserve/Treasury:** 10% (for future development, partnerships, or ecosystem growth)
- **3. Simulate Token Circulation:**
  Model how tokens **flow into the market** via mechanisms such as **staking rewards, liquidity mining, governance incentives, and trading**. This helps analyze **market dynamics** and predict how supply and demand will evolve over time.
- **4. Apply Token Burning (Optional):**
  Introduce a **deflationary mechanism** by permanently removing a portion of tokens from circulation through **burning events**. This helps control inflation, maintain scarcity, and potentially **increase token value** over time.
- **5. Calculate Market Value:**
  Evaluate the **token's price** using the formula:
  Token Price = Market Capitalization ÷ Circulating Supply
  This provides insight into the token's real-time valuation and helps track how market conditions impact its performance.
- **6. Display Final Metrics:**
  Present a comprehensive overview of the **token's key metrics**, including:
  - **Total Supply**
  - **Circulating Supply**
  - **Burned Tokens**
  - **Market Cap and Price Trends**

These metrics are crucial for **investor analysis, ecosystem health tracking**, and maintaining transparency within the crypto economy.

* Softwares used

1. Chrome Web Browser
2. Tokenomics 101(Coinbase)

https://www.coinbase.com/en-in/learn/wallet/tokenomics-101

*As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.

* **Implementation Phase: Final Output (no error)**

Researching Tokenomics – Key Points:

1. Tokenomic details can be found in a project's **whitepaper** or on trusted sites like **Coinbase, CoinMarketCap, CoinGecko,** and **Messari**.
2. On **Coinbase**, visit the **Prices** section (https://www.coinbase.com/price) to explore different cryptocurrencies.
3. After selecting a cryptocurrency, you can view its **market capitalization, trading volume, and circulating supply** below the price chart.
4. The example in the image shows **Bitcoin** priced at **$29,854.47**, with a **market cap of $570.1B**, **24-hour volume of $34.2B**, and **19.0M BTC** circulating (91% of total supply).
5. These insights help users understand a crypto asset's **market performance, liquidity, and overall economic strength**.

* Implementation Phase: Final Output (no error)
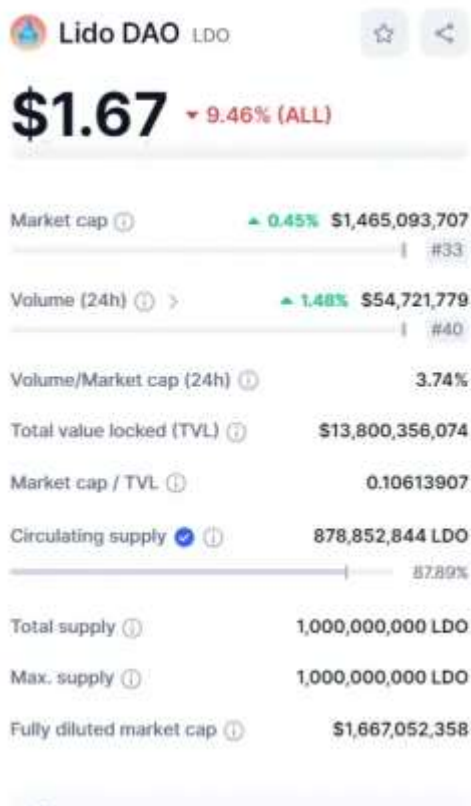
- **Design and Distribution Strategy:**
  Establish a clear **token structure and allocation plan** through pilot token models and phased releases, ensuring fair distribution and measurable ROI for early stakeholders.
- **Scalability and Efficiency Enhancements:**
  Improve **transaction speed and network performance** by integrating **Layer 2 solutions**, optimized consensus algorithms, and hybrid token mechanisms that balance scalability with stability.
- **Regulatory Alignment and Governance:**
  Ensure **compliance and transparency** by incorporating legal best practices, engaging with regulators, and maintaining adaptable token frameworks aligned with evolving crypto regulations.
- **Flexibility and Ecosystem Adaptation:**
  Build a **modular, future-ready token economy** capable of adapting to **market trends, governance updates, and technological advancements** within the broader crypto ecosystem.

* Observations

1. Effective tokenomics design requires **balanced distribution and sustainable utility** to ensure long-term ecosystem growth.
2. **Scalability and regulatory compliance** are crucial for maintaining stability and investor trust.
3. A **flexible and adaptive token model** helps projects evolve with changing market and technological trends.

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/ Practical Simulation/ Programming	10		
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	**50**		

Signature of the Student:

Name :

Regn. No. :

Signature of the Faculty:

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