Centurion University
Shaping Lives... Empowering Communities...

School: ..... Campus: .....

Academic Year: ..... Subject Name: ..... Subject Code: .....

Semester: ..... Program: ..... Branch: ..... Specialization: .....

Date: .....

Classroom Learning

(Learning by Listening and Observations)

Name of the Topic: Crypto Currency and their Names

Learning Outcome:

Concepts learned (Mention 2/3 principles):

Based on the classwork, the principal concepts I have learned include:

1. The fundamental concept of cryptocurrency as a decentralized digital currency designed to work as a medium of exchange through a computer network, not reliant on any central authority.
2. The complete architecture of how cryptocurrencies use cryptographic techniques to secure transactions, control the creation of new units, and verify the transfer of assets.
3. The characteristics of different cryptocurrency types, including coins (like Bitcoin) that operate on their own blockchain and tokens (like ERC-20 tokens) that operate on existing blockchains.

* New techniques learned:

Additionally, I have acquired new knowledge in the following areas:

1. Techniques for understanding the purpose and utility behind a cryptocurrency's name, which often reflects its function (e.g., "Ether" for fueling the Ethereum network) or its philosophical roots (e.g., "Monero" meaning "coin" in Esperanto).
2. Procedures for evaluating the differences between cryptocurrencies based on their consensus mechanisms, such as Proof-of-Work (Bitcoin), Proof-of-Stake (Ethereum, Cardano), and others.
3. The process of how transactions are broadcast, verified, and added to the public ledger (blockchain) by network participants.
4. Methods for analyzing market data using ticker symbols (e.g., BTC, ETH, ADA) to track performance on cryptocurrency exchanges.

* Related Project/Practice work experienced and learned:

During the practice sessions of the lab work, I engaged in and developed proficiency with programs and simulations in the following areas:

1. Setting up and interacting with a cryptocurrency wallet using a testnet to understand public and private key generation and management.
2. Writing a simple Python script using a library like web3.py to check the balance of a specific cryptocurrency address on a blockchain.
3. Simulating a transaction on a testnet (e.g., Ethereum's Goerli or Sepolia) to understand gas fees and transaction confirmation.
4. Creating a comparative chart of different cryptocurrencies based on key metrics like market cap, transaction speed, and consensus algorithm.

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* New Software/Machine/Tool/Equipment/Experiment learned:

During the lab session, I used **MetaMask** as a cryptocurrency wallet, **Etherscan** and **Blockchair** as blockchain explorers to track transactions, and **CoinGecko** to analyze market data and understand the naming conventions and ticker symbols of various cryptocurrencies..

* Application of concept(s) (preferably real life scenario):

1. **Store of Value (SoV):** Bitcoin (BTC), often referred to as 'digital gold', is used as a decentralized store of value and a hedge against inflation.
2. **Smart Contract Platform:** Ether (ETH) is used primarily to pay for transaction fees and computational services on the Ethereum network, powering decentralized applications (dApps).
3. **Private Transactions:** Cryptocurrencies like Monero (XMR) and Zcash (ZEC) are used in scenarios requiring enhanced financial privacy and untraceable transactions.

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* Case Studies/Examples:

1. **Cross-Border Remittances:** Cryptocurrencies like Ripple (XRP) and Stellar (XLM) are used by financial institutions to facilitate fast and low-cost cross-border money transfers, challenging traditional systems like SWIFT.
2. **Decentralized Finance (DeFi):** Tokens like Aave (AAVE) and Uniswap (UNI) are used within their respective DeFi platforms for lending, borrowing, and liquidity provision, creating an alternative financial system.
3. **Supply Chain Management:** VeChain (VET) is used by enterprises to track the authenticity and lifecycle of products, from production to delivery, ensuring transparency and combating counterfeit goods.

Assessment:

Marks Obtained: ..... / 10

Signature of the Faculty:

Signature of the Student:

Name : PN Archana

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** As applicable according to the topic.*
One sheet per topic (10-20) to be used.