

HOME ASSIGNMENT - 4

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1. Short notes on Ethereum (ETH):

ETH is the native cryptocurrency of the ethereum blockchain. It powers all transactions and operations within the ethereum ecosystem, such as executing smart contracts and applying dApps.

Uses:

1. Transaction fees
2. Smart contract execution
3. staking.

Significance:

- Facilitates decentralized finance apps.
- Integral to non-fungible tokens and tokenization.

2. Advantages of Tangle (IOTA) over Traditional blockchain

Tangle is IOTA's unique distributed ledger technology that does not rely on a blockchain structure but instead uses a directed Acyclic graphs.

Key Advantages:

1. Scalability.
2. Zero transaction fees.
3. Light efficient
4. Decentralization.

5. Energy efficiency.

3. Blockchain can enable secure, seamless access to EHR's across different healthcare facilities.

Implementation:

1. Decentralized data storage:

Patient records are stored on a blockchain, ensuring tamper-proof access.

2. Smart contracts:

Define rules for accessing records.

3. Interoperability:

• Data can be shared across facilities in real-time eliminating silos.

4. Encryption:

• Ensures privacy, with only authorized parties able to decrypt data.

Benefits:

- Enhanced data security and privacy
- Reduced administrative inefficiencies.
- Better continuity of care.

4) International goods Transportation system using blockchain:

Blockchain revolutionizes international goods transportation by addressing inefficiency and enhancing transparency.

1. Smart contracts:

- Automate customs clearance, tariff payments and insurance claims.

2. Immutable ledger:

- Tracks goods throughout their journey from origin to destination.
- Provides a real time visibility to stakeholders.

3. Tokenization:

- Goods are represented as digital tokens, simplifying ownership transfer.

Benefits:

- Reduces fraud and errors.
- Speeds up processes.
- Enhances trust between international partners.

5. Blockchain based supply chain financing for farmers:

Blockchain can transform supply chain financing by enabling transparent and efficient credit

1. Data collection
2. Data as collateral
3. Smart contracts
4. Instant financing.

Benefits:

- Reduces dependency on traditional credit assessments
 - Enhances trust and reduce disputes.
 - Promotes financial inclusion
6. Cross-Border payments and KYC in blockchain:
by reducing costs, increasing speed and ensuring compliance

- Payments are processed on a blockchain network without intermediaries.
- Cryptocurrencies or stable coins are used for seamless transactions.

Advantages:

1. Saves time and resources.
2. Improves compliance with regulations.
3. Enhances data privacy.