

Q1.

### **Tier 1 - Blockchain 1.0**

Blockchain 1.0 has some features like these, Primarily used for cryptocurrencies like Bitcoin. It includes core applications such as payments and financial transactions.

Practical Examples -

Bitcoin is the most prominent example of a Tier 1 blockchain, serving as a decentralized digital currency.

### **Tier 2 - Blockchain 2.0**

Blockchain 2.0 has some features like these, Used by financial services and support smart contracts. It incorporates applications beyond currency and finance, such as derivatives, options, swaps, and bonds.

Practical Example: Ethereum is a leading example of a Tier 2 blockchain. It enables developers to create and deploy smart contracts, which are self-executing agreements with predefined conditions.

### **Tier 3 - Blockchain 3.0**

Blockchain 3.0 has some features like these, Used to implement applications beyond the financial services industry in various sectors like government, health, media, arts, and justice.

Practical Examples- Ethereum, Hyperledger, and other newer blockchain platforms that support smart contracts are considered part of this tier, enabling a wide range of decentralized applications.

### **Tier X - Vision of Blockchain Singularity**

Blockchain 3.0 has some features like these, Envisions a public blockchain service available for all realms of society. It involves a decentralized system with intelligent autonomous agents interacting on behalf of people and regulated by code.

Practical Examples- The concept of Tier X is more of a visionary perspective and doesn't have a specific practical example at this time. It represents the future aspirations of blockchain technology's potential.

Q2.

A. Deciding whether national security information should be centralized or decentralized depends on the specific security needs, collaboration requirements, and risk assessment of the application. So in my point of view, I think a decentralized system is better for the government because it has more transparency to people than a centralized system.

B.

<b>Advantages of Decentralization</b>	<b>Disadvantages of Decentralization</b>
Transparency - Enables better scrutiny and fair practices.	Complexity - Requires specialized expertise for management and security.
Resilience - Makes the system less susceptible to failures or attacks.	Coordination Challenges - Achieving consensus might lead to coordination difficulties.
Data Integrity: Ensures data integrity and prevents unauthorized modifications.	Security Risks - Poorly secured systems may expose the data to unauthorized access.