Day 2 Blockchain Notes

Blockchain in Banking & DeFi (Decentralized Finance):

Blockchain is transforming the traditional financial system by eliminating intermediaries and enabling faster, cheaper, and more secure transactions.

- **Cross-Border Payments**: Blockchain allows for faster and cheaper international money transfers. Traditional banking systems involve multiple intermediaries, each taking a cut of the transaction fee. Blockchain eliminates the need for intermediaries, reducing costs and transaction time.

Example: Ripple (XRP) is used by financial institutions to facilitate cross-border payments. Ripple's blockchain network enables instant international transfers, bypassing the delays and high fees associated with traditional bank transfers.

- **Decentralized Finance (DeFi)**: DeFi platforms provide financial services like lending, borrowing, and trading, all built on blockchain technology. DeFi removes the need for banks and other intermediaries, making financial services more accessible to everyone.

Example: Aave is a DeFi lending protocol that allows users to lend their cryptocurrencies and earn interest without needing a bank. Borrowers can also take out loans by collateralizing their crypto holdings.

Blockchain Beyond Money:

Blockchain is not limited to financial transactions. It has numerous other applications that are transforming industries around the world.

- **Digital Identity**: Blockchain can provide secure, decentralized identities that are immune to fraud and identity theft. Instead of relying on a centralized authority (like a government or corporation), blockchain allows users to own and control their digital identity.

Example: Estonia's e-Residency program enables global citizens to establish a secure digital identity and access government services online, such as signing documents and starting a business.

- **Government Uses**: Governments can use blockchain for secure voting, land registry management, and more. Blockchain's transparency and immutability make it an ideal tool for improving the security and efficiency of public services.

Example: Blockchain can be used to create tamper-proof voting systems, ensuring the integrity and transparency of elections.

- **NFTs (Non-Fungible Tokens)**: NFTs are unique digital assets that are stored on the blockchain. Unlike cryptocurrencies (which are fungible), NFTs represent one-of-a-kind items, such as digital art, collectibles, or even real estate.

Example: In 2021, a digital artwork by Beeple, titled "Everydays: The First 5000 Days," was sold as an NFT for $69 million, demonstrating the potential of NFTs in the art world.