SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107 An Autonomous Institution Accredited by NBA – AICTE and Accredited by NAAC
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING IOT Including CS&BCT
COURSE NAME : DISTRIBUTED LEDGER TECHNOLOGY

TOPIC: Industry applications of Blockchain

Introduction to Blockchain in Industry

Blockchain technology is transforming industries by enabling secure, transparent, and decentralized record-keeping. It eliminates the need for intermediaries, reduces fraud, and ensures trust through consensus mechanisms. With features like immutability and cryptographic security, blockchain is being adopted far beyond cryptocurrency — from finance to healthcare and even agriculture.

Finance and Banking

:Blockchain is revolutionizing financial services by enabling faster, cheaper, and more secure transactions.

- Cross-border Payments: Traditional transfers can take days and incur high fees. Blockchain enables near-instant global payments at lower costs.
- Smart Contracts: These self-executing contracts reduce the need for legal intermediaries and automate processes like loan disbursement or insurance claims.
- Fraud Reduction: Transactions are traceable and immutable, making fraudulent activity much easier to detect and prevent.
- Digital Identity: Banks use blockchain to verify identity with reduced risk of forgery or theft.

Healthcare, Supply Chain, and Real Estate

Blockchain offers solutions to key challenges in various sectors beyond finance.

- Healthcare: Medical records stored on blockchain are tamper-proof and accessible only to authorized personnel. This improves patient data privacy and sharing between institutions.
- Supply Chain Management: Blockchain tracks goods from origin to delivery, ensuring transparency, reducing counterfeits, and building consumer trust.
- Real Estate: Property transactions and title deeds can be digitized, eliminating paperwork, reducing fraud, and speeding up deal closures.

Other Emerging Use Cases

The flexibility of blockchain is leading to innovation across emerging and traditional industries.

- Voting Systems: Blockchain-based voting is secure and verifiable, reducing election fraud and increasing public trust.
- Energy Sector: Peer-to-peer energy trading platforms use blockchain to let households buy and sell excess energy from solar panels.
- Entertainment and NFTs: Artists and creators tokenize their work on blockchain platforms, protecting ownership and enabling direct sales via NFTs.
- Education: Diplomas and certificates stored on blockchain are easily verifiable by employers, reducing credential fraud.