

**Maharaja Surajmal Institute of Technology**  
**Department of Computer Science and Engineering**

**Report on Blockchain Workshop**

<b>Name of the Expert</b>	<b>Mr. Ajay Katana, Chief Technical Officer, GeeksforGeeks</b>
<b>Date and Time</b>	<b>17-11-2025 , 10:00 AM – 4:00 PM</b>
<b>Target Audience</b>	<b>B.Tech 3rd year Students</b>
<b>Total Students</b>	<b>50</b>
<b>Organised By</b>	<b>CSE Department</b>

### **Introduction**

On **17th November 2025** at **Maharaja Surajmal Institute of Technology (MSIT)**, Janakpuri, conducted an extensive offline Blockchain Workshop facilitated by Geeks of Gurukul (GoG). The expert speaker , **Mr. Ajay Katana** delivered an in-depth session on Blockchain, Web 3.0 and smart contract development. The workshop aimed to equip students with hands-on experience in wallet creation, MetaMask usage, Remix IDE, smart contract deployment and GitHub project uploading.

### **Objective of the Session**

The main objectives of the workshop were:

- To introduce students to **Blockchain technology** and its importance in the modern digital world.
- To explain Web 3.0 concepts, decentralized applications and real-world use cases.
- To provide hands-on experience with MetaMask wallet creation and blockchain transactions.
- To train students in Solidity basics and smart contract development using Remix IDE.
- To guide students in deploying smart contracts on test networks.

- To help students upload their blockchain project files on GitHub for portfolio enhancement.



## Session Highlights

Mr. Ajay Katana began the session by explaining the foundations of Blockchain — a decentralized, distributed ledger technology designed to ensure transparency, security, and immutability of digital transactions. He connected Blockchain’s relevance with industries such as finance, healthcare, supply chain, and digital identity.

### What is Blockchain?

Blockchain is a distributed database that stores information in blocks linked using cryptography. Each block contains transaction data, a timestamp, and a hash of the previous block. This structure ensures tamper-proof records and decentralized control, removing the need for third-party intermediaries.

### Why Blockchain is Used?

- Ensures transparency and trust in digital transactions.
- Removes the need for central authorities.

- Provides high-level security through cryptographic hashing.
- Supports decentralized applications (DApps) and smart contracts.
- Enables secure digital asset management, NFTs, and tokenization.

### **Importance of Blockchain**

- Highly secure due to decentralized verification.
- Immutable records prevent fraud and unauthorized changes.
- Basis of Web 3.0 — the next generation of the internet.
- Supports global digital currencies and decentralized finance (DeFi).
- Enhances trust and efficiency across industries.



## **Tools and Technologies Covered**

### **MetaMask Wallet**

Students learned how to install and set up the MetaMask wallet, create accounts, manage seed phrases, and connect to different blockchain networks such as Ethereum and testnets.

## **Remix IDE**

The trainer demonstrated how to write, compile, and deploy Solidity smart contracts in Remix IDE. Students implemented a simple contract and understood the structure of Solidity source code.

## **Hands-on Smart Contract Project**

A complete hands-on project was included in the workshop. Students created and deployed a simple Ethereum-based smart contract.

Project tasks included:

- Writing a Solidity contract to store and retrieve values
- Compiling the contract and fixing errors
- Deploying it on an Ethereum test network
- Connecting MetaMask with Remix
- Executing smart contract functions
- Viewing deployment details on blockchain explorers

## **GitHub Project Upload and Deployment**

The session also covered how to upload smart contract files and project components on GitHub. Students created repositories, added project files, wrote documentation, and pushed updates to maintain their portfolios.

## **Student Interaction and Q&A Session**

Students actively participated by asking questions related to Blockchain scalability, smart contract security, career opportunities in Web 3.0, and industry adoption of decentralized systems. The speaker clarified their doubts and encouraged them to continue experimenting with smart contract development.



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## **Conclusion**

The Blockchain Workshop provided students with both conceptual knowledge and practical skills in Blockchain, Web 3.0, MetaMask, Remix, core and smart contract deployment. The hands-on project and GitHub training strengthened their understanding and readiness for future opportunities in decentralized technologies. We express our gratitude to Mr. Ajay Katana, Geeks of Gurukul, and the CSE Department for organizing an insightful and impactful session.

## **Faculty Co-ordinators:**

Dr. Sapna Malik

Dr. Medhavi Malik

Ms. Sabnam Sangwan

## **HOD CSE (First Shift):**

Dr. Geetika Dhand

## **HOD CSE (Second Shift):**

Dr. Nishtha Jatana