A Report on
Five-day Faculty Development Program on
"Foundations of Blockchain and Solidity: A Practical Workshop"
Organized by
Department of Computer Science and Engineering- Artificial Intelligence
in association with Department of Computer Applications
from 12.07.2025 to 16.07.2025

Report Submitted by: Mr. Pala Hanok, Assistant Professor, Department of Computer Applications.

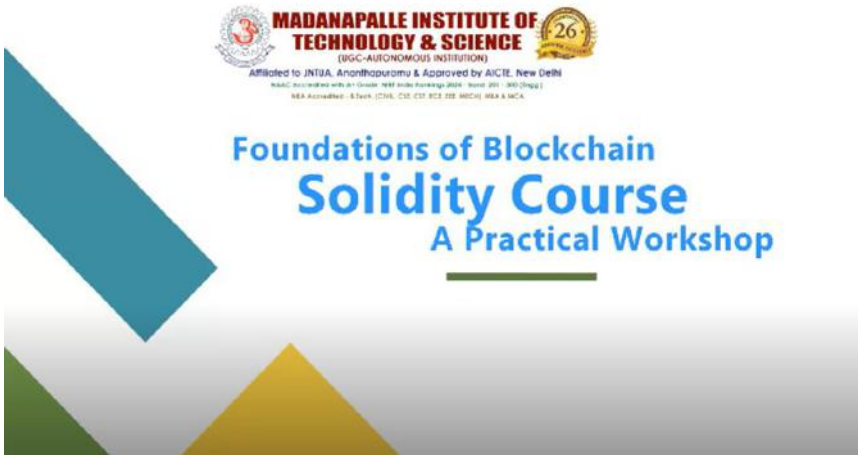
Resource Person Details: Dr. K. Chokkanathan, Assoc. Professor & Head, Dept of CSE(AI) and Mr. G. R. Hemanth Kumar, Assistant Professor, Department of MCA.
Event Coordinators: Mr. K. Mahammad, Assistant Professor, Department of CSE(AI), Mr. Pala Hanok, Assistant Professor, Department of MCA.
No. of Participants: 35
Timings: 10.00 AM to 04.30 PM
Mode of Conduct: Online
Report Received on 24.07.2025.

Introduction:

The Department of CSE (AI) and PAARC Cell organized a Five-Days Online Faculty Development Program titled *"Foundations of Blockchain and Solidity: A Practical Workshop"* from **12th July 2025 to 16th July 2025**. The aim of the FDP was to enhance the technical knowledge and practical skills of faculty members in the rapidly evolving domain of Blockchain Technology. The sessions were designed to offer a balanced mix of theoretical foundations and hands-on experience, focusing particularly on the Solidity programming language and Ethereum smart contract development using tools such as Remix IDE. The program included interactive discussions, real-time demonstrations, and regular doubt-clearing sessions to ensure comprehensive understanding.

FDP Objectives:

The primary objective of the FDP was to equip faculty members with a solid understanding of Blockchain concepts and the technical expertise required to develop decentralized applications. The program was intended to bridge the gap between theoretical knowledge and practical implementation. It aimed to introduce the participants to Blockchain architecture, help them understand smart contract development using Solidity, and enable them to explore in the domain of Blockchain Technology & Solidity through hands-on exercises. By the end of the FDP, participants were expected to be capable of developing simple Blockchain-based applications and smart contracts on a local test environment.



Inauguration:

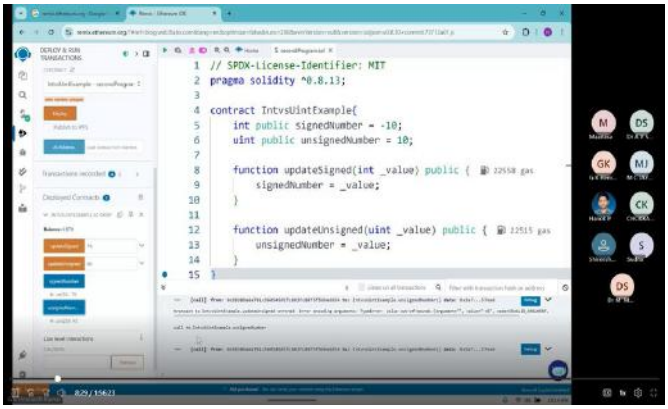
The FDP commenced on **12th July 2025** with an inauguration held from 10:00 AM to 10:30 AM. The event was graced by Dr. P. Ramanathan, Vice Principal Academics, Dr. D. Pradeep Kumar, Head of PAARC Cell, Dr. K. Chokkanathan, Head of the Department of CSE (AI), the coordinators of the program, who delivered encouraging messages about the significance of adopting emerging technologies such as Blockchain in academic and research domains. The inauguration set a positive tone for the five days FDP and highlighted the institution's commitment to enhance the faculty's skills through faculty development programs (FDPs).

Day-wise Topics Covered:

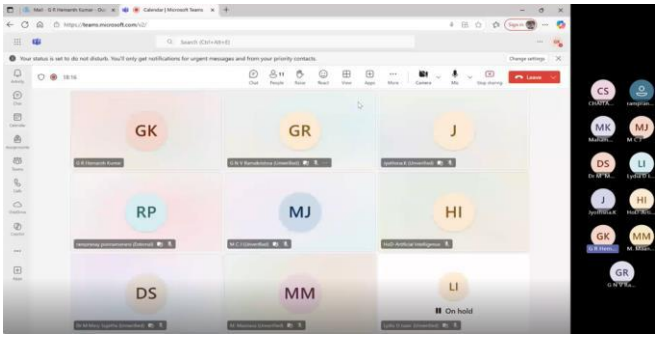
Day 1 (12th July 2025), the forenoon session began with an introduction to Blockchain delivered by Dr. K. Chokkanathan, Head of the Department of CSE (AI), covering topics Introduction of Blockchain Technology and its types, the concept of the Merkle Tree, and followed by a Question & Answers and doubt-clearing session. In the afternoon, the participants were introduced to Ethereum and guided through setting up the Remix IDE, concluding with an interactive discussion to address queries.

Day 2 (13th July 2025) focused on understanding fundamental data types in Solidity such as uint, bool, address, bytes, and string. The afternoon session addressed the use of variables, specifically state and local variables. Each session concluded with a dedicated Q&A segment to ensure clarity. The sessions were hands-on and supported by clear explanations and real-time implementation examples.

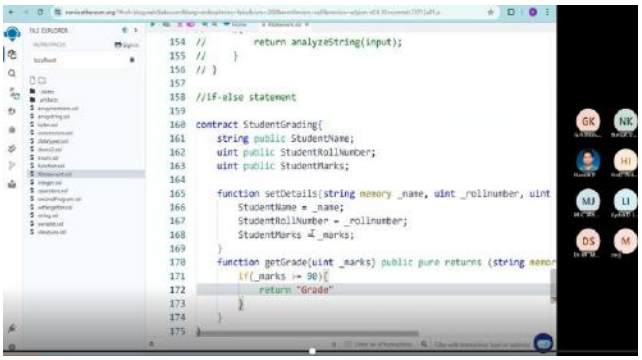
Day 3 (14th July 2025) began with defining and using functions in Solidity programming. In the afternoon, the topics shifted to using getter and setter functions and performing basic arithmetic operations in smart contracts. The sessions were hands-on and supported by clear explanations and real-time implementation examples.



Day 4 (15th July 2025), the forenoon session covered view and pure functions, along with gas cost considerations. The afternoon session introduced conditional statements and looping constructs, essential for writing logic-based smart contracts. The sessions were interactive, allowing participants to practice and clarify their doubts.

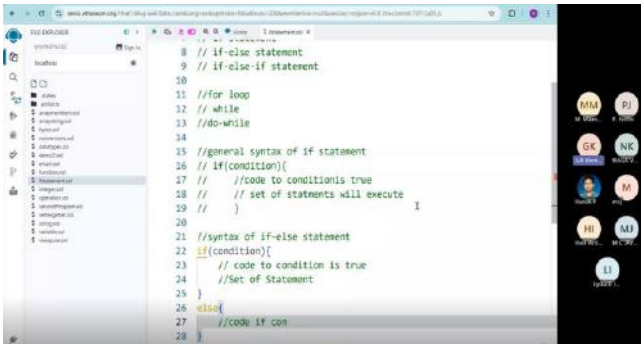


Day 5 (16th July 2025) covered complex data structures in Solidity such as structs, arrays, enums, and mappings in the morning session. In the afternoon, participants worked on a mini-project involving the development of a simple smart contract and deploying it on a local Blockchain environment. The day ended with a feedback session, validation, and closing remarks by the organizing team.



Resource Persons:

The sessions were led by two experienced resource persons: **Dr. K. Chokkanathan** and **Mr. G. R. Hemanth Kumar**. Both speakers have shared knowledge in the domain of Blockchain Technology with the participants and practical experience in the field of Blockchain Technology & solidity programming. Their sessions were well-structured, engaging, and focused on bridging the gap between theoretical understanding and practical application. The participants found the content highly relevant and appreciated the hands-on demonstrations provided during the workshop.



Participation and Engagement:

The FDP witnessed enthusiastic participation from faculty members of various engineering and technology institutions. Participants actively engaged in the sessions, posed insightful questions, and demonstrated keen interest during the hands-on exercises. The interactive nature of the sessions, coupled with the clarity of instruction, ensured that the learning objectives were effectively met. Feedback collected from participants indicated high levels of satisfaction and a desire for more advanced-level workshops in the future.

Vote of Thanks:

At the conclusion of the FDP, a formal vote of thanks was delivered by the Coordinator, Mr. K. Mahammad. He expressed gratitude to the resource persons for their invaluable contributions and to the participants for their active involvement. A special appreciation was extended to the Management, Principal, Vice Principals, Head of Department of CSE (AI), PAARC Cell, and the entire organizing team for their constant support and encouragement. The vote of thanks concluded with best wishes to all participants in applying their newly acquired knowledge in their teaching and research activities.

Event Outcome:

The Five-Day FDP on *Blockchain Development with Solidity* proved to be a highly successful and enriching learning experience. It fulfilled its objective of equipping faculty members with foundational and technical knowledge in Blockchain. The hands-on sessions, combined with expert instruction, ensured a meaningful and impactful program. The positive feedback from participants reflects the effectiveness of the program and the relevance of the topics covered. The organizing team expresses sincere thanks to all stakeholders who contributed to the success of this initiative.