Dr. AKHILESH DAS GUPTA INSTITUTE OF PROFESSIONAL STUDIES

FC-26, SHASTRI PARK, NEW DELHI.

Department of Computer Science & Technology

Date: 9th September 2026

REPORT

on

Expert Lecture- "Full Stack Development"

Date of Event: 9th September 2026

Venue: 2nd Block Seminar Hall, ADGIPS

Time: 10:15 AM ONWARDS

Objectives:

The primary objective of this expert lecture was to provide a comprehensive and rigorous exploration of how full-stack skills power modern, end-to-end web applications in a production environment. The session aimed to shift the attendees perspective from merely writing basic User Interfaces (UI) or isolated Create, Read, Update, Delete (CRUD) endpoints to deeply understanding the entirety of the request lifecycle. Furthermore, it sought to bridge the gap between academic programming and industry-grade engineering by demonstrating how abstract business ideas—such as delivering everyday products quickly—are translated into concrete engineering requirements

Organizers:

The guest lecture was organized by the **Department of Computer Science & Technology, ADGIPS.**

Activities:

The distinguished speaker for the lecture was Mr.Sahil Malik, an experienced Full Stack Developer. The session commenced with Mr. Malik introducing the concept of software architecture, defining it as a necessary trade-off among simplicity, delivery speed, team boundaries, reliability, and operational complexity. He detailed the distinctions between Monolithic, Microservices, Event-Driven (EDA), and Serverless architectures, explicitly advising against choosing micro-services merely because a system is 'large' without first experiencing organizational or scaling bottlenecks that justify the network overhead.

Key Takeaways:

- **Architecture Realities:** Learned to start with a simple monolith and adopt micro-services only when scaling requirements demand it.
- **Database Integrity & ACID:** The session highlighted the importance of ACID properties—Atomicity, Consistency, Isolation, and Durability—in maintaining reliable transactions and ensuring proper rollback during failures.
- **Performance Optimization:** Mr. Malik explained the use of Redis for caching frequently accessed data and background workers for handling asynchronous tasks, improving response times and reducing database load.
- **Progressive Scaling:** Attendees learned a step-by-step approach to application scaling, using indexing, load balancing, multiple instances, queues, caching, and database scaling as user demand increases.

Description:

The expert lecture titled " Full Stack Development " was meticulously designed to provide a panoramic view of modern web engineering. Mr. Sahil Malik structured the discourse around a highly relatable quick-commerce business use-case involving co reactors like customers, store staff, delivery partners

and admins. By using this unified example, he seamlessly connected disparate technology stacks, mapping frontend tools (HTML, CSS, JavaScript, React, Next.js) to their backend API counterparts (REST, Graph QL, Web Sockets) and durable data layers (Postgre SQL).

Outcomes:

The intensive session significantly elevated the technical maturity of the attendees, equipping them with an industry-aligned "production mindset". Students are now highly capable of structuring their academic and personal projects with clear boundaries between user interface responsibilities and protected backend data operations.

Beneficiaries:

The primary beneficiaries of this technical lecture were the students and faculty members of the Computer Science and Technology (CST) department (List attached). The insights provided directly bridged theoretical computer science principles with pragmatic, modern software engineering. Indirectly, this will immensely benefit students in improving their coding practices for hackathons, enhancing their readiness for technical placement interviews, and allowing them to architect highly scalable, full-stack final-year academic projects.

Info-graphics:



Photographs of event:

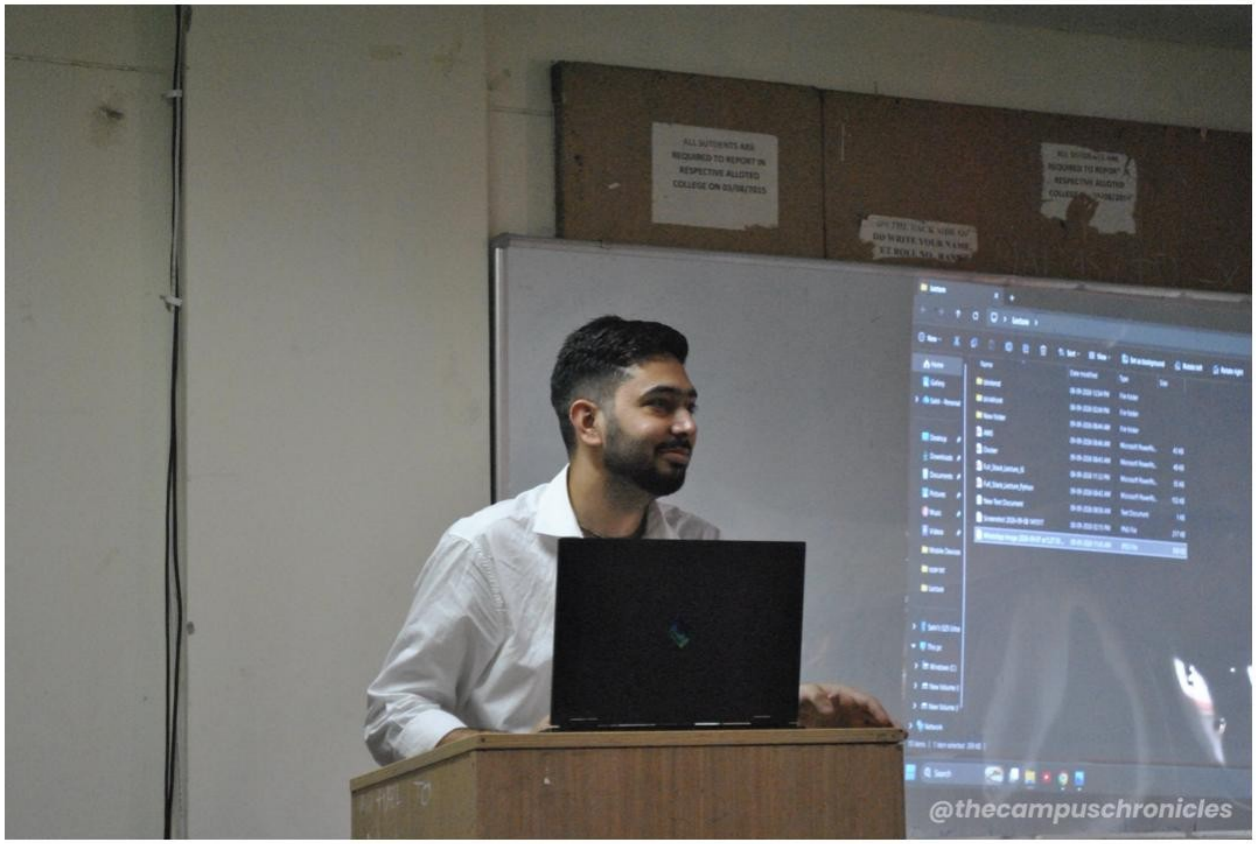


Respected Prof. (Dr.) Niranjan Bhattacharyya (Director Sir) welcoming the speaker before the commencement of the Expert Lecture on " Full Stack Development" in the Seminar Hall, ADGIPS, New Delhi

Photographs of event:



The anchors introducing the session and setting the context for the event, ensuring a smooth and engaging start. They also briefed the audience about the speaker and the key highlights of the session on “Full Stack Development.”



Mr. Sahil Malik, the speaker of the event, delivering an insightful introductory session on Full Stack Development, highlighting its key concepts, technologies, and applications during the online expert lecture.



Faculty members along with the students attending the Expert Lecture delivered by Mr. Sahil Malik on “Full Stack Development”



Faculty members and student coordinators posing for a group photograph in Seminar hall after the Expert lecture by Mr. Sahil Malik on Expert Lecture on **"Full Stack Development"**

Ms. Sunidhi

(Faculty Event Coordinator)

Prof. (Dr.) Suman Bhatia

(Head, CST Department)