PRAGATI ENGINEERING COLLEGE

(AUTONOMOUS)

DEPARTMENT OF CSE (DATA SCIENCE)

Date:06-10-2025

A Report on the Student Workshop on "Java Spring Framework Ecosystem for Building Data-Driven Enterprise Applications"

As part of the technical activities under the **Society for Data Science – Student Chapter** of the Department of CSE (Data Science), this event was conducted.

Title: Java Spring Framework Ecosystem for Building Data Driven Enterprise Applications

Date: 22-09-2025 to 26-09-2025

Time: 9:00 AM – 4:00 PM

Venue: F-6

Mode: Offline

Resource Person: Speakers from M/s. Revanth Software Solutions Pvt. Ltd., Hyderabad

Organized by: Department of CSE (Data Science)

Brief write-up of the event:

The **Department of CSE (Data Science)** at **Pragati Engineering College** organized a **5-day expert workshop and hackathon** titled "Java Spring Framework Ecosystem for Building Data-Driven Enterprise Applications" from **22nd to 26th September 2025.** The workshop was conducted under the **Society for Data Science – Student Chapter** in association with M/s. Revanth Software Solutions Pvt. Ltd., Hyderabad.

The workshop aimed to provide participants with a comprehensive understanding and hands-on experience in the **Spring Framework ecosystem,** focusing on building scalable, data-centric enterprise applications. The sessions covered **Spring Boot, Spring MVC, Spring Data JPA, RESTful APIs,** and integration techniques used in modern enterprise software development.

The event provided a platform for students to learn directly from industry professionals, engage in interactive discussions, and gain practical exposure to developing real-world Java-based enterprise solutions.

DAY-BY-DAY SUMMARY:

Day 1: Introduction to the Spring Framework and Core Concepts

The first day focused on the architecture and fundamental principles of the Spring Framework, including dependency injection, inversion of control (IoC), and application layering. Participants learned about setting up Spring projects and understanding configuration-based development.

Day 2: Working with Spring Boot and Application Development

Sessions covered Spring Boot features, auto-configuration, and the creation of RESTful web services. Students built and executed simple Spring Boot applications and explored how to manage project dependencies effectively.

Day 3: Spring Data JPA and Database Integration

Participants gained insight into database operations using **Spring Data JPA**, including entity mapping, repository interfaces, and CRUD operations. Hands-on exercises helped students connect Spring Boot applications with relational databases.

Day 4: Building Data-Driven Enterprise Applications

Students applied the learned concepts to build complete data-driven applications integrating backend logic, service layers, and front-end interfaces. The resource persons demonstrated best practices for data management, exception handling, and deployment.

Day 5: Hackathon and Project Presentation

On the final day, a **Hackathon** was organized to assess the participants' learning. Students worked in teams to design and implement enterprise-level data-driven applications using the Spring Framework. The top **six teams** were selected as winners based on innovation, functionality, and technical execution.

- **First Prize** – Rs. 2000 and Merit Certificate
- **Second Prize** – Rs. 1500 and Merit Certificate
- **Third Prize** – Rs. 1000 and Merit Certificate

Three additional teams received **Merit Certificates** for outstanding participation.

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HIGHLIGHTS AND KEY TAKEAWAYS:

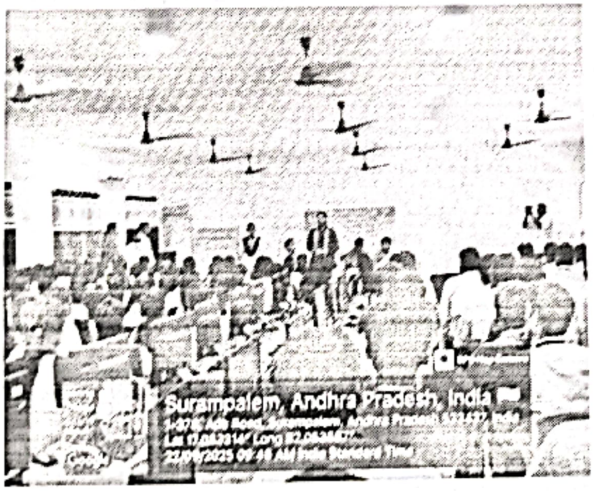
Highlights:

- Expert-led sessions by industry professionals from Revanth Software Solutions Pvt. Ltd.
- Practical exposure to building and deploying Spring Boot applications.
- Real-time database integration using Spring Data JPA.
- A hands-on Hackathon promoting creativity and teamwork.
- Academic–industry collaboration enhancing professional learning outcomes.

Key Takeaways:

- Clear understanding of Spring Framework architecture and components.
- Practical skills in developing and deploying Java-based enterprise applications.
- Knowledge of building RESTful APIs and managing data with JPA.
- Exposure to real-world software development workflows.
- Motivation to explore advanced topics such as microservices and cloud deployment.

PHOTOGRAPHS FROM THE EVENT:



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7/10/25

HoD-CSE (Data Science)

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Encl:

Attendance list of students