LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

One day workshop on"3-Tier MVC Architecture Project Implementation"

Event Type : Workshop

Date : 22nd March 2025

Venue : SRK hall,, 2nd Floor,admin block.

Resource Person(s) : **Dr.Venkat**,
Director of Alladi Cloud Solutions,
Mr.Vishnu, Techinical Assistance,
Mr.S.Siva, Co-Founder of Alladi Cloud Solutions

Name of the Convener : **Dr.D.Veeraiah**, Professor &HoD,Department of CSE

Name of the Co-Convener : **Dr.J.Nageswara rao,**professor,Dept.of CSE

Name of the Co-ordinators(s) : **Mr.O.V.Siva,** Sr. Asst.Prof, Dept of CSE

In Association With : **Alladi Cloud Solutions Pvt. Ltd..**
ACM Student Chapter

Targeted Audience : B.Tech VI Sem CSE Students

Total No.of Students : 280 Students

Objective of the Event:

The objective of event Implementing a **3-Tier MVC (Model-View-Controller) Architecture** in a project provides students with valuable learning experiences and practical exposure to real-world software development. This architecture helps in structuring applications efficiently by dividing them into three distinct layers: the **Presentation Layer (View), Business Logic Layer (Controller), and Data Layer (Model).** By working on such a project, students gain hands-on experience in building scalable and well-organized applications.

Learning Objective of the event:

- **Improved Understanding of Software Architecture**: Students gain a deeper understanding of how applications are structured in layers. They learn how the Presentation Layer (View), Business Logic Layer (Controller), and Data Layer (Model) work together.
- **Better Code Organization & Maintainability:** The project becomes modular, making it easier to maintain and extend. Encourages separation of concerns, reducing code duplication and making debugging easier.

- **Enhanced Problem-Solving & Debugging Skills:** Students learn how to trace errors efficiently by identifying which layer is causing an issue. Debugging becomes more structured, as each layer has a specific responsibility**.**
- **Real-World Software Development Experience:** The MVC pattern is widely used in real-world applications, especially in web development. Students get hands-on experience in designing scalable and flexible applications.
- **Hands-On Experience with Databases & Business Logic:** They learn how to manage database interactions through the Model layer. Gain experience in handling business logic separately in the Controller, improving efficiency.
- **Improved Collaboration & Teamwork:** If implemented in a team setting, students learn version control (e.g., Git) and collaborative coding. Different team members can work on separate layers, improving parallel development.
- **Better Preparation for Job Roles & Internships:** Helps students in interviews and internships, as many companies use MVC-based frameworks. Demonstrates their ability to work on structured, scalable applications.

Description of the event :

The 3-Tier MVC Architecture Project Implementation event is designed to provide students with hands-on experience in developing structured and scalable applications using the Model-View-Controller (MVC) pattern within a three-tier architecture. This event serves as a practical learning opportunity for students to understand how modern software applications are designed, built, and maintained.

During the event, students participate in workshops, coding sessions, and collaborative discussions to implement a project using the three-tier approach. The three layers include:

Presentation Layer (View): Handles user interaction and display logic.

Business Logic Layer (Controller): Manages data processing and application logic.

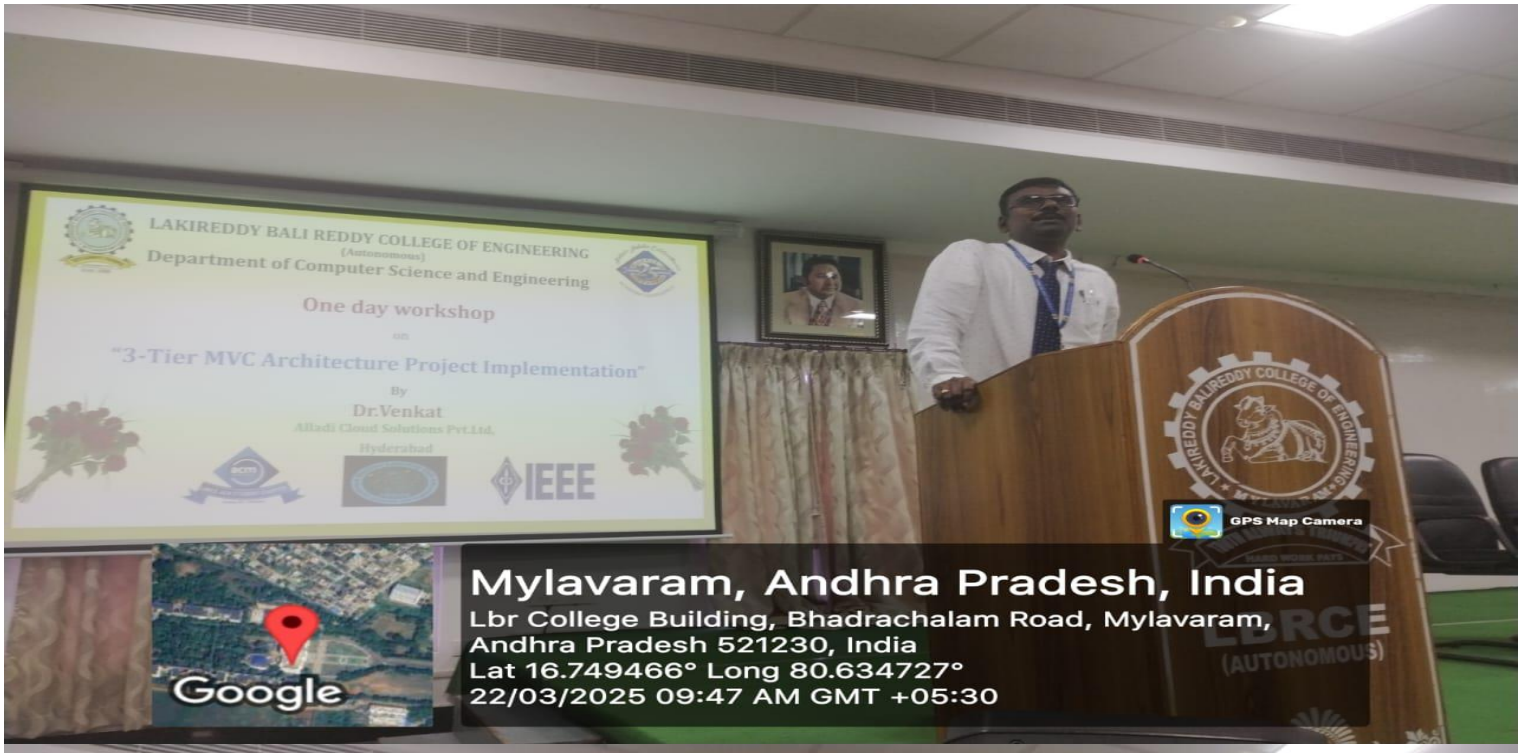
Data Layer (Model): Interacts with databases for data storage and retrieval.

The event typically begins with an introduction to the 3-Tier MVC architecture, where experts and mentors explain its importance, use cases, and benefits in software development. Students then work on real-world project scenarios, applying MVC principles using popular frameworks like Spring MVC, ASP.NET MVC, Django, or Laravel.

A major highlight of the event is the hands-on implementation phase, where students collaborate in teams to design and develop a working application. They gain experience in database management, business logic implementation, and user interface development. Through this, they also learn debugging techniques, best coding practices, and version control using Git.

The event concludes with project presentations and feedback sessions. Students showcase their work, receive expert reviews, and discuss challenges faced during implementation. This helps in refining their understanding and improving their technical skills.

Overall, the 3-Tier MVC Architecture Project Implementation event provides students with practical exposure to industry-standard software development methodologies, teamwork experience, and problem-solving skills. It prepares them for internships, job opportunities, and future software engineering projects by strengthening their understanding of structured application development.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Department of Computer Science and Engineering
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on
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By
Dr.Venkat
Alladi Cloud Solutions Pvt.Ltd,
Hyderabad
IEEE
GPS Map Camera
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Impact Analysis:

- Helps students learn how the **Model, View, and Controller** layers work together.
- Enhances logical thinking, problem-solving, and debugging efficiency.
- Encourages breaking down complex problems into structured layers.
- Makes students more competitive for internships and jobs by building real-world projects.
- Prepares students for **larger projects, advanced coding challenges, and industry practices.**

Feedback & Suggestions:

- We thoroughly enjoyed the workshop.
- By attending this Workshop, we can find project implementaion concepts challenging to grasp initially, especially the underlying 3-tier project implementation. Understanding the difference between different types of implementation (e.g., public vs. private) and how they operate can be overwhelming.
- We got to know the different challenges one can face in Industry.

Suggestions:

- More beginner-friendly resources, tutorials, and hands-on experiences could be beneficial. Offering real-world examples and case studies would help students see the practical applications of project implementation.
- Introduce a **simple MVC example** before moving to complex projects.
- Use **practical case studies** like e-commerce, hospital, or student management systems.
- Assign different **layers to team members** and encourage **Git/GitHub usage.**

Thank you so much Alladi Cloud Solutions pvt.Ltd for this one day Workshop session.

Coordinators
(Mr.O.V.Siva)

Head of the Department
(Dr.D.Veeraiah)