## J.B. INSTITUTE OF ENGINEERING&TECHNOLOGY

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BhaskarNagar, Yenkapally(V), Moinabad(M), P.O. Himayathnagar, R.R. District, Hyderabad-5000075.

# Department of Information Technology

Guest Lecture on

"Java Design Patterns"

**Date: 19th April, 2025** 

B.Tech - III Year - II Sem

A.Y: 2024 - 2025

## **Coordinators**

Mr. U. Karthik, Assistant Professor Mr. B. Bharath Kumar, Assistant Professor

## Convener

Dr. Ramesh Babu Associate Professor & Head of the Department

## **Circular**

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BhaskarNagar, Yenkapally(V), Moinabad(M), P.O. Himayathnagar, R.R. District, Hyderabad-5000075.

#### DEPARTMENT OF INFORMATION TECHNOLOGY

DATE: 11 - 04 - 2025

#### CIRCULAR

This is to inform all III Year students that the Department of Information Technology is organizing a Guest Lecture on "Java Design Patterns" on 19-04-2025 (Wednesday). The Expert Lecture will be conducted in Room No: 227 from 9:30 am onwards.

Dr. Naveen will be the resource person for the Guest Lecture, and is aimed at enhancing students' understanding of Java Design Patterns.

All Students are requested to attend and make the event a grand success.

Signature of Coordinator

Signature of HOD

## **PREAMBLE**

In the ever-evolving landscape of software development, creating flexible, reusable, and maintainable code is crucial. As applications grow in complexity, developers often face recurring challenges that demand proven solutions. Design patterns provide a time-tested approach to solving common software design problems. They encapsulate best practices and industry standards that lead to efficient and scalable software architecture.

This document/presentation explores Java Design Patterns, a collection of object-oriented solutions that simplify the development process. By understanding and applying these patterns, Java developers can improve code readability, foster better collaboration, and accelerate development cycles. The patterns discussed herein are categorized into Creational, Structural, and Behavioral types, each addressing specific design concerns in Java applications.

# A Glimpse of the Event

Welcome to "Java Design Patterns: A Glimpse of the Event", a session designed to explore the art and science of crafting robust, scalable, and maintainable software using well-established design patterns in Java.

This event offers an insightful journey through the core principles of object-oriented design, showcasing how Creational, Structural, and Behavioral design patterns can streamline development and promote best practices in real-world Java applications.

Whether you're a seasoned developer looking to refresh your architectural thinking or a learner stepping into the world of enterprise-grade Java, this event aims to:

- Demystify commonly used design patterns through practical examples and use cases.
- Bridge the gap between theory and implementation in everyday development.
- Equip attendees with reusable solutions for recurring design problems.
- Foster deeper understanding of software design principles like SOLID, DRY, and modularity.

Join us as we uncover the patterns behind powerful Java applications and empower you to write cleaner, more efficient, and future-proof code.

## Event Poster/Banner



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## **Department of Information Technology**

Guest Lecture on

"Java Design Patterns"

19th April 2025, 9:30 AM to 12:20

Venue: Information Technology Block JBIET, Hyd



Dr. Naveen

**Associate Professor** 

Department Computer Science and Engineering

## Resource Person Profile



Dr. Naveen holds a Ph.D. in Computer Science and Engineering and is a seasoned academic with deep expertise in object-oriented programming, software architecture, and enterprise-level Java development. As a scholar from the Department of Computer Science and Engineering, his research and teaching focus on designing robust, maintainable, and scalable software systems.

His work integrates academic rigor with real-world applicability, making him a sought-after speaker in the areas of software engineering and Java design. Dr. Naveen's sessions are known for their clarity, practical demonstrations, and strong industry relevance.

## Event Outcome

Upon successful completion of the Java Design Patterns program, participants will be able to:

### **Understand the Purpose of Design Patterns**

• Gain a solid understanding of the role design patterns play in software architecture and their benefits in improving code quality, flexibility, and maintainability.

### **Classify Design Patterns**

• Identify and categorize design patterns into Creational, Structural, and Behavioral types, understanding when and why to use each category.

#### **Apply Patterns to Real-World Problems**

• Analyze common software development scenarios and apply appropriate design patterns to solve problems in an efficient and scalable manner.

#### **Implement Patterns in Java**

• Write clean and modular Java code that implements widely-used design patterns such as Singleton, Factory, Builder, Adapter, Observer, Strategy, and more.

#### **Improve Object-Oriented Design Skills**

• Enhance object-oriented programming practices by following principles such as SOLID, DRY (Don't Repeat Yourself), and Separation of Concerns through pattern-based solutions.

#### **Enhance Collaboration and Communication**

• Use design pattern terminology and UML to communicate software design ideas effectively across teams and documentation.

#### Prepare for Technical Interviews & System Design

• Build confidence in discussing and applying design patterns in technical interviews, coding assessments, and system design discussions.

#### **Develop Maintainable and Scalable Applications**

• Architect solutions that are easy to maintain, extend, and test — aligning with modern software development standards.

# Photos of the Event



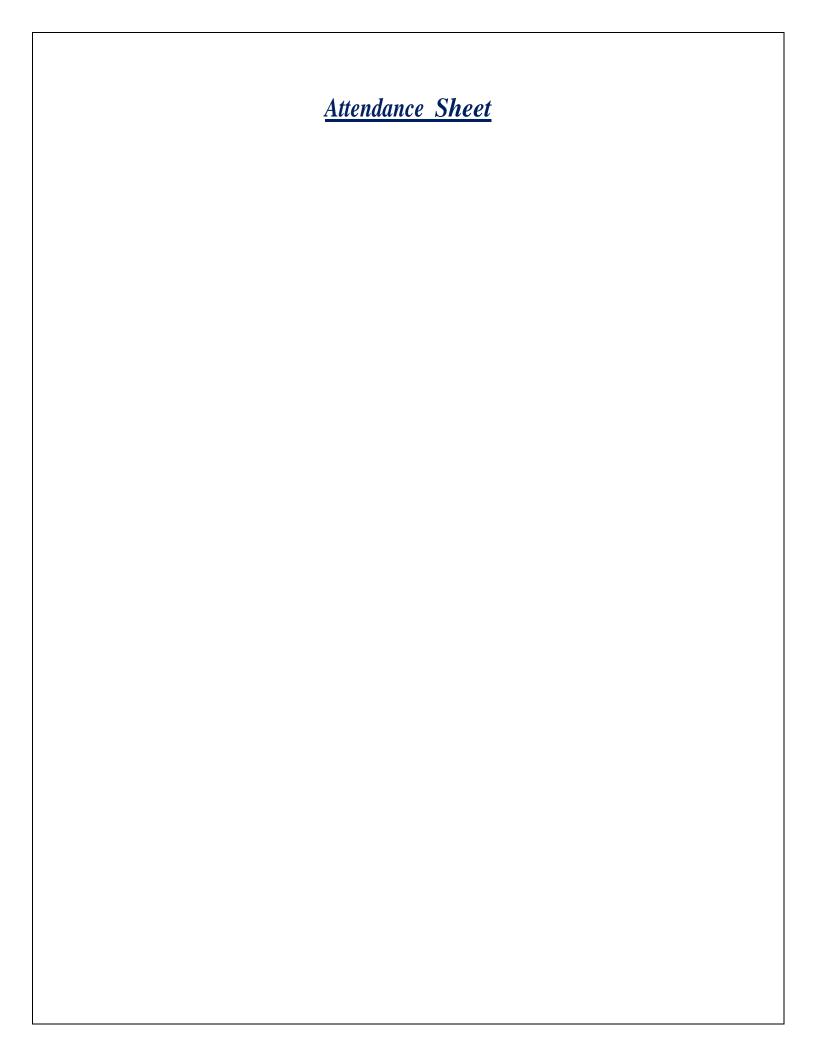
Fig 1: Resource person Dr. Naveen addressing the Students



Fig 2: Faculty Coordinator addressing the Res Person



Fig 3: Faculty coordinators along with Students





# J. B. INSTITUTE OF ENGINEERING AND TECHNOLOGY Sava Design Patterns How UGC Autonomous to write nainterable and Information Technology (Branch code: INF)

| SI.No. | Roll No.   | Name of the Student      | Signature       |
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| 2      | 22671A1202 | AUSHALA ARVIND           | ON 1            |
| 3      | 22671A1203 | B SHARONI                |                 |
| 4      | 22671A1204 | BANDARI SHARVAN          |                 |
| 5      | 22671A1205 | BANGARU HARIVARDHAN      | Harivatdhan     |
| 6      | 22671A1206 | BASSI AMOL               |                 |
| 7      | 22671A1207 | BUSANI NIKHIL            | Mikhil          |
| 8      | 22671A1208 | D SHIVAPRASAD            | Shiva           |
| 9      | 22671A1209 | DEVARA SATYANARAYANA     | Sallya          |
| 10     | 22671A1210 | DHAVANAM SANJAY          | Sanjay          |
| 11     | 22671A1211 | ELETI RAMAKRISHNA REDDY  | Ranapoishi      |
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| 45 | 22671A1246 |                           |           |
| 46 | 22671A1247 | SAVANI AKHIL              |           |
| 47 | 22671A1248 | SHAHEEN SULTANA           | Abhil     |
| 48 | 22671A1250 | SHERI KEERTHANA REDDY     |           |
| 49 | 22671A1251 | SIDDAMSHETTI NIVEDITH     | kcesthona |
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| 62 | 22671A1264 | PULLUR! GOKUL             | Gokul     |
| 63 | 23675A1201 | GURIJALA SRINIVAS RAO     |           |
| 64 | 23675A1202 | BOLLA SNEHA               | sneha     |
| 65 | 23675A1203 | KURUKNDA JASWANTH         |           |
| 66 | 23675A1204 | KONDA KAMAKSHI            | kanakshi  |
| 67 | 23675A1205 | CHAWAN RAHUL              | Rahul     |

Information Technology

J.B. Institute of Example 8. Technology

Youkapally(V), Mainabad(M), TS-500075.