



# LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

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**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**

## Report

on

### “Efficient Data Handling with Java Collections Guest Lecture”

<b>Event Type</b>	:	Guest Lecture
<b>Date(s)</b>	:	27 Oct. 2025
<b>Resource Person(s)</b>	:	Sk. Nagoor, Software Developer, Pandora R&D Labs Pvt. Ltd., Hyderabad.
<b>Name of Coordinators:</b>		Dr. B. Phani Krishna, Assoc. Professor, Dept. of AI & DS, Mr. S. Siva Rama Krishna, Sr. Asst. Professor, Dept. of AI & DS.
<b>Target Audience</b>	:	II Year B.Tech. Students
<b>Total no of Participants:</b>		141
<b>Objective of the Event</b>	:	By the end of the guest lecture, participants will be able to: <ul style="list-style-type: none"><li>▪ Understand the Java Collections Framework</li><li>▪ Select Appropriate Data Structures</li><li>▪ Analyze Performance Implications</li><li>▪ Use Collections Effectively for Data Processing</li><li>▪ Optimize Memory and Execution Efficiency</li><li>▪ Apply Collections to Real-World Use Cases</li></ul>

#### **Description of the Event:**

AI&DS department has planned to organize a Guest Lecture for II B. Tech Students and Dr. P Bhagath, Head of the Department, introduced the resource person Mr. Sk. Nagoor and welcomed all the participants to the Guest Lecture.

#### **Resource Person have discussed the following points**

##### **1. Understand the Java Collections Framework**

- Explain the purpose and architecture of the Java Collections Framework (JCF).
- Distinguish between core interfaces such as List, Set, Queue, and Map.
- Identify suitable collection types for various data-handling scenarios.

##### **2. Select Appropriate Data Structures**

- Evaluate trade-offs between common implementations like ArrayList, LinkedList, HashSet, TreeSet, HashMap, and TreeMap.
- Choose the most efficient collection based on performance needs, data size, and ordering constraints.

##### **3. Use Collections Effectively for Data Processing**

- Apply collection utilities (e.g., Collections class, Comparators) for sorting, searching, and transforming datasets.
- Utilize iterators and enhanced for-loops to traverse collections efficiently.

##### **4. Integrate Modern Java Features**

- Use **Generics** to enforce type safety in collections.
- Apply **Streams API** for declarative, efficient, and parallel data handling.

- Combine collections with **lambda expressions** for concise data manipulation.

### 5. Apply Collections to Real-World Use Cases

- Build small applications or algorithms that handle large datasets efficiently.
- Solve practical problems such as frequency counting, grouping, filtering, and caching using Java collections.

Mr. S. Siva Rama Krishna, Coordinator thanked the resource person for his valuable, outstanding, and overwhelming presentation. He expressed this guest lecture has given more knowledge on Java Collections to students insights of implementing it. He also thanked every participant for their active participation during entire session.

### Feedback/ Suggestions:

All the participants expressed very positive feedback. They expressed its an outstanding and motivational.

## Gallery of the Guest Lecture





**Dr. P. Bhagath**  
**Head of the Department**