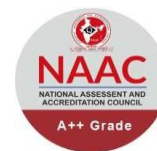**KONERU LAKSHMAIAH EDUCATION FOUNDATION**

(Deemed to be University estd, u/s, 3 of the UGC Act, 1956)

(NAAC Accredited "A++" Grade University)

Green Fields, Guntur District, A.P., India – 522502

Department of Electronics and Communication Engineering

(DST - FIST Sponsored Department)

Active Learning Method

Program: B. Tech   Academic Year / Yr-Sem : 2024 - 25 / II - II Sem

Course Title & Code: **DBMS & 23AD2102R**

Date: 13**.03.2025**   Time: Venue:

CO#	4
Topics	Indexing techniques (B- trees) for efficient data access.
Type of ALM	Case study
Learning Approach	Participatory Learning

Activity: Indexing techniques (B- trees) for efficient data access.

Task:

1. **Apply** your understanding of dynamic multilevel indexing by comparing and contrasting B-trees and B+ trees.

Feature	B-Tree	B+ Tree
Data Storage	Keys & records in all nodes	Records only in leaf nodes
Search Speed	Faster for single lookups	Efficient for range queries
Leaf Node Linking	No	Yes (linked list for fast scans)

2. Apply your knowledge to define what an index is in a database and **explain** the various types of indexing methods (primary indexing, secondary indexing).

- **Index:** A data structure that speeds up data retrieval.

- **Primary Index:** Built on the primary key, unique & ordered.

- **Secondary Index:** Created on non-primary attributes for faster searches.