VIGNAN'S NIRULA
INSTITUTE OF TECHNOLOGY & SCIENCE FOR WOMEN
(Approved by AICTE, New Delhi & Affiliated to JNTU Kakinada)
Vignan Avenue, Peda Palakaluru, Guntur - 522009
Department of Information Technology

Innovative Teaching Practice

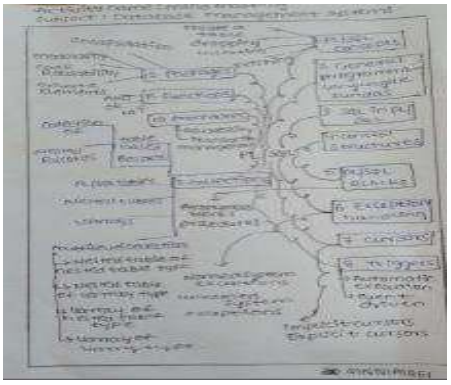
Faculty Name : Mrs.G.R.P.Kumari,Mrs.T.Anusha
Course Name : Data Base Management System
Class : II B. Tech II Semester
Academic Year : 2022-2023
Title of the Topic : SQL concept
Activity Name : Mind Mapping

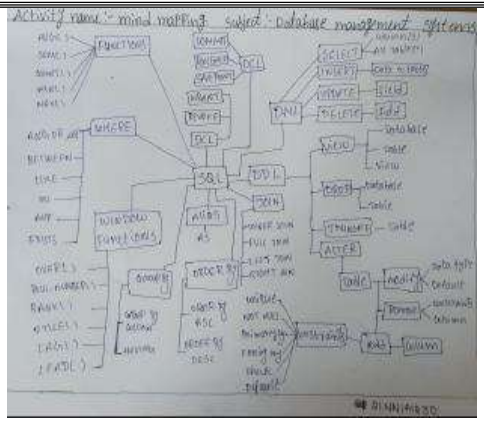
Objective:
To help students understand the fundamental concepts of SQL, including database structure, query writing, data manipulation, and relational operations, by applying practical examples and connecting theoretical knowledge with real-world applications.

Method to Implement:
Introduction: Begin with a brief explanation of SQL concepts and their importance in managing and querying databases.
Mind Map Creation:
• Provided a central topic: "SQL Concepts and Database Management." • Asked the students to branch out with subtopics such as:

- SQL Basics (SELECT, INSERT, UPDATE, DELETE)
- Database Structure (Tables, Keys, Relations)
- Data Types and Constraints
- SQL Joins and Subqueries
- Aggregation and Grouping Functions
- SQL Transactions and Normalization

• **Collaborative Activity**: Divide the class into groups to create a collaborative mind map on paper, focusing on the various SQL concepts.
• **Discussion**: Groups present their mind maps, explaining the relationships between SQL components and how they are used in real-world database applications.
Screenshots of the Practice





Central Node: SQL Concepts and Database Management

Branch 1: SQL Basics

- Sub-branches: SELECT, INSERT, UPDATE, DELETE, WHERE clause

Branch 2: Database Structure

- Sub-branches: Tables, Primary Keys, Foreign Keys, Indexes, Relationships

Branch 3: SQL Operations

- Sub-branches: Joins (INNER JOIN, LEFT JOIN, RIGHT JOIN), Subqueries, Aggregation (SUM, AVG, COUNT), GROUP BY, HAVING

Branch 4: Data Integrity and Constraints

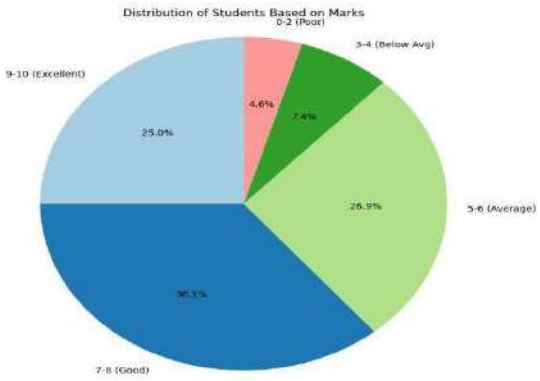
- Sub-branches: NOT NULL, UNIQUE, CHECK, DEFAULT, FOREIGN KEY

Branch 5: SQL Transactions

- Sub-branches: COMMIT, ROLLBACK, ACID properties (Atomicity, Consistency, Isolation, Durability)

Assessment Analysis

Marks Range	Number of Students	Percentage
9-10 (Excellent)	27	25.00%
7-8 (Good)	39	36.11%
5-6 (Average)	29	26.85%
3-4 (Below Avg)	8	7.41%
0-2 (Poor)	5	4.63%
Total	108	100%



Conclusion:

The mind mapping technique helped students grasp and connect key SQL concepts, making complex database management topics more comprehensible. Collaborative discussions and visualizing relationships between SQL components significantly enhanced their understanding and retention.

Signature of the Faculty **Head of the Department**