

**A Report on One-Day Alumni Hands-on Session on  
“Unleash the Power of Data with SQL”  
Organized by Department of Computer Science & Technology  
in association with MITS ITS ACM Student Chapter & MITS AWA  
on 15.11.2024.**



**Report Submitted by: Mr. P. Firoze Khan, Assistant Professor, Dept. of CST and Mr. D. Suresh, Assistant Professor, Dept. of CST**

**Resource Person Details: Ms. K. Poojitha Reddy, Software Engineer-JLL Technologies, Bangalore, India.**

**Venue and Time: Seminar Hall B and 01:00 PM to 05:00 PM**

**Participants: Total Number of participants are 92.**

**Mode of Conduct: Offline.**

**Report Received on 21.11.2024.**

The Department of CST has organized One day Alumni Hands-On Workshop on “Unleash the Power of Data with SQL” in association with MITS ITS ACM Student Chapter & MITS AWA” on November 15th, 2024 (Friday) between 01:00 PM to 05:00 PM, in Seminar Hall B.

#### **Welcome Address:**

The event commenced promptly at 01:00 PM with a warm and engaging welcome address to all by Mr. P. Firoze Khan, Assistant Professor, Department of CST, Madanapalle Institute of Technology & Science (MITS), Madanapalle. The main objective of a workshop on “Unleash the Power of Data with SQL” is to Learn the fundamental concepts of SQL, including database structure, syntax, and commands. Explore data types, tables, and relationships within relational databases. It aims to provide hands-on learning experiences, demonstrating how SQL can automate repetitive tasks efficiently. Students will learn best practices and key libraries, empowering them to develop custom SQL query solutions.

#### **Resource Person Lecture:**

The Resource Person Ms. K. Poojitha Reddy Software Engineer-JLL Technologies, Bangalore, India. With this Program the students will get the knowledge on the Power of Data with SQL and the requirements of Documentations. It aims to equip individuals with the skills, knowledge in the SQL. It seeks to individual talent by providing training, mentoring, and other necessary resources to enhance in the power of Data with SQL and improve their chances of success.

#### **Covered several important topics, such as:**

##### **1. Understanding the Basics of SQL**

- Learn the fundamental concepts of SQL, including database structure, syntax, and commands.
- Explore data types, tables, and relationships within relational databases.

##### **2. Database Management Skills**

- Understand how to create, modify, and delete databases, tables, and schemas.
- Master key database operations such as inserting, updating, and deleting data.

### 3. Data Retrieval and Analysis

- Learn how to retrieve specific data using SQL queries (e.g., SELECT statements).
- Master filtering (WHERE clause), sorting (ORDER BY), and grouping (GROUP BY) for meaningful data analysis.

### 4. Advanced Query Techniques

- Explore advanced SQL functions such as joins (inner, outer, cross), subqueries, and set operations (UNION, INTERSECT).
- Work with aggregate functions like SUM, COUNT, AVG, and MAX.

### 5. Data Manipulation and Transformation

- Practice manipulating and transforming datasets for reporting and visualization.
- Use SQL to clean, normalize, and pre-process data for advanced analytics.

### 6. Practical, Real-World Applications

- Solve real-world problems by analyzing trends, generating reports, and creating dashboards.
- Work on practical projects to reinforce learning and demonstrate expertise in SQL.

### 7. Broader Career Opportunities

- Enhance employability in a wide range of industries, including finance, technology, healthcare, retail, and more.
- Stand out in competitive job markets by demonstrating proficiency in data management and SQL.

### 8. Cost-Effective Data Analysis

- Learn to use SQL for analysis without needing expensive or complex software.
- Rely on SQL as a versatile tool that integrates with many data platforms and technologies.

### 9. Scalability in Data Management

- Gain confidence in handling large-scale data operations as your organization grows.
- Learn techniques to manage performance and scalability issues in databases.

### 10. Confidence in Data Literacy

- Develop a strong understanding of data concepts, fostering collaboration with data scientists and engineers.
- Bridge the gap between technical and non-technical teams with clear, data-backed insights.

### Hand on session (Tasks given by Resource person to students):

Dataset Schema Example: **Sales Database**

Task 1: Understanding the Data

Task 2: Simple Filtering

Task 3: Sorting and Limiting

Task 4: Basic Aggregation

Task 5: Joining Tables

### **Q&A and Interactive Discussions:**

To conclude the workshop, an open Q&A session was held where participants could ask questions and seek advice from the Resource Person.



### **Vote of Thanks:**

The workshop formally concluded with a vote of thanks delivered by, Mr. D. Suresh, Assistant Professor, and Department of CST. In his address, he expressed sincere gratitude to resource persons for taking the time to share their expertise and inspired our students towards stepping their career path towards Power of Data with SQL. I heartfelt thank full to our beloved HoD sir Dr.K.Dinesh for supporting and conducting this event.

### **Outcomes:**

At the end of Program, Students can able to,

1. Participants will gain a thorough understanding of SQL syntax, commands, and database structures.
2. Confidence in performing basic operations like creating, querying, updating, and deleting data from relational databases.
3. Ability to use complex SQL functions, including joins, subqueries, window functions, and set operations.
4. Proficiency in applying aggregate functions and conditional logic to analyze data effectively.
5. Hands-on experience solving industry-specific problems using SQL