

## **INVITATION TO ATTEND THE INTESIVE COURSE ON STRUCTURED QUERY LANGUAGE (SQL) IN MYSQL**

**Dear sir/madam,**

We are pleased to invite you to our hands-on course, Structured Query Language (SQL) in MySQL, tailored for individuals and professionals who want to master SQL, the most widely used language for managing and interacting with databases. Whether you're a beginner or an experienced user, this course will enhance your SQL skills and enable you to work confidently with databases using MySQL, one of the world's most popular relational database management systems.

### **Course Overview:**

SQL is essential for anyone involved in managing or analyzing data. In this course, participants will learn how to query databases, retrieve and manipulate data, and perform advanced database operations using MySQL. This practical training will help you become proficient in writing SQL queries, designing databases, and handling data in an efficient and scalable manner. You will also learn how to optimize your queries for better performance, making this training highly relevant for data analysts, developers, and database administrators.

### **Objectives:**

By the end of this training, participants will be able to:

- Understand the fundamentals of databases and the role of SQL.
- Use SQL to retrieve, filter, and sort data from a MySQL database.
- Perform complex queries including joins, subqueries, and aggregate functions.
- Create and modify database structures using SQL.
- Implement data integrity, constraints, and manage database security.
- Optimize queries for better database performance.

### **Training Outcomes:**

Participants will acquire:

- A solid understanding of SQL syntax and MySQL database operations.
- Hands-on experience in designing, querying, and managing databases.
- The ability to write efficient SQL queries for retrieving and analyzing data.
- Practical skills in managing data integrity, relationships, and constraints.
- Proficiency in database performance optimization techniques.

### **Course Content:**

The course will cover the following key topics:

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## 1. Introduction to SQL and MySQL:

- Overview of relational databases and SQL.
- Introduction to MySQL as a relational database management system.
- Setting up MySQL and creating your first database.

## 2. Basic SQL Queries:

- Understanding SQL syntax and structure.
- Writing basic SQL queries: SELECT, FROM, WHERE.
- Filtering data with conditions (AND, OR, NOT) and pattern matching (LIKE).
- Sorting and limiting result sets (ORDER BY, LIMIT).

## 3. Working with Multiple Tables:

- Understanding table relationships: primary and foreign keys.
- Writing JOIN queries: INNER JOIN, LEFT JOIN, RIGHT JOIN.
- Using UNION and UNION ALL for combining result sets.
- Retrieving data from multiple tables using subqueries.

## 4. Data Manipulation in MySQL:

- Inserting new data into tables (INSERT INTO).
- Updating existing data (UPDATE) and deleting records (DELETE).
- Using transactions for managing complex data modifications.
- Bulk data imports and exports.

## 5. Database Design and Table Management:

- Creating and altering tables with proper data types and constraints.
- Setting up primary and foreign keys, unique constraints, and indexes.
- Understanding normalization and how to avoid redundancy in database design.
- Managing relationships between tables.

## 6. Advanced SQL Queries and Functions:

- Aggregating data with functions like COUNT, SUM, AVG, MIN, MAX.
- Grouping data using GROUP BY and filtering groups with HAVING.
- Writing complex subqueries for nested data retrieval.
- Using CASE statements for conditional logic in queries.

## 7. MySQL Database Management:

- Implementing security and managing user privileges.
- Backing up and restoring databases.
- Indexing and optimizing queries for faster performance.
- Monitoring and troubleshooting MySQL databases.

## 8. Stored Procedures, Views, and Triggers:

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- Creating and using views for simplifying complex queries.
  - Writing stored procedures and functions to automate tasks.
  - Setting up triggers for automatic actions based on database changes.
  - Managing and maintaining views, procedures, and triggers in MySQL.

## **9. Project:**

- A hands-on project where participants will design a complete database in MySQL and implement advanced SQL queries to retrieve, manipulate, and manage data efficiently.

## **Who Should Attend:**

This course is ideal for:

- Data analysts, developers, and database administrators.
- IT professionals who manage or interact with databases.
- Business analysts who want to gain deeper insights into data through SQL.
- Students or anyone interested in learning SQL and MySQL to manage data efficiently.

## **Fees and Payment Method:**

**TZS 200,000/= per person per Month** (Physical or Online Session). Payments can be made through bank deposit to the following details:

**A/C NAME: STEP AHEAD FINANCIAL CONS**

**BANK NAME: CRDB BANK**

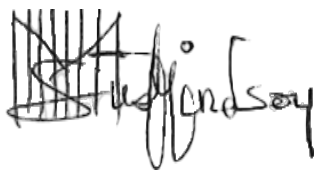
**ACCOUNT NUMBER: 015C448187900**

## **Confirmation:**

To confirm your attendance or for any inquiries, please call +255 713 388 317 or email us at [info@safco.co.tz](mailto:info@safco.co.tz).

We look forward to your participation in this insightful seminar, which promises to enhance your knowledge and skills in this fields. Your presence will undoubtedly contribute to the success of this event.

Sincerely,



Yustino Nyendeza

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Step Ahead Financial Consultants Limited (SAFCO)

Training Director

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