

SQL SYLLABUS

Chapter 1: - Introduction to Basic Database Concepts

- What is Data, Field, Record and database?
- Limitations of File Management System.
- Basic Concepts of Advantages of DBMS,
- Level of abstraction, Database models,
- Exploring Relational DBMS,
- Discuss the basic design, theoretical, and physical aspects
- of a relational database
- Understanding Client and Server,
- What is MySQL?

Chapter 2: Introduction to SQL

- MySQL datatypes
- Basics of Types of SQL Statements
- Create and use Database
- Categorize the different types of SQL statements: DDL, DML, DQL, DCL and TCL
- Data types in SQL
- Exploring DDL Statements on Table

Chapter 3: Writing Basic SQL Statement

- **List the capabilities of SQL SELECT statements**
- **Generate a report of data from the output of a basic select statement**
- **Select All Columns**
- **Select Specific Columns**
- **Use Column Heading Defaults**
- **Use Arithmetic Operators**
- **Understand Operator Precedence**
- **Learn the DESCRIBE command to display the table structure**
- **Using Parentheses**
- **Defining a Null**
- **Defining a Column Alias**
- **Using Column Aliases**
- **Concatenation Operator**
- **Using the Concatenation Operator**
- **Literal Character Strings**
- **Using Literal Character Strings**
- **Duplicate Rows**
- **Eliminating Duplicate Rows**

Chapter 4: Restricting and Sorting Data

- **Limiting Rows Using a Selection**
- **Limiting the Rows Selected**
- **Using the WHERE Clause**
- **Character Strings and Dates**
- **Comparison Conditions**
- **Using Comparison Conditions**
- **Other Comparison Conditions**
- **Using the BETWEEN Condition**
- **Using the IN Condition**
- **Using the LIKE Condition**
- **Using the NULL Conditions**
- **Logical Conditions**
- **Using the AND Operator**
- **Using the OR Operator**
- **Using the NOT Operator**
- **Rules of Precedence**
- **ORDER BY Clause**
- **Sorting in Descending Order**
- **Sorting by Column Alias**
- **Sorting by Multiple Columns**

Chapter 5: Advance DDL Commands

- **Alter Table Statements**
- **Drop Table Statements**
- **Various Constraints**
- **Commit**
- **Rollback**
- **Savepoint**
- **Creating Views**

Chapter 6: Working on DML statements

- **Data Manipulation Language**
- **Adding a New Row to a Table**
- **The INSERT Statement Syntax**
- **Inserting New Rows**
- **Inserting Rows with Null Values**
- **Inserting Special Values**
- **Inserting Specific Date Values**
- **Creating a Script**
- **Copying Rows from another Table**
- **Changing Data in a Table**
- **The UPDATE Statement Syntax**
- **Updating Rows in a Table**
- **Updating Two Columns with a Subquery**
- **Updating Rows Based on another Table**
- **Updating Rows: Integrity Constraint Error**
- **Removing a Row from a Table**
- **The DELETE Statement**
- **Deleting Rows from a Table**
- **Deleting Rows Based on another Table**
- **Deleting Rows: Integrity Constraint Error**
- **Using a Subquery in an INSERT Statement**

Chapter 7: Use of built-in function in SQL

- **Conversion Function**
- **Logical Functions**
- **Math Function**
- **Aggregate Functions**
- **String Functions**
- **Date Functions**
- **Chapter 8: Working on multiple tables and Retrieve records from multiple tables**
- **Self-Join**
- **Inner Join**
- **Left Join**
- **Right Join**
- **Cross Join**