



SQL School
Learn | Practice | Build | Succeed

SQL with AI

TRAINING FROM SQL SCHOOL

Master SQL. Leverage AI. Build Real-World Skills. Advance Your Career.

Trainer:
Mr. Sai Phanindra Tholeti
Alumni of Microsoft

Trainer Profile:
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TRAINING HIGHLIGHTS

- Step-by-step Classes
- 100% Interactive
- Projects for Resume
- Job Assistance, Mocks

In-depth SQL Concepts | AI Integration with SQL | Real-World Projects | Career Support You Can Count On

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I'm **Mr. Sai Phanindra**, your trainer for this **SQL Developer** Course. With **20+ years of experience** in SQL & Database Technologies, I've worked with **Microsoft, Deloitte, and Infosys**. I provide **100% practical, step-by-step training** with real-time Projects. Let's connect at: www.linkedin.com/in/saiphanindra/

MSSQL & T-SQL Developer Training

Master SQL Server and T-SQL through practical, project-based learning. Start with database fundamentals and progress into advanced querying, stored procedures, performance tuning, Azure SQL, Microsoft Fabric, AI-assisted SQL development, and real-world implementation.

Learning Path

Beginner → SQL Queries → Advanced T-SQL → Performance Tuning → Cloud SQL → AI-Enabled SQL Developer

Career Opportunities After This Training

- ✓ SQL Developer
- ✓ Database Developer
- ✓ BI Developer
- ✓ ETL Developer
- ✓ Azure SQL Developer
- ✓ Fabric SQL Developer

By the End of This Training, You Will Be Able To:

- ✓ Design relational databases and tables
- ✓ Write complex T-SQL queries
- ✓ Build joins, CTEs, subqueries and analytical queries
- ✓ Develop stored procedures, functions, views and triggers
- ✓ Implement transactions and error handling
- ✓ Analyze and optimize slow SQL queries
- ✓ Understand execution plans

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- ✓ Design and optimize indexes
- ✓ Build database solutions for real business requirements
- ✓ Work with Azure SQL Database
- ✓ Write T-SQL in Microsoft Fabric

Who Should Join?

- ✓ Freshers starting a career in Data/SQL
- ✓ Developers who want strong SQL skills
- ✓ Data Analysts who need advanced SQL
- ✓ ETL/Data Engineering aspirants
- ✓ Existing SQL Developers wanting query-tuning skills
- ✓ Professionals preparing for Azure/Fabric SQL roles

Prerequisites

No previous SQL experience is required.

What Learners Receive

- ✓ LIVE practical training
- ✓ Daily hands-on assignments
- ✓ Practice database/scripts
- ✓ Real-time project(s)
- ✓ SQL interview preparation
- ✓ Resume guidance
- ✓ Mock interviews
- ✓ DP-800 guidance

SQL Server TSQL Training Plans (Choose anyone):

	 Module	 Duration	 Key Take-a-ways	 Who can join?
Plan A	1 MSSQL & TSQL	 4 Weeks	 1 Real-time Project	 For Starters, Analysts, Engineers
Plan B	1 MSSQL & TSQL 2 TSQL Programming 3 Query Tuning	 6 Weeks	 1 Real-time Project  1 Real-Time Case Study	 For SQL Developers
Plan C	1 MSSQL & TSQL 2 TSQL Programming 3 Query Tuning 4 Cloud SQL, AI	 8 Weeks	 2 Real-time Projects  1 Real-Time Case Study	 For Senior SQL Developers, DP 800 Exam Aspirants

Training Modes

- LIVE Online Training (Highly Interactive)
- Self-Paced Video Training (Latest, Detailed. Step by step)

You can enrol for the course right away. Start video access, practice each video step by step with our detailed notes. Additionally join the LIVE Classes in our immediate next new batch. Reach is now for more details!

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Detailed Course Content

100% Hands-On Training with Real-Time Examples, Daily Assignments & 400+ SQL Queries

Module 1: MSSQL & TSQL

Ch 1: SQL Database Job Roles

- ✓ Database Intro
- ✓ OLTP, DWH, OLAP
- ✓ DBMS Basics
- ✓ SQL Database Job Roles

Ch 2: Database Intro & Installations

- ✓ SQL Server Installations
- ✓ Instance & Collations
- ✓ SSMS Tool Installation
- ✓ Connections, Authentications

Ch 3: SQL Basics V1 (Commands)

- ✓ SQL Basics (DDL, DML, etc..)
- ✓ Creating Databases, Tables
- ✓ Data Inserts (GUI, SQL)
- ✓ Basic SELECT Queries

Ch 4: SQL Basics V2 (Commands, Operators)

- ✓ DDL: Create, Alter, Drop
- ✓ DML: Insert, Update, Delete
- ✓ DQL: Select, Fetch
- ✓ Add, Truncate Statements
- ✓ SQL Operators

Ch 5: Data Types & Variables

- ✓ Integer Data Types
- ✓ Character, MAX Data Types
- ✓ Decimal & Boolean Data Types
- ✓ Date and Time Data Types
- ✓ SQL_Variant Type

Ch 6: Data Imports

- ✓ Data Imports with Excel
- ✓ Data Imports with CSV
- ✓ Data Types Detection
- ✓ OLE-DB Connections
- ✓ ORDER BY, TOP, OFFSET

Ch 7: Schemas & Batches

- ✓ Schemas & Table Grouping
- ✓ Real-world Banking Database

- ✓ 2 Part, 3 Part & 4 Part Naming
- ✓ Batch Concept & “Go” Command

Ch 8: Constraints, Keys & RDBMS

- ✓ Null, Not Null Constraints
- ✓ Unique Key & Check
- ✓ Primary Key Constraint
- ✓ Foreign Keys, Default
- ✓ DB Diagrams & ER Models

Ch 9: Normal Forms & RDBMS

- ✓ Normal Forms: 1 NF, 2 NF
- ✓ 3 NF, BCNF and 4 NF
- ✓ 1:1, 1:M, M:1 Cardinality
- ✓ Cascading Keys, Self Referencing Keys

Ch 10: Joins & Queries

- ✓ Joins: Table Comparisons
- ✓ Inner Joins & Matching Data
- ✓ Outer Joins: LEFT, RIGHT
- ✓ Full Outer Joins & Aliases
- ✓ Self Joins & Aliases

Ch 11: Sub Queries

- ✓ Basic Sub Queries
- ✓ Aggregations
- ✓ Combining Queries
- ✓ Correlated Sub Queries
- ✓ UNION, UNION ALL

Ch 12: Group By Queries

- ✓ Group By, Distinct
- ✓ GROUP BY, HAVING
- ✓ Cube() and Rollup()
- ✓ Sub Totals & Grand Totals
- ✓ Grouping() & Usage
- ✓ ISNULL, COALESCE

Ch 13: Joins with Group By, Sub Queries

- ✓ 3 Table, 4 Table Joins
- ✓ Join Queries & WHERE
- ✓ Join & Group By, Sub Queries
- ✓ IIF(), CASE Statement
- ✓ EXISTS, NOT EXISTS
- ✓ Query Execution Order

Ch 14: Views & RLS

- ✓ Views: Realtime Usage
- ✓ DML, SELECT with Views
- ✓ WITH CHECK OPTION
- ✓ Row Level Security (RLS)
- ✓ Important System Views

Ch 15: Functions & Queries

- ✓ User Defined Functions
- ✓ Scalar, Table Value Functions
- ✓ Variables & Parameters
- ✓ Date & Time Functions
- ✓ String Functions
- ✓ Aggregated Functions
- ✓ Data Conversion Functions

Ch 16: Advanced SQL & Window Functions

- ✓ Window Functions (Rank)
- ✓ Row_Number, DenseRank
- ✓ Partition By & Order By
- ✓ Lag & Lead Functions
- ✓ Pivot, UnPivot
- ✓ Running Totals
- ✓ Moving Average

Ch 17: Stored Procedures - 1

- ✓ Stored Procedures: Realtime Use
- ✓ Parameters Concept with SPs
- ✓ Procedures with SELECT
- ✓ System Stored Procedures
- ✓ Stored Procedures, Tuning

Ch 18: Stored Procedures - 2

- ✓ Merge Statement (Upsert)
- ✓ Merge with OLTP & DWH
- ✓ Matched and Not Matched
- ✓ Merge & SP Recompilations

Ch 19: Triggers & Automations

- ✓ Need for Triggers in Real-world
- ✓ DDL & DML Triggers
- ✓ For / After Triggers
- ✓ Instead Of Triggers
- ✓ Disabling DMLs Triggers

Ch 20: Transactions & ACID

- ✓ Auto Commit Transaction
- ✓ Explicit Transactions

- ✓ COMMIT, ROLLBACK
- ✓ Checkpoint & Query Blocking
- ✓ READPAST, LOCKHINT
- ✓ TRY...CATCH & Error Handling

Ch 21: SQL Query Performance & Indexing

- ✓ Clustered vs Nonclustered Indexes
- ✓ Index Seek vs Scan
- ✓ Execution Plans
- ✓ SARGable Queries
- ✓ Tuning Queries
- ✓ Avoiding SELECT *
- ✓ Indexing JOIN/WHERE columns
- ✓ Statistics Basics
- ✓ Query Optimization Examples

Ch 22: CTEs & Tuning

- ✓ Common Table Expression
- ✓ CTEs for Data Retrieval
- ✓ CTEs for DML Operations
- ✓ Data Cleansing Techniques
- ✓ Duplicate Detection/Removal

Ch 23: Temp Tables & Advanced Query Techniques

- ✓ Local & Global Temp Tables
- ✓ SELECT..INTO Statement
- ✓ Cursor Basics – When to Use & Avoid
- ✓ NULLIF
- ✓ Basic Execution-Plan Reading

Ch 24: Bonus / Advanced Module: SQL Server Internals

- ✓ Database Engine Components
- ✓ Parser, Compiler & Optimizer
- ✓ Parsing and Compilation
- ✓ Memory Manager & IO Managers

Real-Time Project on HealthCare Domain

Project Requirement:

Solve 20+ Real-World Healthcare Business Requirements.

Project Workflow:

Database Design → SQL Development → Data Analysis → Performance Optimization

Project Operational Flow:

Healthcare DB → Patients → Doctors → Appointments → Treatments → Billing → Insurance → SQL Analysis → Stored Procedures → Performance Tuning → Business Reports

Business Requirements:

Monthly Hospital Revenue, Top Doctors By Patients Treated, Repeat Patients, Department Performance, Average Treatment Cost, Unpaid Bills, Insurance Claim Analysis, Patient Trends, Month-Over-Month Revenue And Top Procedures...

Project Implementations:

- ✓ HealthCare Database
- ✓ DB & Table Design
- ✓ Data Validations
- ✓ Query Design
- ✓ Query Tuning
- ✓ Stored Procedures
- ✓ Functions
- ✓ Excel Analytics

Module 2: TSQL Programming

Ch 25: Variables & Try..Catch

- ✓ Variables: Declaration & Usage
- ✓ Assigning Values to Variables
- ✓ SELECT & SET Operations
- ✓ Try.. Catch Block with Variables
- ✓ THROW Statement, Error Handling

Ch 26: Updatable Views

- ✓ Using Triggers with Views
- ✓ Updatable Views, DML
- ✓ Views & Stored Procedures
- ✓ Data Distributions in Tables
- ✓ Rollback Options in Realtime

Ch 27: Stored Procedures & TVPs

- ✓ Using TVP with Procedures
- ✓ Creating User Defined Types
- ✓ Big Data Copy & Transactions
- ✓ Transactional Integrity with SPs
- ✓ Conditional Commits, Rollbacks
- ✓ Procedure Recompilations

Ch 28: Stored Procedures, Cursors

- ✓ Cursors Types: Local, Global
- ✓ FETCH and Iterations
- ✓ Procedures with Cursors
- ✓ Formatting Queries, Nvarchar
- ✓ WHILE Loop: @Fetch Status
- ✓ sp_executesql Extended SP
- ✓ Dynamic SQL Programming

Ch 29: SPs & Recursive CTEs

- ✓ CTEs: Common Table Expression
- ✓ CTEs For DML Operations
- ✓ Defining Recursive CTEs
- ✓ Anchor Element: Realtime Use
- ✓ Termination Checks and Loops
- ✓ Cautions with Recursive CTEs

Ch 30: Functions & Loops

- ✓ Inline, Table Line Functions
- ✓ Multi Line Table Functions
- ✓ Using LOOPS in Functions
- ✓ Table Generation Logic
- ✓ Date & Time Data Types
- ✓ Calendar Data Generations

Ch 31: Open Fuzzy Logic, Debugging

- ✓ EDIT_DISTANCE_SIMILARITY
- ✓ JARO_WINKLER_DISTANCE
- ✓ MATCH Operator, OPENROWSET
- ✓ JSON_OBJECT
- ✓ JSON_ARRAY
- ✓ JSON_ARRAYAGG
- ✓ JSON_CONTAINS

Ch 32: PIVOT, UNPIVOT

- ✓ Reading Denormalized Data
- ✓ PIVOT Operation with TSQL
- ✓ PIVOT with Aggregates
- ✓ UNPIVOT with TSQL
- ✓ PIVOT with Functions, SPs

Ch 33: Change Data Capture

- ✓ CDC Concept
- ✓ Database Level CDC
- ✓ Table Level CDC
- ✓ CT Tables (Change Tracking)
- ✓ __\$operation fields
- ✓ DDL & DML Tracking

Module 3: Query Tuning

Ch 34: Performance Tuning Fundamentals

- ✓ Query Monitoring
- ✓ Server Dashboards
- ✓ Server Logs
- ✓ Identify CPU/IO Queries
- ✓ Identify Long Running Queries

- ✓ DMVs, DMFs For Query Audits

Ch 35: Query Store

- ✓ Query Store Concept
- ✓ Configure Query Store
- ✓ History Retention
- ✓ Query Store Settings

Ch 36: Tuning: Indexes

- ✓ Indexes: Sort Locations
- ✓ Clustered & Online Indexes
- ✓ Non Clustered, Column Store
- ✓ Included Indexes in Realtime
- ✓ Filtered Indexes & Usage
- ✓ Indexed Views (Materialized)

Ch 37: Tuning: Partitions

- ✓ Partitions: Performance Tuning
- ✓ Partition Functions & Schemes
- ✓ Compressions: ROW, PAGE
- ✓ Partitions Limitations in OLTP
- ✓ Partitions with DWH

Ch 38: Statistics & Tuning

- ✓ Statistics: Realtime Usage
- ✓ Index & Column Statistics
- ✓ Statistics & Key Purpose
- ✓ Statistics Versus Indexes
- ✓ Stats Updates

Ch 39: Index Management

- ✓ Index Management Options
- ✓ Index Rebuilds, Re-Organize
- ✓ Database Maintenance Plans
- ✓ Page Count and Index Conditions
- ✓ Resumable & Online Indexes

Ch 40: Tuning Tools

- ✓ Tuning Tools: Workload Files
- ✓ Profiler Tuning, Events
- ✓ DTA, Profiler Options
- ✓ Physical Design Structures
- ✓ PDS Recommendations
- ✓ Query Execution Cache
- ✓ Tuning Tools: Precautions

Ch 41: Execution Plans - 1

- ✓ Execution Plan Analysis

- ✓ IO Cost and CPU Cost
- ✓ SubTree & Operator Cost
- ✓ Table & Index Scan, Index Seek
- ✓ Index Selectivity & Tuning

Ch 42: Execution Plans - 2

- ✓ Extended Events
- ✓ wait statistics
- ✓ sys.dm_exec_query_stats
- ✓ sys.dm_exec_requests
- ✓ sys.dm_exec_sessions
- ✓ Cache Plans

Ch 43: Server Management & Tuning

- ✓ Extended Events
- ✓ NUMA Nodes, Processor Affinity
- ✓ Thread Count, DOP
- ✓ MAXDOP
- ✓ Memory Grants
- ✓ Tempdb Contention/Spills
- ✓ Memory Pressure

Ch 44: Lock Management

- ✓ Open Transactions in Realtime
- ✓ Open Transaction, Blocking
- ✓ LOCKS: Types & Audits
- ✓ S, X, IX, U and MD Locks
- ✓ Sch-M and Sch-S Locks
- ✓ SP_WHO2, SP_LOCK
- ✓ sysprocesses & Lock Waits

Ch 45: Isolation Levels

- ✓ Lock Hints and Isolation Levels
- ✓ Read Committed, Uncommitted
- ✓ Serializable, Repeatable Read
- ✓ Snapshot Isolation, Versioning
- ✓ Read Committed Snapshot
- ✓ sysprocesses & sp_who2
- ✓ Choosing Correct Isolation Level

Ch 46: Deadlocks, LIVE Locks

- ✓ Deadlocks in Real-world
- ✓ Profiler Tool & Deadlocks
- ✓ Lock Management: Deadlocks
- ✓ Deadlock Graphs & Events
- ✓ Deadlock Avoidance, Prevention
- ✓ Deadlock Prevention

- ✓ sysprocesses & sp_who2

Ch 47: Deadlocks, LIVE Locks

- ✓ CPU and I/O waits
- ✓ locking waits
- ✓ memory-related waits
- ✓ parallelism waits
- ✓ symptom & root cause

Ch 48: AI Enabled SQL, Tuning

- ✓ Installing AI Components
- ✓ Using AI in SQL
- ✓ SQL Queries with Prompts
- ✓ SQL Query Analysis
- ✓ Plan Regression
- ✓ Parameter Sniffing

Module 4: SQL Server in Cloud (Azure, Fabric)

Ch 49: Cloud Basics, Azure Funda

- ✓ Cloud Fundamentals
- ✓ Cloud Concepts, Benefits
- ✓ IaaS, PaaS, SaaS Cloud Types
- ✓ Azure Resources & Usage
- ✓ Azure Services & Purpose
- ✓ Azure Account & Subscription

Ch 50: Azure SQL Deployments

- ✓ Azure SQL Services
- ✓ Azure SQL Server Creation
- ✓ Azure SQL Databases
- ✓ Azure Firewall: Rules
- ✓ SSMS Tool: Test Connections

Ch 51: Azure Storage Accounts

- ✓ Azure Storage Account
- ✓ Azure Data Lake Storage (ADLS)
- ✓ Azure BLOB Data
- ✓ Containers
- ✓ Folder & File Uploads
- ✓ Access Keys

Ch 52: Azure SQL DB Migrations

- ✓ SQL DB Migration Options
- ✓ Data Migration Assistant: DMA
- ✓ DMA Tool, Migration Options
- ✓ On-Premises DB Export
- ✓ Azure SQL Database Import

- ✓ Azure Storage Account

Ch 53: Azure SQL DB Metrics

- ✓ Azure SQL DB Metrics
- ✓ CPU, Memory, Log Metrics
- ✓ Data File Metrics, Alerts
- ✓ Azure Action Groups
- ✓ Azure Notifications

Ch 54: Azure SQL DB Tuning - 1

- ✓ Automated Tuning Options
- ✓ Server Level Tuning
- ✓ Database Level Tuning
- ✓ Index Creation
- ✓ Index Drop, Index Seek

Ch 55: Azure SQL DB Tuning – 2 (AI)

- ✓ Azure AI Search
- ✓ Watermark Columns
- ✓ Filterable, Searchable
- ✓ Indexer & Data Refresh

Ch 56: Regular Expressions

- ✓ REGEXP_LIKE
- ✓ REGEXP_REPLACE
- ✓ REGEXP_SUBSTR
- ✓ REGEXP_INSTR
- ✓ REGEXP_COUNT
- ✓ REGEXP_MATCHES

Ch 57: TSQL in Microsoft Fabric

- ✓ Microsoft Fabric Concepts
- ✓ Fabric Account & Workspace
- ✓ Fabric Warehouse Creation
- ✓ TSQL in Fabric Warehouse
- ✓ TSQL Events in Fabric

Ch 58: TSQL with AI, Co-Pilot

- ✓ CoPilot Concepts
- ✓ CoPilot Architecture
- ✓ CoPilot with TSQL
- ✓ CoPilot in Fabric
- ✓ Model Context Protocol (MCP)
- ✓ MCP End Points

Ch 59: GITHUB with SQL

- ✓ Git fundamentals
- ✓ Creating repositories

- ✓ Version controlling .sql scripts
- ✓ Branches and commits
- ✓ SQL project folder structure
- ✓ README documentation
- ✓ Publishing project code
- ✓ Building a professional SQL GitHub portfolio

Ch 60: DP-800 Exam Guidance

- ✓ DP-800 Certification Overview
- ✓ Exam Objectives & Latest Syllabus
- ✓ AI & GitHub Copilot for SQL Development
- ✓ Exam Scenario-Based Questions
- ✓ Exam Mocks
- ✓ Exam Preparation Guidance

Real-Time Project 2

Banking Transaction Management System using SQL Server & T-SQL

- ✓ Customer Account Management
- ✓ Savings / Current Account Tables
- ✓ Account Opening & KYC Data
- ✓ Deposit and Withdrawal Transactions
- ✓ Fund Transfer Between Accounts
- ✓ Transaction History Report
- ✓ Daily, Monthly, Yearly Statements
- ✓ Stored Procedures for Banking Operations
- ✓ Views for Customer & Account Reports
- ✓ Functions for EMI, Interest & Balance Calculation
- ✓ Triggers for Audit Tracking
- ✓ Cloud Deployments
- ✓ Cloud Migrations
- ✓ Azure SQL
- ✓ Fabric SQL
- ✓ CDC (Change Data Capture)
- ✓ GIT Configurations
- ✓ Version Control Concepts
- ✓ Realtime Project Implementations

Real-Time Activities You Will Practice in this course

- ✓ Understand business requirements
- ✓ Convert requirements into database objects
- ✓ Design tables and relationships
- ✓ Write production-style queries
- ✓ Create reusable stored procedures
- ✓ Debug failed SQL code
- ✓ Optimize slow-running queries

- ✓ Analyze execution plans
- ✓ Resolve blocking/deadlocking scenarios
- ✓ Perform bulk-data operations
- ✓ Implement audit mechanisms
- ✓ Work with cloud-hosted SQL databases
- ✓ Maintain SQL code using Git/GitHub

Interview & Career Preparation

- 🎧 100 SQL Interview Questions
- 🎧 30 Query-Based Interview Problems
- 🎧 10 Scenario-Based SQL Questions
- 🎧 Capstone Project Interview Explanation
- 🎧 SQL Skills for Resume
- 🎧 Mock Interviews
- 🎧 Job Assistance
- 🎧 Course Completion Certificate

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