

SQL SCHOOL
Premium Quality Training

Microsoft Azure | databricks

Learn from Expert Trainer
Mr. Sai Phanindra
20+ Years of Industry Experience

DP-750: Implementing Data Engineering Solutions Using Azure Databricks

100% Practical Training to Level Up
Your Data Engineering Career

WHAT YOU WILL LEARN

- ✓ Spark SQL & PySpark
- ✓ Delta Lake Architecture
- ✓ ETL & Data Pipelines
- ✓ Unity Catalog
- ✓ Performance Optimization
- ✓ Real-Time Projects
- ✓ Interview Preparation

DATA SOURCES

- Databases
- Cloud Storage
- Files / Logs
- Streaming Data

DELTA LAKE

- BRONZE Raw Data
- SILVER Cleaned Data
- GOLD Curated Data

TECHNOLOGIES

- SPARK SQL & PYSARK
- PYSARK
- SQL
- DELTA LAKE
- UNITY CATALOG
- DATABRICKS

20+ Years of Industry Experience

100% Practical Training

Real-Time Use Cases & Projects

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SQL SCHOOL

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Thank you for contacting our **SQL School**. I am **Mr. Sai Phanindra**, trainer for this **Databricks Certification Training Course**. With 20+ Years of technical expertise exclusively on Database and Azure, BI Technologies, I assure you 100% Practical, Step by Step Classes for this in-depth course with **DP-750 Exam Guidance**. Lets connect at: [linkedin.com/in/saiphanindra/](https://www.linkedin.com/in/saiphanindra/)

Azure Databricks Training with AI, DP-750: 100% Practical Training

This hands-on training program is divided into **FOUR Comprehensive Modules**:

Module 1: SQL Server (MSSQL) & T-SQL

Module 2: Azure Databricks

Module 3: Real-Time Project

Module 4: Data Engineer Certifications

- DP-750 Exam Guidance
- Databricks Data Engineer Associate Exam Guidance

Total Program Duration:

- ✓ 2 Months Course
- ✓ 100% Practical & Realtime
- ✓ Call For Free Demo: +91 9951440801, +91 9666640801

Who Should Join?

- Freshers
- Developers
- Data Analysts

Prerequisites

- No pre-requisites required. We shall start from the very basics, step by step.

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Detailed Course Content

Module 1: SQL Server (MSSQL), TSQL

Ch 1: SQL Database Job Roles

- ✓ Introduction to Data
- ✓ Database Intro, Types
- ✓ OLTP, DWH, OLAP
- ✓ DBMS Concepts
- ✓ Database Job Roles
- ✓ Data Engineer Job Roles

Ch 2: Database Intro & Installations

- ✓ SQL Server Installations
- ✓ Instance Concepts
- ✓ Authentication Types
- ✓ Authentication Modes
- ✓ SSMS Tool Installation
- ✓ Connections, Authentications

Ch 3: SQL Basics V1 (Commands)

- ✓ Creating Databases (GUI)
- ✓ Creating Tables, Columns (GUI)
- ✓ 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, Add
- ✓ DML: Insert, Update, Delete
- ✓ DQL: Select, Fetch
- ✓ SQL Operators
- ✓ Special Operators

Ch 5: Excel Data Imports

- ✓ Data Imports with Excel
- ✓ Order By: Asc, Desc
- ✓ Order By with WHERE
- ✓ TOP & OFFSET
- ✓ UNION, UNION ALL

Ch 6: Schemas & Batches

- ✓ Schemas: Creation, Usage
- ✓ Schemas & Table Grouping
- ✓ Real-world Banking Database
- ✓ 2 Part, 3 Part & 4 Part Naming

- ✓ Batch Concept & “Go” Command

Ch 7: Constraints, Keys & RDBMS

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

Ch 8: Normal Forms & ERD

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

Ch 9: Joins Queries – Level 1

- ✓ Joins: Table Comparisons
- ✓ Inner Join & Outer Joins
- ✓ Cross Join & Cross Apply
- ✓ Table Combination
- ✓ Table & Column Aliases

Ch 10: Joins Queries – Level 2

- ✓ Group By & Aggregations
- ✓ Joins with Group By
- ✓ 3 Table, 4 Table Joins
- ✓ Join Queries with Aliases
- ✓ WHERE & HAVING
- ✓ Query Execution Order

Ch 11: Sub Queries

- ✓ Distinct & Union, Union All
- ✓ Sub Queries Concept
- ✓ Sub Queries & Aggregations
- ✓ Joins with Sub Queries
- ✓ Correlated Queries

Ch 12: Views & Data Analytics

- ✓ Views: Realtime Usage
- ✓ Storing SELECT in Views
- ✓ DML, SELECT with Views
- ✓ RLS: Row Level Security
- ✓ Data Analytics with Excel
- ✓ Important System Views

Ch 13: Stored Procedures – Level 1

- ✓ Stored Procedures: Realtime Use
- ✓ Procedures with SELECT
- ✓ System Stored Procedures
- ✓ Metadata Access with SPs
- ✓ Stored Procedures, Tuning

Ch 14: Stored Procedures – Level 2

- ✓ Merge Statement
- ✓ Upsert Operations with Merge
- ✓ Merge with OLTP & DWH
- ✓ Matched and Not Matched
- ✓ Merge Statement inside SPs

Ch 15: Functions – Level 1

- ✓ Using Defined Functions (UDF)
- ✓ Scalar Functions in Real-world
- ✓ Table Valued Functions
- ✓ Parameterized Queries
- ✓ Returns and Return
- ✓ SP Versus Functions

Ch 16: Functions – Level 2

- ✓ Aggregated Functions
- ✓ Date & Time Functions
- ✓ String Functions
- ✓ Window Functions
- ✓ Rank, Row_Number
- ✓ DenseRank, Partition By

Ch 17: Triggers & Automations

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

Ch 18: Transactions & ACID

- ✓ Transaction Concepts in OLTP
- ✓ Auto Commit Transaction
- ✓ Explicit Transactions
- ✓ COMMIT, ROLLBACK
- ✓ Lock Hints & Query Blocking
- ✓ READPAST, LOCKHINT

Ch 19: Indexes Basics, Tuning

- ✓ Indexes & Tuning
- ✓ Clustered Index, Primary Key
- ✓ Non Clustered Index & Unique
- ✓ Creating Indexes Manually
- ✓ Composite Keys, Query Optimizer
- ✓ Composite Indexes & Usage

Ch 20: CTEs & Tuning

- ✓ Common Table Expression
- ✓ Creating and Using CTEs
- ✓ CTEs, In-Memory Processing
- ✓ IIF(), CASE Statement
- ✓ Cube() and Rollup()
- ✓ Sub Totals & Grand Totals
- ✓ Grouping() & Usage

Ch 21: Data Types & Variables

- ✓ Integer Data Types
- ✓ Character, MAX Data Types
- ✓ Decimal & Money Data Types
- ✓ Boolean & Binary Data Types
- ✓ Date and Time Data Types
- ✓ SQL_Variant Type
- ✓ Variables in SQL
- ✓ Cursor Variable & Fetch

Ch 22: Temp Tables

- ✓ Local Temp Tables
- ✓ Global Temp Tables
- ✓ Testing Temp Tables
- ✓ SELECT..INTO Statement
- ✓ Bulk Copy Operations

Ch 23: SQL Server Architecture

- ✓ Network Protocols
- ✓ Query Execution Engine
- ✓ Parser, Compiler, Checkpoint
- ✓ SQL Manager, DB Manager
- ✓ Storage Engine, Locks
- ✓ SQL OS Components

Ch 24: Real-Time SQL Server Case Studies (2)

- ✓ Healthcare Management System
 - Patient Records Management
 - Doctor Appointment Scheduling
 - Billing & Insurance Processing
 - Medical Reports Analysis

- ✓ **E-Commerce Database**
 - Customer & Product Management
 - Order Processing
 - Inventory Tracking
 - Sales Reporting

- ✓ **Banking & Financial Systems**
 - Customer Accounts
 - Transaction Processing
 - Loan Management
 - Fraud Detection Queries

Module 2: Azure Databricks

Ch 1: Databricks Introduction

- ✓ Cloud ETL, DWH
- ✓ Cloud Computing
- ✓ Databricks Concepts
- ✓ Big Data in Cloud

Ch 2: Databricks Architecture

- ✓ Unity Catalog, Volume
- ✓ Spark Clusters
- ✓ Apache Spark and Databricks
- ✓ Apache Spark Ecosystem
- ✓ Compute Operations
- ✓ Hadoop, MapReduce, Apache Spark

Ch 3: Unity Catalog

- ✓ Unity Catalog Concepts
- ✓ Workspace Objects
- ✓ Databricks Notebooks
- ✓ Databricks Workspace UI
- ✓ Organizing Workspace Objects
- ✓ Creating Volumes
- ✓ Spark Table Creations
- ✓ Spark UI: Limitations

Ch 4: Spark SQL: Basics

- ✓ Spark SQL Notebooks
- ✓ Creating Catalog
- ✓ Creating Schemas
- ✓ Creating Tables
- ✓ Spark Data Types

- ✓ PySpark API: SQL Queries
- ✓ Dropping Objects
- ✓ Notebooks: Exports, Clone

Ch 5: Spark SQL: Table Types

- ✓ Delta Tables
- ✓ Managed Tables
- ✓ External Tables
- ✓ Data Partitioning
- ✓ Union, Views in Spark
- ✓ External Volumes

Ch 6: Spark SQL: Functions

- ✓ Math, Sort Functions
- ✓ String, DateTime Functions
- ✓ Conditional Statements
- ✓ SQL Expressions with `expr()`
- ✓ Volume for our Data Assets
- ✓ File Formats, Schema Inference
- ✓ Spark SQL Aggregations

Ch 7: Spark SQL: Time Travel

- ✓ Time Travel Concepts
- ✓ Spark DB: Logical Architecture
- ✓ Spark DB: Physical Store
- ✓ Data File Store
- ✓ Log File Store
- ✓ Time Travel
- ✓ DESCRIBE, EXTENDED
- ✓ HISTORY
- ✓ Version Numbers

Ch 8: Python: Introduction, Print

- ✓ Python Introduction
- ✓ Python Versions
- ✓ Python Implementations
- ✓ Python in Spark (PySpark)
- ✓ Python `Print()`
- ✓ Single, Multiline Statements

Ch 9: Python: Variables

- ✓ Python Variables
- ✓ Variable Declarations
- ✓ Variable Values

- ✓ Value Types
- ✓ Multi Variable Values
- ✓ Common Variable Values
- ✓ Realtime use of Variables

Ch 10: Python: Operators

- ✓ Need for Operators
- ✓ Arithmetic Operators
- ✓ Assignment Operators
- ✓ Comparison Operators
- ✓ Operator Precedence
- ✓ Operands in Python

Ch 11: Python: Control Statements

- ✓ Python Control Structures
- ✓ If ... Else Statement
- ✓ Short Hand If
- ✓ ELIF & ELSE IF Statements
- ✓ OR, AND Concepts
- ✓ Python Loops

Ch 12: Python: Data Types

- ✓ Python Data Types
- ✓ Integer / Int Data Types
- ✓ Float, String Data Types
- ✓ List Data Type
- ✓ Dictionary Data Type
- ✓ Tuple Data Type
- ✓ List Items, Indexes
- ✓ Tables Versus Dictionaries

Ch 13: Python: Modules & Dataframes

- ✓ Python Modules
- ✓ Pandas
- ✓ NumPy
- ✓ Dataframe Concepts
- ✓ Handling Nulls
- ✓ Data Cleansing Concepts
- ✓ Pandas Series, arrays
- ✓ Indexes, Indexed Lists

Ch 14: PySpark Concepts

- ✓ Constructing Dataframes
- ✓ Single List Dataframes

- ✓ Multi List Dataframes
- ✓ Pandas Dataframes
- ✓ Contact & Union
- ✓ Merge
- ✓ Join Options with Dataframes

Ch 15: Medallion Architecture - 1

- ✓ Medallion Architecture
- ✓ Aggregated Data Loads
- ✓ Broze, Silver and Gold
- ✓ Temp Views
- ✓ Spark Tables (Parquet)
- ✓ Work with File Sources

Ch 16: Medallion Architecture - 2

- ✓ Medallion Architecture
- ✓ Azure SQL DB Connections
- ✓ Joining Source Tables
- ✓ Dataframes, Temp Views
- ✓ Aggregated Data Loads
- ✓ Gold Data Consumption

Ch 17: Delta Lake

- ✓ Databricks DeltaLake
- ✓ Schema Evolution
- ✓ Azure SQL DB Connections
- ✓ Dataframes, Temp Views
- ✓ Delta Table API
- ✓ Deleting Records
- ✓ Updating Records
- ✓ Merging Records
- ✓ Old History Retention
- ✓ Delta Transaction Log

Ch 18: PySpark: Widgets

- ✓ PySpark Parameters
- ✓ Text Widgets
- ✓ User Parameters
- ✓ Manual Executions
- ✓ Automations
- ✓ UI & JSON For Widgets

Ch 19: Lake Flow Jobs

- ✓ Workflows & CRON

- ✓ Job Compute, Running Tasks
- ✓ Python Script Tasks
- ✓ Parameters into Notebook Tasks
- ✓ Parameters into Python Script Tasks
- ✓ Concurrent Executions, Dependencies
- ✓ Branching Control with the If-Else Task

Ch 20: Pyspark: Auto Loader - 1

- ✓ AutoLoader Concept
- ✓ Cloudfiles Architecture
- ✓ Checkpoint Configurations
- ✓ Creating Directories
- ✓ Reading Databricks Cloud Sources
- ✓ Initial Loads

Ch 21: PySpark: Auto Loader - 2

- ✓ Reading Streams with Auto Loader
- ✓ Reading a Data Stream
- ✓ Manually Cancel your Data Streams
- ✓ Writing to a Data Stream
- ✓ Schema Evaluation Modes
- ✓ Adding New Columns
- ✓ Workspace Modules

Ch 22: Lake Flow Declarative Pipelines

- ✓ SDP: Spark Declarative Pipelines
- ✓ Delta LIVE Tables
- ✓ Streaming Data Loads
- ✓ Bronze, Silver, Gold Data
- ✓ Materialized Views
- ✓ Pipeline Clusters
- ✓ Databricks CLI
- ✓ Data Quality Checks

Ch 23: Databricks Optimizations

- ✓ Lazy Evaluation
- ✓ Explain Plan
- ✓ Caching
- ✓ Data Shuffling
- ✓ Broadcast Joins
- ✓ Partitions
- ✓ Data Skipping
- ✓ Z Ordering
- ✓ Liquid Clustering

- ✓ VACUUM
- ✓ OPTIMIZE

Ch 24: Security Concepts

- ✓ Overview of ACLs
- ✓ Adding a New User to Workspace
- ✓ Workspace Access Control
- ✓ Cluster Access Control
- ✓ Groups & LakeBridge
- ✓ Access Keys (Tokens)

Ch 25: Azure Databricks

- ✓ Deployment Modes
- ✓ Classic Deployment
- ✓ Azure Databricks Account
- ✓ Azure Databricks Workspace
- ✓ Databricks Compute
- ✓ Photon Acceleration
- ✓ Scaling & Tuning
- ✓ Open Source Databricks Vs Azure Databricks

Ch 25: Databricks Data Engineer Associate Exam

- ✓ Databricks Data Engineer Associate Exam
- ✓ AVRO Formats
- ✓ Exam Guidance
- ✓ Databricks Exam Pattern
- ✓ Exam Q & A, Scenarios

Module 3: End-to-End Industry Project For Resume (ECommerce Platform)

Project Objective:

Build an end-to-end Azure Data Engineering solution to process, transform, and analyze e-commerce business data from multiple sources.

Technologies Used:

- Azure Databricks (Apache Spark)
- Azure SQL Database
- Azure Blob Storage
- Azure Monitor
- Azure Monitor Logs

Skills Gained:

- Data Ingestion & ETL Development
- Azure Data Factory Pipelines
- Databricks & PySpark Transformations

- Data Lake Architecture
- Medallion Architecture (Bronze/Silver/Gold)
- Real-Time Industry Experience

Components For Project (From Resume Perspective):

- Source Systems
- Bronze
- Silver
- Gold
- PySpark
- Power BI Reporting
- Monitoring
- Alerting
- Deployment
- End to End Integrations

Module 4: Databricks Certifications

Azure Databricks (DP-750)

- Exam Pattern
- Exam Q & A, Scenarios

Databricks Data Engineer Associate Exam

- Exam Pattern
- Exam Q & A, Scenarios

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