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Complete Practical; Real-time Job Oriented Training

Fabric Data Engineering with SQL, Power BI

Thank you for contacting our **SQL School**. I am **Mr. Sai Phanindra**, trainer for this **Azure Data Engineer with Power BI** Course. With 19+ Years of technical expertise exclusively on Database and Azure, BI Technologies, I assure you 100% Practical, Step by Step Classes for this in-depth Azure Data Engineer course. My Profile @ [linkedin.com/in/saiphanindra/](https://www.linkedin.com/in/saiphanindra/)

In Fabric Data Engineering training, we learn with step by step examples & practically implement ETL, DWH, Cloud Computing, Fabric Data Factory, OneLake, LakeHouse, Synapse Warehouse, Synapse Analytics, Logic Apps, Data Activator, Python Analytics, Python ETL, Spark, PySpark, Fabric Stream, IoT, Big Data Analytics and more ..!

This course is very helpful for:

1. Data Engineers
2. Data Analysts
3. ETL Developers
4. BI Developers
5. Cloud Engineers

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Microsoft Fabric With AI

100% Real-Time, Job Oriented Trainings

Data Factory Synapse One lake, LH
PySpark Power BI AI, Copilot

Trainer: **Mr. Sai Phanindra, 19+ Exp.**
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Step by Step Scenario Based Realtime Project

www.sqlschool.com

Fabric Data Engineering - Training Options (Plans)

	Inclusions	Duration	Number of LIVE Projects
Plan A	Module 1: Fabric Data Engineer	7 Weeks	One
Plan B	Module 1: MSSQL, TSQL Queries Module 2: Fabric Data Engineer	10 Weeks	One
Plan C	Module 1: MSSQL, TSQL Queries Module 2: Fabric Data Engineer Module 3: Power BI	14 Weeks	Two

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Module 1: SQL Server TSQL (MSSQL)

<p>Ch 1: Introduction</p> <ul style="list-style-type: none"> ✓ Database Introduction ✓ Types of Databases ✓ Need for & ETL, DWH ✓ BI Implementations ✓ SQL Server Advantages ✓ Version, Editions of MSSQL ✓ Engineering, Analytics Roles 	<p>Ch 2: Installations</p> <ul style="list-style-type: none"> ✓ SQL Server 2019, 2017 ✓ SSMS Tools Installation ✓ Database Engine (OLTP) ✓ SCM, Configuration Tools ✓ Instance Types, Uses ✓ Authentication Modes ✓ Collation, File Stream 	<p>Ch 3: SQL Basics - 1</p> <ul style="list-style-type: none"> ✓ Need for Databases, Tables ✓ Need for SQL Commands ✓ DDL, DML & DQL Statements ✓ Database Creation @ GUI ✓ Data Operations @ GUI ✓ Session ID, SQL Context ✓ DB, Tables, Data @ SQL
<p>Ch 4: SQL Basics - 2</p> <ul style="list-style-type: none"> ✓ DDL Variants in MSSQL ✓ DML Variants in MSSQL ✓ INSERT & INSERT INTO ✓ SELECT & SELECT INTO ✓ Basic Operators in SQL ✓ Special Operators in MSSQL ✓ ALTER, ADD, TRUNCATE, DROP 	<p>Ch 5: Data Imports, Schemas</p> <ul style="list-style-type: none"> ✓ Data Imports with Excel ✓ ORDER BY & UNION ✓ UNION ALL For Sorting Data ✓ Creating, Using Schemas ✓ Real-world Banking Database ✓ Table Migrations @ Schemas ✓ 2 Part, 3 Part & 4 Part Naming 	<p>Ch 6: Constraints, Index Basics</p> <ul style="list-style-type: none"> ✓ Need for Constraints, Keys ✓ NULL, NOT NULL, UNIQUE ✓ Primary Key & Foreign Key ✓ RDBMS and ER Models ✓ Identity Property, Default ✓ Clustered Index, Primary Key ✓ Non Clustered Index, Unique
<p>Ch 7: Joins & Views Basics</p> <ul style="list-style-type: none"> ✓ JOINS: Purpose. Inner Joins ✓ Left / Right / Full Outer Joins ✓ Cross Joins, Query Tuning ✓ Creating & Using Views ✓ DML, SELECT with Views ✓ RLS : WITH CHECK OPTION ✓ System Views & Metadata 	<p>Ch 8: Functions(UDF), Data Types</p> <ul style="list-style-type: none"> ✓ Using Functions in MSSQL ✓ Scalar Value Functions ✓ Inline & Multiline Functions ✓ Date & Time Functions ✓ String, Aggregate Functions ✓ Data Types : Integer, Char, Bit ✓ SQL Variant, Timestamp, Date 	<p>Ch 9: Stored Procedures, Models</p> <ul style="list-style-type: none"> ✓ Stored Procedures & Usage ✓ Creating, Testing Procedures ✓ Encryption, Deferred Names ✓ SPs for Validations, Analysis ✓ System SPs, Recompilation ✓ Normal Forms & Types ✓ Data Models, Self-References
<p>Ch 10: Triggers, Temp Tables</p> <ul style="list-style-type: none"> ✓ Need for Triggers ✓ DDL & DML Triggers ✓ Using Memory Tables ✓ Data Replication, Automation ✓ Local & Global Temp Tables ✓ Testing & Using Temp Tables ✓ SELECT .. INTO & Bulk Loads 	<p>Ch 11: DB Architecture, Locks</p> <ul style="list-style-type: none"> ✓ Planning VLDBs : Files, Sizing ✓ Filegroups, Extents & Types ✓ Log Files : VLF, Mini LSN ✓ Table Location, Performance ✓ Schemas, Transfer, Synonyms ✓ Transactions Types, Lock Hint ✓ Query Blocking Scenarios 	<p>Ch 12: Cursors & CTEs, Links</p> <ul style="list-style-type: none"> ✓ Cursors : Realtime Use ✓ Fetch & Access Cursor Rows ✓ CTEs for SELECT, DML ✓ CTEs: Scenarios & Tuning ✓ Linked Servers, Remote Joins ✓ Linked Servers: MSDTC, RPC ✓ Tuning Remote Queries
<p>Ch 13: Merge, Upsert & Rank</p> <ul style="list-style-type: none"> ✓ Need for Merge in ETL ✓ Incremental Loads with SQL ✓ MERGE and RANK Functions ✓ Window Functions, Partition ✓ Identify, Remove Duplicates 	<p>Ch 14: Grouping & Cube</p> <ul style="list-style-type: none"> ✓ Group By & HAVING ✓ Cube, Rollup & Grouping ✓ Joins with Group By ✓ 3 Table, 4 Table Joins ✓ Query Execution Order 	<p>Ch 15: Self Joins, Excel Analysis</p> <ul style="list-style-type: none"> ✓ Self Joins & Self References ✓ UNION, UNION ALL ✓ Sub Queries with Joins ✓ IIF, CASE, EXISTS Statements ✓ Excel Analytics, Pivot Reports
<p>Realtime Case Study : Health-Care Domain</p>		

Module 2: Fabric Data Engineer

Ch 1 : Fabrics Introduction

Big Data Analytics with Azure; Big Data Products; Microsoft Fabric - One; Fabric Advantages; Unified Data Foundation; AI Powered Capabilities; OneLake: Storage; Synapse: Engineering, Warehouse; Synapse: Data Science, Analytics; Power BI

Ch 2 : Fabric Licenses, Capacity

Fabric Workspace : Licensing; Fabric Components & Tenant; Organizational Licenses; Capacity, PPU and SKUs; Individual Licenses: Free, Pro; SKU Types: Azure & Office 365; Fabric Workspace : Activation; GUI: Walk Thru Options; Data Factory, Synapse Options; Streaming Objects; Creating Fabric Capacity; Pause / Resume Capacity;

Ch 3 : ETL & Cloud Concepts

Database Introduction; Data Warehouse (DWH) ; Data Engineering Work Flow; Cloud Concepts: IaaS, PaaS; SaaS & Azure Cloud Concepts; Azure Resources & Groups; Storage, ETL, IoT Resources

Ch 4: Azure SQL Database Concepts

Azure SQL Server, SQL DB; Azure SQL Database (OLTP); Azure SQL Pool (DWH); Connections from SSMS Tool; Connections; Pause / Resume SQL Pool; Source Data Configurations; Azure Data Studio Tool Configuration and Connections;

Ch 4: Fabric Data Factory (ADF)

Need for ADF & Pipelines; Linked Services & IRs; Datasets, Pipelines, Triggers; Copy Data Activity & CDT; Data Loads Pipelines, DTUs; Pipeline Monitoring, Edits;

Ch 5: Fabric Data Factory Incremental Loads - 1

File Incremental Loads; Storage Account, Data Lake; Binary Copy, Schema Drift; Staging Concept in ADF; DOCP, Logging & Consistency; Polybase Concept & Tuning;

Ch 6: Fabric Data Factory Incremental Loads - 2

Implement SCD with ADF; Self Hosted IR: Realtime Use; On-premise Data: Incr Loads; Copy Method : Upsert, Keys; Staging & ADF Optimizations; Pipeline Runs, Activity IDs;

Ch 7: ADF Data Flow - 1

Data Flow Transformations; Spark Clusters for Debugging; Optimized Clusters, Preview; Conditional Split, SELECT; Sort, Union Transformations; Pipelines with Data Flow;

Ch 8: ADF Data Flow - 2

Working with Multiple Tables; Join Transform, Broadcast; Row Filters, Column Filters; Surrogate Keys, Derived Cols; ETL Loads Dates, Sink Options; Aggregated Data Loads;

Ch 9: ADF Data Flow - 3

Pivot Transformation; Group By & Pivot Keys; Column Pattern, Deduplicate; Lookup, Cached Lookup; Tuning Transformations; Tuning Data Flow, Spark;

Ch 10: Parameters, SCD & ETL

ADF Templates in Realtime; Table Incremental Loads; Control Tables, Watermarks; Pipeline Parameters, SPs; Dynamic Data Sets, SCD;

Ch 11: Fabric Data Factory Optimizations

Fabric Studio: Data Flow Activity; Spark Clusters : Automations; Spark Cluster Debugging; Spark Cluster Sizing, Capacity; Lakehouse Table: ETL Process; ADLS File Connectors; Power Query Transformations; Power Query Profiling; In-Memory Processing, M Lang; Optimizations; Partition Options & Tuning; Broadcast Options & Tuning;

Ch 12: Data Loads with Lakehouse

Large Scale Data Analytics; Onelake Metastore & Use; Workspace & LakeHouse; Lakehouse Explorer: Tables, Files; File Upload : Header, Data Types; Explorer Shortcuts in Lakehouse; File Data Load to Tables; SQL Queries in Tables; Lakehouse to SQL Endpoint; Transaction Audit: `_delta_log`; Aggregations, Visual Queries; Reports and Data Models;

Ch 13: Fabrics & Spark Clusters

Apache Spark Configurations; Data Engineering/Science; Sark Compute & Capacity; Node Family Settings; Memory Optimized; Transaction Optimized; Runtime Versions, Scaling; Notebooks, Concurrency; Python Libraries in Spark; Dataframes & Realtime Use; Spark SQL Queries & Data Loads; Data Visualizations & Spark;

Ch 14: Fabric Notebooks

Spark Jobs for ETL; Spark Dataframes for ETL; Inferring & Explicit Schema; `pyspark.sql.types`; `pyspark.sql.functions`; Filter, Group Data Frames; Dataframe Storage, Partition; Spark Catalog : Objects; TempView in Spark Catalog; Spark SQL API & Visualizations; Graphic Packages: PyPlot; Big Data Analytics with Spark;

Ch 15: Synapse Warehouse - 1

Fabric Datawarehouse; DWH Creation Options; Sensivity Settings; Warehouse Compute; SSMS Connections; ADS Connections; Table Creations; Warehouse Sample; Data Load Options; Warehouse Query Options; Data Aggregations; Data Analytics;

Ch 16: Synapse Warehouse - 2

Fabric Security Options; Warehouse Security Model; Warehouse Access Model; Fabric Workspace Roles; Item Permissions; Object Level Security; Sharing Warehouse; SQL Permissions; Read, Connect; SQL endpoint data; ReadAll & Build; Grant, Revoke, Deny;

Ch 17: Synapse Warehouse - 3

Zero Copy Clone in DWH; Table Clone in Synapse; Table Clone Inheritance; Create Table As Clone; Table Cloning Scenarios; Cloning : Limitations; Warehouse Performance; Statistics : Creation, Use; Leverage Stats in DWH; In-Memory & SSD Cache; Disk Cache, Important DMVs; Cold Cache & Management;

Ch 18: Synapse Realtime Analytics

Realtime Analytics in Fabric; Streaming & Time Series Data; Capture, Transform & Route; Ingest, Load and Stream; Data Integration At Scale; Creating KQL Databases; KQL Tables, Queries; BLOB Data Ingestions; Data Loads & Fabric Studio; Command Viewer Options; Partialial Data Preview; Data Exploration;

Ch 19: OneLake Concepts

Unified Data Lake in Fabric; Warehouse and Lakehouse; One Lake Workspace Management; Azure HD Insight : Security; DFS API and Connections; Fabric Workloads & Tuning; Onelake File Explorer; One Copy of Data, Data Engines; Compute and Analytics; Uni Management & Governance; Creating Lakehouse with Onelake; Data Loads with Lakehouse;

Ch 20: Microsoft Fabric with Power BI

Using Power BI with Fabric; OneLake Connections with Power BI; Power BI Desktop with Fabric; Power BI Desktop with OneLake; Power BI Desktop with LakeHouse; Power BI Desktop with Synapse; Power BI Cloud with OneLake; Power BI Datasets (LIVE); Power BI Datamarts and Usage; Dashboards with Fabric Metrics; Unified Data Foundation : OneLake; End to end Implementation Plan;

Module 3 : Power BI

<p>Ch 1: Power BI Introduction</p> <ul style="list-style-type: none"> ✓ Reporting Basics & Types ✓ Interactive, Analytical Reports ✓ Paginated Reports (RDL) ✓ Power BI Eco System ✓ Power BI Tools, Service, Server ✓ Need for Power Query (M) ✓ Need for DAX & Cloud 	<p>Ch 2: Power BI Basic Reports</p> <ul style="list-style-type: none"> ✓ Power BI Desktop Installation ✓ Basic Report Design (PBIX) ✓ Data View, Data Models ✓ Data Points, Aggregations ✓ Focus Mode, Spotlight, Exports ✓ ToolTip, PBIX and PBIT ✓ Visual Interactions & Edits 	<p>Ch 3: Grouping, Hierarchies</p> <ul style="list-style-type: none"> ✓ Creating Groups in Power BI ✓ Groups : Creation & Usage ✓ Group Edits Options ✓ Bins & Bin Size, Bin Count ✓ Hierarchies: Creation, Use ✓ Drill Down, Drill Up ✓ Conditional Drill Down
<p>Ch 4: Visual Sync, Filters</p> <ul style="list-style-type: none"> ✓ Slicer & Single Select ✓ Multi Select Options ✓ Integer, Character Slicers ✓ Visual Sync with Slicers ✓ Filters: Visual, Page, Report ✓ Drill Thru Filters & Usage ✓ Basic, Top & Advanced ✓ Clear Filter Options, Resets 	<p>Ch 5: Bookmarks, Big Data Access</p> <ul style="list-style-type: none"> ✓ Bookmarks Creation & Usage ✓ Visual Interactions, Bookmarks ✓ Images : Actions, Bookmarks ✓ Big Data Access with Power BI ✓ Storage Modes: Direct Query ✓ Import & Performance Impact ✓ Formatting & Data Refresh ✓ Summary & Date Time Formats 	<p>Ch 6: Power BI Visualizations</p> <ul style="list-style-type: none"> ✓ Chart and Bar Visuals ✓ Line and Area Charts ✓ Maps, TreeMaps, HeatMaps ✓ Funnel, Card, Multrow Card ✓ PieCharts & Settings ✓ Waterfall, Sentiment Colors ✓ Scatter Chart, Play Axis ✓ Infographics, Classifications
<p>Ch 7: Power Query Level 1</p> <ul style="list-style-type: none"> ✓ Power Query (Mashup) ✓ ETL Transformations in PBI ✓ Power Query Expressions ✓ Table Combine Options ✓ Merge, Union All Options ✓ Table Transformations 	<p>Ch 8: Power Query Level 2</p> <ul style="list-style-type: none"> ✓ Any Column Transformations ✓ String / Text Transformations ✓ Numeric Analytics & Mashup ✓ Date Time Transformations ✓ Add Column Transformations ✓ Expressions and New Columns 	<p>Ch 9: Power Query Level 3</p> <ul style="list-style-type: none"> ✓ Parameters in Power Query ✓ Static Parameters, Defaults ✓ Dynamic Dropdowns, Lists ✓ Linking with Table Queries ✓ Column From Examples ✓ Step Edits, Type Conversions
<p>Ch 10: Power BI Cloud - 1</p> <ul style="list-style-type: none"> ✓ Power BI Cloud Concepts ✓ Workspace Creation, Usage ✓ Report Publish & Edits ✓ Semantic Models in Realtime ✓ Dashboard Creation, Usage ✓ Clone, Share, Subscribe ✓ Q&A, Lineage, Settings 	<p>Ch 11: Power BI Cloud - 2</p> <ul style="list-style-type: none"> ✓ Data Gateways, Data Refresh ✓ Data Source Configurations ✓ Data Refresh & Scheduling ✓ Gateway Optimizations ✓ Semantic Model Optimizations ✓ Report Optimizations ✓ Dashboard Optimizations 	<p>Ch 12: Power BI Cloud - 3</p> <ul style="list-style-type: none"> ✓ Power BI Apps, Shares ✓ App Sections & Options ✓ App Updates, Security ✓ Excel Analytics ✓ Data Explorer Options ✓ Sharing, Subscriptions ✓ Alerts, Metrics, Insights

Ch 13: Report Server & RDL <ul style="list-style-type: none"> ✓ Power BI Report Server ✓ SQL Server DB Engine ✓ Report Database, TempDB ✓ Web Service & Server URL ✓ Paginated Reports (RDL) ✓ Report Builder Tool Usage 	Ch 14: DAX Level 1 <ul style="list-style-type: none"> ✓ DAX : Purpose, Realtime Use ✓ DAX Calculations Creation, Use ✓ DAX Measures Creation, Use ✓ DAX Functions: IIF, ISBLANK ✓ SUM, CALCULATE Functions ✓ DAX Cheat Sheet : Examples 	Ch 15: DAX Level 2 <ul style="list-style-type: none"> ✓ Quick Measures in Power BI ✓ Running Totals, Filters ✓ Star Rating Calculations ✓ Data Models & DAX ✓ Star & Snowflake Schemas ✓ Dimensions, Fact Tables
Ch 16: DAX Level 3 <ul style="list-style-type: none"> ✓ DAX Expressions & Joins ✓ DAX Variables, Usage ✓ Dynamic Report with DAX ✓ SELECTED MEMEBER ✓ Time Intelligence with DAX ✓ PARALLELPERIOD, DATE 	Ch 17: Realtime Project Phase 1 <ul style="list-style-type: none"> ✓ Project Requirement Spec ✓ Understanding Data, Formats ✓ Report Pattern Design ✓ Report Design & Modelling ✓ Power Query, DAX, Insights ✓ Analytical Reports in Cloud 	Ch 18: Realtime Project Phase 2 <ul style="list-style-type: none"> ✓ Complete Project Solution ✓ Project FAQs, Key Roles ✓ Real-world Considerations ✓ Power BI Admin Concepts ✓ Resume Points, FAQs ✓ PL 300 Exam Guidance

Reach Us Now, for Free demo !
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Resume, Mock Interview + Project FAQs and Solutions



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DevOps	AI

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Trending Job Roles

- Data Analyst
- Data Scientist
- Data Engineer
- Solution Architect
- Consultant, more .. !



Training Highlights

- ✓ Step by Step
- ✓ LIVE Project(s)
- ✓ Job Assistance
- ✓ Resume Guidance
- ✓ Concept wise FAQs



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