KOENIG SOLUTIONS · COURSE OUTLINE

Leveraging AI for SQL and Databases

Learn to use AI in SSMS to automate SQL coding, optimise query performance and drive intelligent database tuning.

3 Days	3	8	3
DURATION	MODULES	TOPICS	HANDS-ON ACTIVITIES

COURSE OVERVIEW

This 3-day intensive training program is designed to empower database professionals, developers, and IT specialists with the expertise to leverage Artificial Intelligence (AI) technologies to streamline SQL coding, enhance query performance, and implement intelligent database tuning strategies within SQL Server Management Studio (SSMS). Participants will gain valuable skills to improve productivity, reduce manual effort, and adopt AI-driven automation in SQL Server environments.

WHO THIS COURSE IS FOR

Database administrators, SQL developers, data engineers, IT professionals, and architects seeking to integrate AI techniques for enhanced SQL coding efficiency and database performance optimization

PREREQUISITES

- Solid experience with SQL Server and T-SQL programming.
- Familiarity with SSMS interface and basic query tuning concepts.
- Basic understanding of database indexing and execution plans.
- Prior knowledge of AI concepts is helpful but not mandatory.

LEARNING OBJECTIVES

- Understand the role of AI in SQL Server database development and management
- Learn AI-powered methods to automate and optimize SQL query generation and tuning
- Develop proficiency in AI-driven performance analysis and intelligent indexing strategies
- Explore AI-enabled database monitoring and automatic tuning features in SQL Server
- Apply practical solutions through hands-on labs and case studies for enterprise scenarios

COURSE SYLLABUS

3 Modules, 8 Topics

01

Hands-On Lab

Introduction and AI-Assisted SQL Coding

TOPICS

- **AI in Database Management:** Concepts and Use Cases
- Automating SQL Code Generation with AI

02

Hands-On Lab

Enhancing Query Performance with AI

TOPICS

- Understanding Query Execution Plans and Bottlenecks
- AI-Driven Query Optimization and Indexing Strategies
- **Real-World Case Study:** AI-Based Performance Improvements

03

Hands-On Lab

Intelligent Database Tuning and Automation

TOPICS

- AI-Powered Performance Monitoring and Automatic Tuning in SQL Server
- Automating Database Maintenance and Workload Forecasting with AI
- Future Trends in AI for Database Management and Wrap-Up

HANDS-ON ACTIVITIES

Practise What You Learn

#	MODULE	ACTIVITY
01	**Introduction and AI-Assisted SQL Coding**	Generating and Optimizing Queries Using AI Tools
02	**Enhancing Query Performance with AI**	Using AI Tools to Tune Slow Queries
03	**Intelligent Database Tuning and Automation**	Configuring AI-Driven Tuning Features

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

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