

KOENIG SOLUTIONS • COURSE OUTLINE

Developing SQL 2016 Data Models (SSAS)

Learn to build multidimensional and tabular data models in SSAS, using MDX, DAX and data mining for business intelligence.

3 Days

24 HOURS

9

MODULES

29

TOPICS

9

HANDS-ON LABS

COURSE OVERVIEW

The Developing SQL 2016 Data Models (SSAS) course is designed to provide learners with a comprehensive understanding and practical skill set for implementing data models using Microsoft SQL Server Analysis Services (MS SSAS). This course covers various aspects of both multidimensional and Tabular data models, diving into the creation and management of Cubes, Dimensions, and Measures. Learners will also explore the essentials of the Multidimensional Expressions (MDX) language and the Data Analysis Expressions (DAX) language for more complex data manipulation and analysis. Throughout the course, students will gain practical experience with MS SSAS through a series of labs that reinforce the lessons, enabling them to configure Dimensions, Measure groups, and implement security within their data models. Additionally, learners will delve into predictive analytics with data mining, a key feature of MS SQL Server Analysis Services. By the end of the course, participants will have the skills to build robust, efficient data models that are essential for enterprise-level business intelligence solutions.

WHO THIS COURSE IS FOR

The “Developing SQL 2016 Data Models” course caters to professionals aiming to enhance their BI and data modeling skills.

Business Intelligence (BI) Analysts

Data Analysts

Database Administrators

Database Developers

Data Architects

Data Scientists

IT Professionals working with SQL Server

SQL Server Developers

Business Analysts involved in BI projects

System Architects

BI Developers

Report Developers

Professionals preparing for Microsoft certification exams related to SQL Server Analysis Services (SSAS)

What You Will Learn

- Explain core business intelligence and Microsoft BI platform concepts
- Create data sources, data source views and cubes
- Configure dimensions, attribute hierarchies and grouping
- Configure measures and measure groups within a cube
- Apply MDX to query and add calculations to a cube
- Implement KPIs, actions, perspectives and translations in a cube
- Develop a tabular data model and apply DAX calculations
- Plan predictive analysis using data mining models

COURSE SYLLABUS

9 Modules, 29 Topics

01

Lab

Introduction to Business Intelligence and Data Modeling

This module introduces key BI concepts and the Microsoft BI product suite.

TOPICS

Introduction to Business Intelligence · The Microsoft business intelligence platform

02

Lab

Creating Multidimensional Databases

This module describes the steps required to create a multidimensional database with analysis services.

TOPICS

Introduction to multidimensional analysis · Course details · Creating data sources and data source views · Creating a cube · Overview of cube security

03

Lab

Working with Cubes and Dimensions

This module describes how to implement dimensions in a cube.

TOPICS

Configuring dimensions · Define attribute hierarchies · Sorting and grouping attributes

04**Lab**

Working with Measures and Measure Groups

This module describes how to implement measures and measure groups in a cube.

TOPICS

Working with measures · Working with measure groups

05**Lab**

Introduction to MDX

This module describes the MDX syntax and how to use MDX.

TOPICS

MDX fundamentals · Adding calculations to a cube · Using MDX to query a cube

06**Lab**

Customizing Cube Functionality

This module describes how to customize a cube.

TOPICS

Implementing key performance indicators · Implementing actions · Implementing perspectives ·
Implementing translations

07**Lab**

Implementing a Tabular Data Model by Using Analysis Services

This module describes how to implement a tabular data model in PowerPivot.

TOPICS

- Introduction to tabular data models
- Creating a tabular data model
- Using an analysis services tabular model in an enterprise BI solution

08**Lab**

Introduction to Data Analysis Expression (DAX)

This module describes how to use DAX to create measures and calculated columns in a tabular data model.

TOPICS

- DAX fundamentals
- Using DAX to create calculated columns and measures in a tabular data model

Performing Predictive Analysis with Data Mining

This module describes how to use data mining for predictive analysis.

TOPICS

- Overview of data mining
- Using the data mining add-in for Excel
- Creating a custom data mining solution
- Validating a data mining model
- Connecting to and consuming a data mining model

HANDS-ON LABS

Practise What You Learn

#	MODULE	ACTIVITY
01	Introduction to Business Intelligence and Data Modeling	Exploring a Data Warehouse
02	Creating Multidimensional Databases	Creating a multidimensional database
03	Working with Cubes and Dimensions	Working with Cubes and Dimensions
04	Working with Measures and Measure Groups	Configuring Measures and Measure Groups
05	Introduction to MDX	Using MDX
06	Customizing Cube Functionality	Customizing a Cube
07	Implementing a Tabular Data Model by Using Analysis Services	Working with an Analysis services tabular data model
08	Introduction to Data Analysis Expression (DAX)	Creating Calculated Columns and Measures by using DAX
09	Performing Predictive Analysis with Data Mining	Perform Predictive Analysis with Data Mining

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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