KOENIG SOLUTIONS · COURSE OUTLINE

Preparing Your Data for Power BI

Learn to build tabular data models with SQL Server Analysis Services, load data from multiple sources, and write DAX queries.

8	42	20
MODULES	TOPICS	HANDS-ON ACTIVITIES

COURSE OVERVIEW

This course is designed to introduce the participant to SQL Business Intelligence Semantic Model (BISM) Tabular mode, data modeling, and DAX.

WHO THIS COURSE IS FOR

- **Business analysts**
- **Business intelligence developers**
- **SQL Professionals**

LEARNING OBJECTIVES

What You Will Learn

At Course Completion

- Understand Analysis Services Installation and Architecture: One Product, Two Models
- Understand version changes: SQL Server Analysis Services
- Understand important terms
- Understand and utilize SQL Server Data Tools for Tabular
- Understand and utilize projects
- Understand and utilize importing
- Understand and utilize loading data
- Understand and utilize examining views
- Understand and utilize deployment
- Understand and utilize data sources
- Understand and utilize data credentials
- Understand and utilize SQL as a source
- Understand and utilize Excel as a source
- Understand and utilize Flat Files as a source
- Understand and utilize Azure as a source
- Understand and utilize SharePoint as a source
- Understand and utilize sorting during load
- Understand querying with MDX
- Understand and utilize DAX syntax
- Understand and utilize DAX data types and operator overloading
- Understand and utilize DAX operators
- Understand and utilize DAX values
- Understand and utilize measures
- Understand and utilize calculated columns
- Understand evaluation contexts
- Understand and utilize date calculations
- Understand and utilize importing related tables
- Understand and utilize creating relationships
- Understand and utilize hierarchies
- Understand Direct Query
- Understand and utilize KPIs
- Understand drill through
- Understand perspectives
- Understand and utilize PowerPivot
- Understand and utilize Pivot Tables

- Understand and utilize Power View

COURSE SYLLABUS

8 Modules, 42 Topics

01

Activity

Course Overview

This module explains how the class will be structured and introduces course materials and additional administrative information.

TOPICS

Introduction · Course Materials · Facilities · Prerequisites · What We'll Be Discussing

02

Activity

What Is the Tabular Model?

SQL Server Analysis Services (SSAS) provides two different approaches for data modeling: multidimensional and tabular. While there is substantial overlap between them, there are also significant differences. In this module, we discuss feature comparisons and explain each approach, then we'll dive deeper into the tabular model as that is the focus for this course.

TOPICS

- **Analysis Services Installation and Architecture:** One Product, Two Models
- **Version Changes:** SQL Server Analysis Services
- Important Terms
- SQL Server Data Tools for Tabular

03

Activity

Working in Tabular

In this module, we cover the specifics of creating projects, discuss options to either import or load data, and explore deployment.

TOPICS

Projects · Importing · Loading Data · Examining Views · Deployment

04

Working in Tabular

TOPICS

Understand and utilize projects · Understand and utilize importing · Understand and utilize loading data · Understand and utilize examining views · Understand and utilize deployment

05

Activity

Understanding Loading Data From Different Sources

In this module, we will explore data sources, the credentials needed to access them, and cover a few of the most common sources available.

TOPICS

Data Sources · Data Credentials · SQL as a Source · Excel as a Source · Flat Files as a Source · Azure as a Source · SharePoint as a Source · Sorting During Load

06

8 Activities

Using DAX and MDX

In this module, we will discuss two different languages; DAX and MDX. We will briefly explore MDX and its use with a tabular model, then we'll cover DAX and walk-through how to use this powerful language.

TOPICS

Querying with MDX · Basic DAX Syntax · Evaluation Context · Calculate Function · Time Intelligence

07

2 Activities

Building Data Models

In this module, we will discuss data modeling basics and explore how to utilize these concepts effectively.

TOPICS

Importing Related Tables · Creating Relationships · Hierarchies · Direct Query · KPIs · Drillthrough · Perspectives

08

6 Activities

Excel PowerPivot and Tabular

In this module, we will discuss utilizing DAX with PowerPivot, pivot tables, and Power View.

TOPICS

Working with PowerPivot · Working with Pivot Tables · Working with PowerView

HANDS-ON ACTIVITIES

Practise What You Learn

#	MODULE	ACTIVITY
01	**Course Overview**	**Lab 1: Course Overview:** None
02	**What Is the Tabular Model?**	**Lab 1: What is the Tabular Model?:** SQL Server Data Tools for Tabular
03	**Working in Tabular**	**Lab 1: Working in Tabular:** Creating a Tabular Project
05	**Understanding Loading Data From Different Sources**	**Lab 1: Understanding Loading Data From Different Sources:** None
06	**Using DAX and MDX**	**LAB 1: USING DAX AND MDX** ■ DAX Syntax ■ DAX Data Types and Operator Overloading ■ DAX Operators ■ DAX Values ■ Measures ■ Calculated Columns ■ Evaluation Contexts ■ Date Calculations
07	**Building Data Models**	**LAB 1: BUILDING DATA MODELS** ■ Creating Relationships ■ Hierarchies
08	**Excel PowerPivot and Tabular**	**LAB 1: EXCEL POWERPIVOT AND TABULAR** ■ Importing Data ■ Importing Large Datasets ■ Importing Data with a Query ■ Creating Relationships ■ Creating a Cascading Relationship ■ Power View

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.

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