Implementing Data Models and Reports with Microsoft® SQL Server® 2012

Duration: 5 Days   Course Code: M10778

Overview:

This 5-day instructor-led course describes how to empower information workers through self-service analytics and reporting. Students will learn how to implement PowerPivot and tabular data models, create and deliver rich data visualizations with Power View and SQL Server Reporting Services, and discover business insights by using data mining.

The Beta version of this course (10778AB) utilizes pre-release software in the virtual machine for the labs. Microsoft SQL Server 2012 Release Candidate 0 (RC0) is used in this course.Some of the exercises in this course are SQL Azure enabled.

Target Audience:

The primary audience for this course are database professionals who need to fulfill BI Developer role to create analysis and reporting solutions. Primary responsibilities will include:Implement reporting solutions by using SQL Server Reporting Services Implementing multidimensional databases by using SQL Server Analysis Services Creating tabular semantic data models for analysis by using SQL Server Analysis Services Create visualizations of data by using Power View Create data mining solutions by using SQL Server Analysis Services

Objectives:

- Describe the components, architecture, and nature of a BI solution.

- Create reports with Reporting Services.

- Create reusable report items that simplify self-service reporting.

- Manage a reporting infrastructure.

- Create a multidimensional database with Analysis Services.

- Implement dimensions in a cube.

- Implement measures and measure groups in a cube.

- Use MDX Syntax.

- Customize a cube.

- Implement a Tabular Data Model in PowerPivot.

- Use DAX to query a tabular model.

- Implement a Tabular Database.

- Use Power View to create interactive data visualizations.

- Use Data Mining for predictive analysis.

Prerequisites:

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- 10774A: Writing Queries with Microsoft SQL Server Transact-SQL

Testing and Certification

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Content:

Module 1: Introduction to Business Intelligence and Data Modeling
This module provides an introduction to Business Intelligence (BI). It describes common BI scenarios, current trends in BI, and the typical roles involved in creating a BI solution. It also introduces the Microsoft BI platform, and describes the roles that SQL Server Denali and SharePoint 2010 play in Microsoft BI solutions.
Lessons
•Introduction to Business Intelligence
•The Microsoft Business Intelligence Platform

Module 2: Implementing Reports with Reporting Services
This module describes how to create reports with Reporting Services.
Lessons
•Introduction to Reporting Services
•Creating a Report with Report Designer
•Grouping and Aggregating Data in a Report
•Showing Data Graphically
•Filtering Reports Using Parameters

Module 3: Supporting Self-Service Reporting
This module describes how to create reusable report items that simplify self-service reporting.
Lessons
•Introduction to Report Builder
•Creating Reusable Report Items

Module 4: Managing a Reporting Infrastructure
Describes how to manage a reporting infrastructure.
Lessons
•Managing Security
•Managing Report Execution
•Delivering Reports with Subscriptions
•Troubleshooting Reporting Services

Module 5: Creating Multidimensional Databases
This module provides an introduction to multidimensional databases and introduces the core components of an OLAP cube.
Lessons
•Introduction to Multidimensional Analysis
•Creating Data Sources and Data Source Views
•Creating a Cube
•Overview of Cube Security

Module 6: Working with Cubes and Dimensions
This module describes how to create multidimensional databases and introduces the core components of an OLAP cube
Lessons
•Configuring Dimensions
•Defining Attribute Hierarchies
•Sorting and Grouping Attributes

Module 7: Working with Measures and Measure Groups
This module describes how to implement measures and measure groups in a cube.
Lessons
•Working With Measures
•Working with Measure Groups

Module 8: Introduction to MDX
In this module, students will learn the fundamentals of Multidimensional Expressions. Students will also learn about building calculations, such as calculated members and named sets.
Lessons
•MDX Fundamentals
•Adding Calculations to a Cube
•Using MDX To Query a Cube

Module 9: Customizing Cube Functionality
In this module describes how to customize cube functionality by using several technologies available to you in Microsoft SQL Server Denali Analysis Services.
Lessons
•Implementing Key Performance Indicators
•Implementing Actions
•Implementing Perspectives
•Implementing Translations

Module 10: Implementing a Tabular Data Model by Using Microsoft PowerPivot
This module explains how to install and use the PowerPivot for Excel add-in and the PowerPivot for SharePoint gallery. It also provides an introduction to the concepts underlying these technologies, such as the BI Semantic Model and Tabular Data Models.
Lessons
•Introduction to Tabular Data Models and PowerPivot Technologies
•Creating a Tabular Data Model by Using PowerPivot for Excel
•Sharing a PowerPivot Workbook and Using PowerPivot Gallery

Module 11: Introduction to Data Analysis Expression (DAX)
This module explains the fundamentals of the DAX language. It also explains how you can use DAX to create calculated columns and measures, and how you can use these in your Tabular Data Models.
Lessons
•DAX Fundamentals
•Using DAX to Create Calculated Columns and Measures in a Tabular Data Model

Module 12: Implementing an Analysis Services Tabular Data Model
This module describes Analysis Services Tabular Data Models and explains how to develop a Tabular Data Model by using the Business Intelligence Development Studio.
Lessons
•Introduction to Analysis Services Tabular Data Model Projects
•Implementing an Analysis Services Tabular Data Model in Business Intelligence Development Studio

Module 13: Creating Data Visualizations With Power View
This module describes how to use Power View to create interactive data visualizations.
Lessons
•Introduction to Power View
•Visualizing Data with Power View

Module 14: Performing Predictive Analysis with Data Mining
The module describes how to use Data Mining for Predictive Analysis.
Lessons
•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 a and Consuming a Data-Mining Model

Additional Information:

This course will be delivered with digital courseware. In order to have the best learning experience you are asked to bring your own second screen to view the courseware. A second screen includes: tablets and laptops.

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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