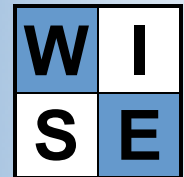


Data Warehouse Development for SQL Server 2005/2008



WISE LTD.

- COURSE CODE:** SQSDWD
- COURSE TITLE:** Data Warehouse Development for SQL Server 2005/2008
- AUDIENCE:** Data warehouse analysts, ETL specialists, data warehouse administrators.
- PREREQUISITES:** Completion of our course 'Data Warehousing Terms, Concepts & Architecture (DWHTCA)' and 6 months experience of Microsoft SQL Server 2005 or equivalent knowledge.
- DURATION:** 3 days
- LEVEL:** Intermediate
- FEATURES:** Data warehouse/data mart and multidimensional cube development using realistic scenarios.
- SUMMARY:** Designed to emphasise SQL Server features specific to business intelligence (BI) and data warehousing (DW), this scenario and hands-on presentation details the following:
- Dimensional modelling
 - Data mart design and load
 - Business Intelligence Development Studio (BIDS)
 - SQL Server Management Studio
 - Building dimension tables
 - Building fact tables
 - Developing dimensions
 - Hierarchies
 - ETL via SQL Server 2005/2008 Integration Services (SSIS)
 - Security
 - SQL Server 2005/2008 Analysis Services (SSAS)
 - SQL Server 2005/2008 Reporting Services (SSRS)
 - Performance and good practices
- OBJECTIVES:** Upon completion of this course, the delegate should understand how to deal with BI/DW design issues as they relate to SQL Server 2005/2008.
- FORMAT:** Hands-on (about 60%).

1. DATA MART DESIGN – INITIAL STEPS

- Determine business processes
- Determine grain
- Determine dimensions
- Determine facts

2. DATA MART DESIGN

- Fictitious organisation description
- Business process bus architecture
- Business questions to be answered and solutions to be met
- Star vs. snowflake schema
- Dimension design
- Hierarchy design
- Fact (measure) design

3. DATA MART CREATION: SQL SERVER MANAGEMENT STUDIO

- Database
- Dimension tables
- Fact tables
- Integrity and other relationships

4. ALTERNATIVE DATA MART CREATION: BIDS

- Analysis Services cube via Cube Wizard
- Data mart via Cube Definition

5. POPULATE DATA MART USING SQL SERVER INTEGRATION SERVICES (SSIS)

- Create project
- Use Control Flows
- Use Data Flows
- Use Source and Destination adaptors
- Use IS Connection Manager
- Use Source to Destination mapping
- Use Precedence Constraints
- Use Aggregate Transformation
- Load data into data mart

6. CREATE A SECOND FACT TABLE IN EXISTING DATA MART

- Rationale
- Use SQL Server Management Studio
- Use Properties window
- Establish referential integrity

7. POPULATE FACT TABLES: SSIS

- Use BIDS
- Create new project
- Use various Control Flows
- Use various Data Flows
- Establish Source and Destination
- Adjust and optimise SSIS data types
- Establish column mapping
- Use Sort Transformation
- Use Derived Column Transformation
- Use expressions

8. SQL SERVER ANALYSIS SERVICES (SSAS) & CUBES

- Rationale
- Extend existing data mart with OLAP cube
- Define measures for cube
- Determine granularity
- Define calculated measures
- How to format measures
- How to add measures to cubes
- How to relate dimensions to measure groups
- How to deploy OLAP cubes via BIDS
- How to deploy OLAP cubes via Analysis Services
- Deployment wizard
- Workshop

9. INTRODUCTION TO THE BUSINESS INTELLIGENCE WIZARD

- Rationale
- Key Performance Indicators (KPIs)
- Actions
- Partitions
- Aggregation

10. ANALYSIS SERVICES & SECURITY

- Creating security roles
- How to use MDX to control security
- Use role entries of Solution Explorer

11. INTRODUCTION TO SQL SERVER REPORTING SERVICES (SSRS)

- Rationale
- Definition
- Architecture
- Report creation
- Report manager
- Management
- Ad-hoc reporting

12. USING MDX QUERIES: SQL SERVER MANAGEMENT STUDIO

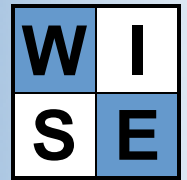
- MDX queries vs. T-SQL queries
- Using the MDX SELECT statement
- Using query dimensions
- Using Slicer dimensions
- Using Filter functions
- Using WITH statements
- Crossjoins
- Using TOPCOUNT/BOTTOMUP queries
- Using aggregates queries
- MDX and AXIS(n) queries
- Using the IIF function
- Using data analysis (e.g., MAX, VARIANCE) functions

13. PHYSICAL DESIGN CONSIDERATIONS

- Definition
- Set-up (e.g., estimated volumes, availability requirements)
- Configuration
- Software
- Indexes
- ETL design

14. DW GOOD PRACTICES & PERFORMANCE

- Hardware considerations
- Database considerations
- Table design
- Index design
- Partition design
- ETL design
- Schema design
- Data integrity design
- Security design
- Backup and recovery design
- Metadata design



15. INTEGRATION SERVICES TUNING & BEST PRACTICES

- How to optimise Data Flows
- How to optimise Data Sources
- How to optimise parsing
- How to optimise logging
- Index considerations
- How to optimise Lookup transformations
- How to optimise Fuzzy Lookup
- How to optimise Fuzzy Grouping
- Constraint best practices
- How to encourage parallel execution
- Buffer usage
- Execution trees
- Blocking vs. non-blocking transformations
- How to improve INSERT performance