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Upgrade

Relational Database Support for Data Warehouses

University of Colorado System

Part of a 5-course series, the Data Warehousing for Business Intelligence Specialization

You're currently enrolled in this session:

January 18 – February 28

Upcoming session:

August 29 - October 10

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Course Ratings

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4.6 out of 5

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About this Course

Relational Database Support for Data Warehouses is the third course in the Data Warehousing for Business Intelligence specialization. In this course, you'll use analytical elements of SQL for answering business intelligence questions. You'll learn features of relational database management systems for managing summary data commonly used in business intelligence reporting. Because of the importance and difficulty of managing implementations of data warehouses, we'll also delve into storage architectures, scalable parallel processing, data governance, and big data impacts.

🌐 Subtitles available in **English**
👥 Volunteer to translate subtitles for this course

Relational Database Support for Data Warehouses is course 3 of 5 in the Data Warehousing for Business Intelligence Specialization.

Evaluate business needs, design a data warehouse, and integrate and visualize data using dashboards and visual analytics. This Specialization covers data architecture skills that are increasingly critical across a broad range of technology fields. You'll learn the basics of structured data modeling, gain practical SQL coding experience, and develop an in-depth understanding of data warehouse design and data manipulation. You'll have the opportunity to work with large data sets in a data warehouse environment to create dashboards and Visual Analytics. You will use of MicroStrategy, a leading BI tool, OLAP (online analytical processing) and Visual Insights capabilities to create dashboards and Visual Analytics. In the final Capstone Project, you'll apply your skills to build a small, basic data warehouse, populate it with data, and create dashboards and other visualizations to analyze and communicate the data to a broad audience.

Data Warehousing for Business Intelligence

View Specialization »

Instructors

Michael Mannino

Associate Professor
Business School, University of Colorado Denver

Syllabus

Week 1   DBMS Extensions and Example Data Warehouses

Course objectives
Course topics and assignments
DBMS extensions
Relational database schema patterns
Colorado Education Data Warehouse
Data warehouse standards in health care
Course software requirements
Quiz

Quiz: Module 1 quiz

Week 2   SQL Subtotal Operators

GROUP BY clause review
SQL CUBE operator
SQL ROLLUP operator
SQL GROUPING SETS operator
Variations of subtotal operators
Quiz and Assignment

Quiz: Module 2 quiz
Quiz: Quiz for module 2 assignment
Peer Graded Assignment: Assignment for module 2

Week 3   SQL Analytic Functions

Processing Model and Basic Syntax
Extended Syntax and Ranking Functions
Window Comparisons I
Window Comparisons II
Functions for Ratio Comparisons
Quiz and Assignment

Quiz: Module 3 quiz
Quiz: Quiz for module 3 assignment
Peer Graded Assignment: Assignment for module 3

Week 4   Materialized View Processing and Design

Background on Traditional Views
Materialized view definition and processing
Query Rewriting Rules
Query Rewriting Examples
Oracle Tools for Data Integration
Quiz and Assignment

Quiz: Module 4 quiz
Quiz: Quiz for module 4 assignment
Peer Graded Assignment: Assignment for module 4

Week 5   Physical Design and Governance

Storage Architectures
Scalable Parallel Processing Approaches
Big data issues
Data Governance
Quiz and Assignment
Closing

Quiz: Module 5 quiz

How to Pass the Course

Pass all graded assignments to complete the course.

Related Courses

Data Warehouse Concepts, Design, and Data Integration

University of Colorado System

Business Intelligence Concepts, Tools, and Applications

University of Colorado System

Database Management Essentials

University of Colorado System

Building a Data Science Team

Johns Hopkins University

Managing Data Analysis

Johns Hopkins University