Advanced SQL for ERP Reporting Training Course

Professional Development Training Course Outline

Category	Enterprise Resource Planning (ERP)	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Advanced SQL for ERP Reporting Training Course is designed for professionals aiming to enhance their skills in leveraging SQL to generate dynamic, actionable reports from ERP systems. In today's fast-paced, data-driven business environment, ERP systems hold vast amounts of critical information, and being able to extract and manipulate this data efficiently is key to driving insightful decision-making. This course provides an in-depth exploration of SQL, enabling participants to master complex queries, optimize performance, and produce customized reports tailored to specific organizational needs. Whether you are working with SAP, Oracle, or Microsoft Dynamics, this course will help you unlock the full potential of ERP data through powerful SQL techniques.

Throughout the course, participants will learn how to use advanced SQL queries to extract key business intelligence (BI) from ERP databases, automate reporting processes, and create complex, multi-table joins to streamline business operations. By integrating real-world case studies and best practices, this course aims to equip attendees with the expertise required to not only understand ERP architecture but also to design and implement effective reporting strategies that drive business efficiency. Whether you are a business analyst, database administrator, or IT specialist, this training will significantly elevate your ability to work with ERP data and enhance your organization's reporting capabilities.

Programme Curriculum

Advanced SQL for ERP Reporting Training Course

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Course Objectives

1. Understand the role of SQL in ERP systems and its impact on business reporting.
2. Master the use of complex joins to connect tables within ERP databases.
3. Learn how to optimize SQL queries for improved reporting performance and efficiency.
4. Explore the creation and implementation of advanced filtering techniques in SQL for precise data extraction.
5. Develop proficiency in working with aggregations and grouping functions for detailed analysis.
6. Implement subqueries and nested queries for multi-layered data extraction.
7. Gain expertise in generating dynamic, parameterized reports tailored to specific business needs.
8. Learn the use of window functions and rankings to analyze large datasets within ERP systems.
9. Dive into ERP database architecture to understand data storage and relationships between key tables.
10. Automate report generation using scheduled SQL scripts and stored procedures.
11. Explore best practices for maintaining data integrity and ensuring accurate ERP reports.
12. Understand the importance of data security and user access control when dealing with sensitive business data.
13. Learn to create interactive dashboards and data visualizations by integrating SQL with BI tools.

Target Audience

1. ERP Analysts.
2. Database Administrators.
3. Business Intelligence Analysts.
4. Data Analysts.
5. Software Engineers.
6. Consultants.
7. IT Professionals.
8. Decision-Makers in enterprises.

Course Modules

Module 1: Introduction to ERP Systems and SQL

- Overview of ERP system architecture and database structure
- Key ERP modules and their data flows
- Introduction to SQL and its role in ERP reporting
- Understanding the importance of database normalization in ERP reporting
- Case study: Building simple reports from ERP tables

Module 2: Advanced SQL Query Techniques

- Writing complex join queries
- Using subqueries to extract nested data
- Understanding nested SELECT statements and their use cases
- Filtering data using advanced WHERE and HAVING clauses
- Case study: Query optimization for faster report generation

Module 3: Data Aggregation and Grouping

- Using GROUP BY and HAVING to summarize data
- Advanced aggregation functions
- Calculating moving averages and running totals in reports
- Pivoting data for reporting purposes
- Case study: Generating month-over-month sales reports

Module 4: Data Transformation Techniques

- Using CASE statements for data categorization
- Implementing COALESCE and NULLIF for handling missing data
- Data type conversions and formatting within SQL queries
- Creating custom report columns with calculated fields
- Case study: Building financial statements with dynamic data transformations

Module 5: SQL for ERP Performance Optimization

- Identifying performance bottlenecks in complex queries
- Indexing strategies for speeding up report generation
- Optimizing joins and subqueries for ERP data
- Using EXPLAIN and query execution plans to troubleshoot slow queries
- Case study: Performance tuning of a large ERP report

Module 6: Automating Reports and SQL Scheduling

- Introduction to scheduled SQL jobs in ERP systems
- Creating stored procedures for automated reporting
- Automating report delivery via email or BI tools
- Using Triggers to automatically generate reports on data updates
- Case study: Automating financial close reports in ERP systems

Module 7: Advanced Data Analysis with Window Functions

- Introduction to window functions
- Calculating running totals, cumulative sums, and moving averages
- Using PARTITION BY for windowed calculations
- Applying LEAD and LAG for trend analysis

- Case study: Analyzing sales trends and forecasting future performance

Module 8: Integrating SQL with BI Tools for Reporting

- Connecting SQL queries to Power BI or Tableau for interactive dashboards
- Importing ERP data into BI tools for analysis and visualization
- Creating custom dashboards from SQL queries
- Understanding data models in BI tools and ERP systems
- Case study: Creating an interactive sales dashboard from ERP data

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call +254769199797

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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