SQL Automation for Business Intelligence Training Course

Professional Development Training Course Outline

Category	Business Intelligence	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

SQL Automation for Business Intelligence Training Course is designed to empower professionals with the ability to streamline, optimize, and automate data processes across business intelligence platforms. This course focuses on leveraging advanced SQL techniques and automation tools to enhance reporting efficiency, reduce manual workload, and improve the accuracy of business insights. Participants will gain practical knowledge in SQL scripting, query optimization, ETL automation, and integration with BI tools, ensuring that they are fully equipped to meet the demands of modern data-driven organizations.

Through this program, learners will acquire hands-on experience in automating repetitive data tasks, building dynamic dashboards, and deploying intelligent reporting solutions that drive actionable business decisions. By bridging the gap between data management and business intelligence, this course prepares participants to implement scalable, reliable, and high-performance SQL automation strategies that contribute directly to organizational success.

Programme Curriculum

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Course Objectives

1. Understand SQL fundamentals for BI automation and data management
2. Develop complex SQL queries for optimized business reporting
3. Automate repetitive ETL processes for improved efficiency
4. Integrate SQL with BI tools such as Power BI, Tableau, and Looker
5. Implement best practices in SQL query performance tuning
6. Design dynamic dashboards using automated SQL scripts
7. Apply data transformation techniques for actionable insights
8. Monitor and troubleshoot SQL jobs and automation pipelines
9. Ensure data quality, consistency, and governance in BI systems
10. Leverage advanced SQL functions and procedures for automation
11. Explore real-world case studies on SQL automation in enterprises
12. Enhance reporting accuracy and reduce manual errors
13. Develop end-to-end automated BI reporting solutions

Organizational Benefits

- Streamlined reporting processes and reduced manual effort
- Faster and more accurate business decision-making
- Enhanced data quality and governance
- Increased productivity of BI teams
- Cost reduction in repetitive data management tasks
- Improved scalability of reporting infrastructure
- Efficient handling of large datasets
- Real-time insights through automated dashboards
- Better alignment between IT and business teams
- Higher ROI from BI initiatives

Target Audiences

1. Business Intelligence Analysts
2. Data Analysts and Data Engineers
3. SQL Developers
4. BI Managers and Team Leads
5. ETL Developers
6. Database Administrators
7. Reporting Specialists
8. IT Professionals seeking automation skills

Course Duration: 5 days

Course Modules

Module 1: Introduction to SQL Automation

- Overview of SQL automation in BI processes
- Benefits of automating queries and reports
- Understanding SQL scripts and stored procedures
- Introduction to automation tools and platforms
- Hands-on exercises on basic SQL automation
- Case Study: Automating monthly sales reporting

Module 2: Advanced SQL Query Techniques

- Writing complex SQL queries for large datasets
- Optimizing joins, subqueries, and indexes
- Using window functions and aggregate functions
- Automating query execution and scheduling
- Debugging and troubleshooting SQL scripts
- Case Study: Query optimization for e-commerce data

Module 3: ETL Automation for BI

- Automating Extract, Transform, Load processes
- Connecting databases to BI tools
- Data cleansing and transformation automation
- Scheduling and monitoring ETL workflows
- Implementing error handling in ETL processes
- Case Study: Automating data pipelines for finance analytics

Module 4: Integrating SQL with BI Tools

- Connecting SQL data to Power BI, Tableau, and Looker
- Creating automated dashboards and reports
- Scheduling refreshes for real-time insights
- Parameterized queries for dynamic reporting
- Best practices for BI tool integration
- Case Study: Automated KPI dashboards for retail

Module 5: SQL Performance Tuning

- Identifying slow queries and bottlenecks
- Indexing strategies for faster execution
- Query rewriting for performance improvement
- Automating performance monitoring
- Using execution plans for optimization
- Case Study: Reducing report generation time by 50%

Module 6: Data Governance and Quality Automation

- Ensuring data consistency and integrity
- Automating validation checks in SQL
- Implementing error reporting mechanisms
- Maintaining audit trails and compliance
- Best practices for BI data governance
- Case Study: Automating data quality checks in banking

Module 7: Advanced Automation Techniques

- Using stored procedures, triggers, and functions
- Scheduling scripts with cron jobs or SQL agents
- Automating alerts and notifications for BI teams
- Integrating scripts with version control systems
- Implementing reusable automation templates
- Case Study: Automating financial month-end reports

Module 8: Capstone Project and Real-World Application

- End-to-end SQL automation project
- Applying all modules in a business scenario
- Creating automated dashboards and reports
- Troubleshooting and refining automation pipelines
- Presenting insights and business recommendations
- Case Study: Complete BI automation workflow for a retail chain

Training Methodology

- Interactive instructor-led sessions
- Hands-on practical exercises and labs
- Real-world case studies for contextual learning
- Group discussions and collaborative problem-solving
- Continuous assessment through exercises and quizzes
- Guidance on best practices for implementation

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

Ready to enroll or request a customized program? Book online or contact us:

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