# Stored Procedures for Business Intelligence Training Course

Professional Development Training Course Outline

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

## Course Introduction

In today's data-driven business environment, mastering stored procedures is essential for business intelligence professionals to streamline data processing, enhance reporting efficiency, and ensure scalable database operations. Stored Procedures for Business Intelligence Training Course is designed to provide a comprehensive understanding of stored procedures, integrating practical examples with real-world BI applications. Participants will develop the skills to design, optimize, and deploy stored procedures that improve query performance, ensure data integrity, and support analytics-driven decision-making.

This course equips participants with advanced technical knowledge in SQL programming, database optimization, and automation of complex data workflows. With hands-on exercises and case studies, learners will gain practical experience in building reusable, robust stored procedures that serve enterprise-level BI systems. Emphasis is placed on aligning technical skills with business intelligence goals, empowering participants to transform raw data into actionable insights effectively.

## Programme Curriculum

**Stored Procedures for Business Intelligence Training Course**

**Introduction**

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**Course Objectives**

1. Understand the fundamentals of stored procedures in relational databases.
2. Develop optimized SQL stored procedures for BI reporting.
3. Implement error handling and transaction management in stored procedures.
4. Enhance data security and integrity using advanced stored procedure techniques.
5. Automate repetitive BI tasks with parameterized procedures.
6. Integrate stored procedures with data visualization tools for reporting.
7. Improve query performance with indexing and execution plan analysis.
8. Debug and troubleshoot complex stored procedures efficiently.
9. Apply best practices for version control and documentation of procedures.
10. Leverage dynamic SQL to support flexible BI reporting needs.
11. Design modular stored procedures for reusable BI components.
12. Implement conditional logic and loops for complex data transformations.
13. Analyze real-world BI case studies for practical stored procedure deployment.

**Organizational Benefits**

- Streamlined BI workflows through optimized stored procedures.
- Increased database performance and reduced query execution times.
- Improved accuracy and consistency of BI reports.
- Automated data transformation processes for faster insights.
- Enhanced collaboration between IT and BI teams.
- Reduced manual errors in data processing.
- Scalable database solutions that support growing business needs.
- Better utilization of database resources.
- Increased employee technical proficiency in SQL and BI tools.
- Stronger alignment between database management and business objectives.

**Target Audiences**

- BI Developers and Analysts
- Database Administrators
- Data Engineers
- Reporting Specialists
- SQL Developers
- IT Professionals in Data Management
- Business Analysts
- Project Managers overseeing BI implementations

**Course Duration:** 5 days

**Course Modules**

**Module 1: Introduction to Stored Procedures**

- Overview of stored procedures in SQL
- Benefits for BI reporting and data automation
- Basic syntax and structure of procedures
- Creating, modifying, and deleting procedures
- Parameterized procedures for dynamic inputs
- Case Study: Automating monthly sales reports

**Module 2: SQL Programming for BI**

- Writing complex SQL queries for stored procedures
- Joins, subqueries, and CTE usage in procedures
- Using aggregate and window functions efficiently
- Implementing conditional logic (IF, CASE)
- Understanding data types and variable declarations
- Case Study: Generating KPI dashboards using stored procedures

**Module 3: Performance Optimization**

- Analyzing execution plans for procedure performance
- Indexing strategies for faster query results
- Reducing locking and blocking issues
- Optimizing joins and subqueries
- Parameter sniffing and plan reuse techniques
- Case Study: Improving BI report runtime for a retail database

**Module 4: Error Handling and Transactions**

- Implementing TRY…CATCH blocks in procedures
- Rollback and commit for transaction management
- Logging errors for troubleshooting
- Handling NULL values and exceptions
- Ensuring data integrity with transactions
- Case Study: Financial reconciliation automation using stored procedures

**Module 5: Advanced Stored Procedure Techniques**

- Dynamic SQL for flexible reporting
- Modular and reusable procedure design
- Using temporary tables and table variables
- Recursive stored procedures
- Advanced parameter handling techniques
- Case Study: Multi-department BI reporting automation

**Module 6: Integration with BI Tools**

- Connecting stored procedures to Power BI/Tableau
- Automating refresh of dashboards
- Embedding procedure logic in visualizations
- Using procedures for ETL processes
- Performance considerations for large datasets
- Case Study: Building an interactive sales dashboard

**Module 7: Debugging and Troubleshooting**

- Common errors and their resolutions
- Using SQL Profiler and execution plans
- Step-by-step debugging techniques
- Performance bottleneck identification
- Logging and monitoring stored procedure execution
- Case Study: Troubleshooting slow-running BI queries

**Module 8: Best Practices and Documentation**

- Version control for stored procedures
- Documenting procedures for team collaboration
- Standardizing coding and naming conventions
- Security best practices and access control
- Maintaining reusable procedure libraries
- Case Study: Implementing a company-wide stored procedure standard

**Training Methodology**

- Instructor-led interactive sessions
- Hands-on exercises and real-world scenarios
- Group discussions and knowledge sharing
- Case study analysis for practical understanding
- Quizzes and assessments to reinforce learning
- 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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