office@sqlmasteracademy.com
www.sqlmasteracademy.com
0888 332 654; 0885 113 442

COURSE: Mastering SQL Server for Database Developers

The class teach students specific methods to use in order to write highly efficient and effective stored procedures, batches, transactions, cursors, and ad hoc queries. Participants will be shown how to properly code functions, joins, sub-queries, Case statements, and grouping facilities. They will learn how to change their code and use specific code structures in order to get the best performance and scalability. They will see some untraditional techniques and usage of statements in order to get the optimal code execution. Additionally, students will learn the structure of locking, search arguments, optimizations, and stored procedure compilations. They will understand how to avoid specific pitfalls in logical database design, how to write effective code and avoid code problems, what the data and index structures are, how to design an optimal data loading using minimally logged operations. They will be aware of upcoming technologies in new versions. The specific SQL Server development features are also part of the training – CDC, CT, Service Broker, CSI, and the SQL Server 2014/2016 InMemory OLTP.

Summary

Duration:	5 days/ 40 hours
Level:	300
Delivery method:	In class
Language:	Bulgarian
Price:	950 Euro excl VAT

* The difficulty level is consistent with the widely accepted scale of technical difficulty of training on Microsoft Corp

AUDIENCE:

- Database Developers who are willing to gain deeper knowledge and understanding of the technology
- NET developers who are responsible for database design and server side development

AFTER THE TRAINING ATTENDEES WILL BE ABLE TO:

- Gain a mastering level of experience and knowledge in T-SQL
- Make proper decision which constructs and features to use to program specific cases, which one to avoid and how to architect an effective server side database application
- Have a deep understanding of how the code executes in order to avoid sending bad code to the database
- Design proper scalable and performant database programming layer

TOPICS:

Module 1.   SQL Server Architecture overview and logical modelling pitfalls
Module 2.   Data and Index Structures
Module 3.   Complex multi-table Queries, CTES, windowing functions, ranking, aggregating and pivoting
Module 4.   Query optimization process, query plans, plan changing and recompilation, parameterization, multi-threading, operators and parallel plans
Module 5.   Transactions and concurrency, error handling, data modifications,
Module 6.   Programming objects and advanced constructs, dynamic SQL
Module 7.   Data loading for performance, minimally logged operations
Module 8.   SQL Server InMemory OLTP, natively compiled SPs
Module 9.   SQL Server Always Encrypted, Data encryption

FUNDAMENTALS

SQL Server Fundamentals courses give you an excellent base for successful career as administrator or data base developer. Their practical purpose, use of scenarios of working practice will help both the beginners, as well as the more experienced students. The courses will assist the students to develop skills to protect in a better way the data of their organizations, to react quicker and adequate to all issues, which are data base related, and to avoid following some harmful myths and wrong concepts in administration and data base development.

- ❖ **MS Windows & AD Administration for DBA's**
- ❖ **Querying SQL Server Fundamentals**
- ❖ **SQL Server Administration Fundamentals**
- ❖ **SQL Server Development Fundamentals**

MASTERING

The trainings of SQL Server Mastering series consist of intensive modules which are comparatively complicated regarding the technical level and which are designed and intended for professionals in the field of SQL Server. Trainings include solid theoretical material, part of which comes directly from the program team, who develops SQL Server in Microsoft also numerous demonstrations from the "workshop" of SQL Server, unpublished tuning techniques for increase of SQL Server performance.

- ❖ **Mastering SQL Server for Database Admins**
- ❖ **Mastering SQL Server for Database Developers**
- ❖ **SQL Server Performance Tuning and Optimization**

DEEP DIVE

Deep Dive Series consists two and three day trainings with technical level 300+ (level 100 – beginners, level 400 – masters). Those courses are focused on specific components of SQL Server. They consist of a significant number of practical advices, a lot of demonstrations, huge theoretical part and also examples of real infrastructural solutions, discussions of real situations which students have in their infrastructures and want to discuss.

- ❖ **SQL Server Enterprise Infrastructure Optimization and Deployment**
- ❖ **SQL Server Upgrade**
- ❖ **SQL Server Replication Deep Dive**
- ❖ **SQL Server High Availability and Disaster Recovery Solutions**

BI

SQL Master Academy works in close partnership with SolidQ in the field of Business Intelligence trainings, due to which fact we have in our portfolio a unique programme of professional trainings in the field of Data Quality, Multidimensional Design, SSAS, ETL and SSIS. The courses train BI developers and designers of BI solutions, including back end EIM, as well as front end and reporting.

- ❖ **Personal Business Intelligence with MS Power BI**
- ❖ **Introduction to MS Business Intelligence**
- ❖ **BI Fundamentals**
- ❖ **Accelerated SQL Server 2012-2016 Integration Services**
- ❖ **Multidimensional Database Design with SSAS 2012-2016**
- ❖ **Data Quality and Master Data Management with SQL Server 2012-2016**
- ❖ **Data Mining Algorithms in SSAS, Excel, R, and Azure ML**

DATABASE DESIGN

The design of relational data base is one important and inseparable part of the solution development. Those are knowledge and skills which every DB Dev or DB Designer should have. A huge part of the problems in production sphere are due to a not good base model or to such, which does not scale well. The courses for design of relational data base we offer in SQL Master Academy, are oriented not only to mastering of the relational model and the good design of the subject filed, but also to the mastering of good practices in modelling of scalable data base.

- ❖ **Relational Database Design Fundamentals**
- ❖ **Relational Database Design for Performance and Scalability**

SQL SERVER 2016

Explore the new version of the fastest performing database system in the market today – SQL Server 2016! Be prepared for InMemory OLTP, the new columnstore extensions and the brand new operational analytics possibilities, which can give your workload 30x-100x performance improvement. See how the Query Store, temporals, the new built-in security features and AlwaysOn groups works. Get all that you need to put your skills and your databases on track.

- ❖ **SQL Server 2016 Get Ready for DBA and DB Devs**
- ❖ **SQL Server 2016 for Business Intelligence Experts**
- ❖ **SQL Server Cloud based Solutions**