MS SQL Server for programmers (code: MSSQL-PROG)

Ask for details
Phone +44 203 608 6289
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Overview

The course provides students with knowledge and skills to create, manage and programmatically control database on MS SQL Server platform. Basing on relational database theory students get to know Transact SQL (T-SQL) language. They learn to create complex queries, design well structured databases, use indexes to improve performance. Students practice every subject in hands-on lab.

The course outline is similar to course BD 101 (Databases for programmers). This course is designed to MS SQL Server platform. Great value of dedicated courses is that students get used to dedicated tools and learn specific SQL dialect.

Duration

3 days

Agenda

1. Introduction to relational databases
   - Understanding relations
   - Table, row, column
   - Key, primary key
   - Foreign key, references between tables
2. Getting familiar with SQL Server Management Studio
3. Transact SQL language syntax
   - Writing simple query - SELECT closure
   - Using functions and operators
   - Using conditional functions - CASE, ISNULL, COALESCE, LIKE
   - Narrowing results - WHERE closure
   - Sorting results - ORDER BY closure
   - Hitting extremes - TOP statement
   - Using multiple tables - JOIN statement
   - Working with set of data - GROUP BY closure
   - Adding aggregates
   - Choosing sets - HAVING closure
   - Using sub-queries
   - Combining multiple-query results - UNION, EXCEPT, and INTERSECT closures
4. Relational database theory
   - Dealing with anomalies
   - Understanding normal forms
5. Designing database structure
   - How-to: designing techniques
   - Using database design notation
   - Best practices: design patterns for typical issues
6. Creating database schema (DDL)
   - Understanding data types
   - Creating tables - CREATE TABLE query
   - Understanding constraints PRIMARY KEY, UNIQUE, NOT NULL, DEFAULT, FOREIGN KEY, CHECK, ON DELETE, ON UPDATE
   - Using IDENTITY column
7. Inserting, modifying and deleting data (DML)

   - Adding data - INSERT query
   - Editing data - UPDATE query
   - Removing data - DELETE query
8. Understanding views
   - Creating views - CREATE VIEW query
   - Using views
9. Using procedural languages
   - Introduction to programming databases
   - Using triggers and stored procedures

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Target audience and prerequisites

The course is intended for novice and experienced MS SQL Server users, who want to learn SQL language and touch some programming and performance issues. Especially we invite programmers and analysts having programming concerns.

Before attending this course, students must have:

- Basic computer knowledge, such as keyboard and mouse skills.
- Basic file-management skills. The student should know how to navigate to folders and files on a computer running Windows Vista / Windows 7.

No prior database experience is required.

Certificates

Course participants receive completion certificates signed by ALX.

Locations

- Online (English) – your home, office or wherever you want
- Warsaw (English) – Jasna 14/16A
- any other location (London, UK, EU) on request

Price

990 EUR

The price includes:

- course materials,
- meals,
- snacks, coffee, tea and soft drinks,
- course completion certificate,
- one-time consultation with the instructor after course completion.