

# Sela.



SQL4DA

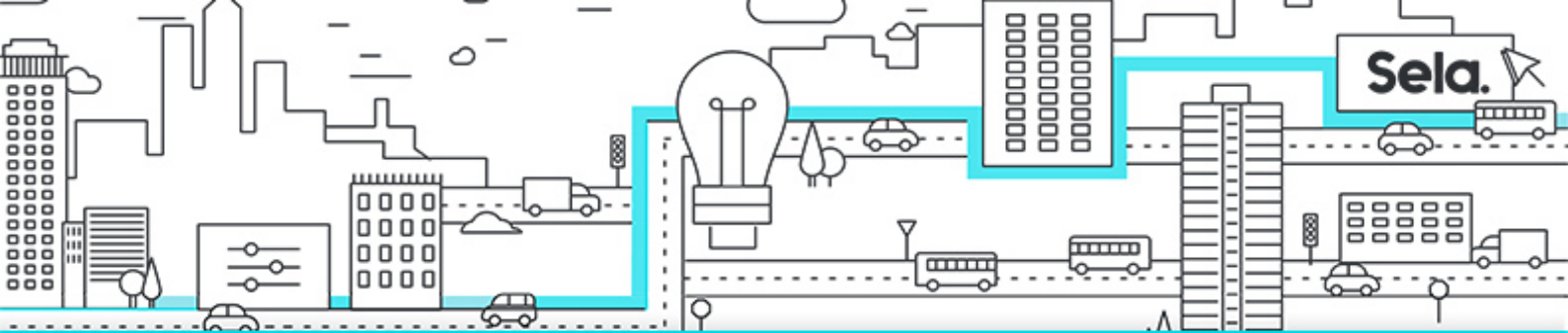
## SQL Training for Data Analysts



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# SQL Training for Data Analysts

SQL4DA - Version: 1

## 5 days course

### Description:

This course introduces the SQL language based on the SQL Server platform to people who are new to this topic. In this course, the students will learn how to write Transact-SQL queries against tables and other objects in SQL Server, for various purposes: reporting, testing, data analysis, and more.

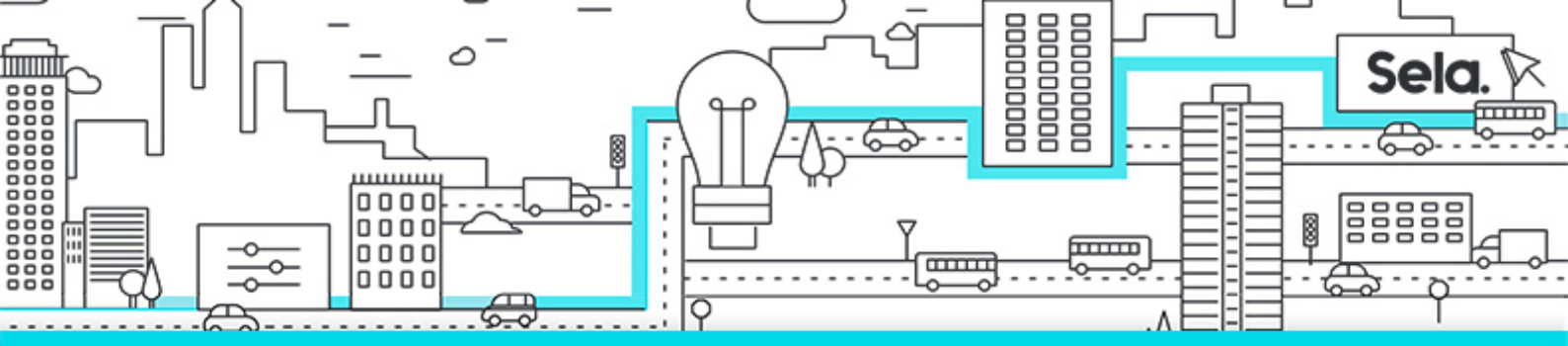
The course includes a lot of exercises so that the students will be able to experience what they learn. At the end of this course, the students will be able to work in a SQL Server environment and write efficient queries against database objects.

### Intended Audience:

The course is intended for inexperienced database users, who are required to use databases in their daily work, mainly for data reporting and analysis scenarios. The course is relevant for data analysts, data testers, second level support engineers, and other personnel who are using databases. No previous knowledge or experience is required.

### Objectives:

- Introduce Microsoft SQL Server and the SQL language
- Learn to write Transact-SQL queries against tables and other objects in SQL Server
- Understand when to use sub-queries, views CTEs, and temporary table
- Practice advanced methods, such as window functions and pivoting
- Acquire techniques and best practices for writing efficient queries



## Topics:

### • Introduction to the SQL Language

- SQL vs. Transact-SQL
- Types of Transact-SQL Statements
- Transact-SQL Syntax Elements
- System Data Types
- System Functions
- Connections, Sessions, Batches, and Transactions
- The Use of NULL

### • The SELECT Statement

- A Simple Query
- Formatting the Result Set
- Filtering the Data
- Grouping and Sorting
- Joining Multiple Tables

### • Programming Basics

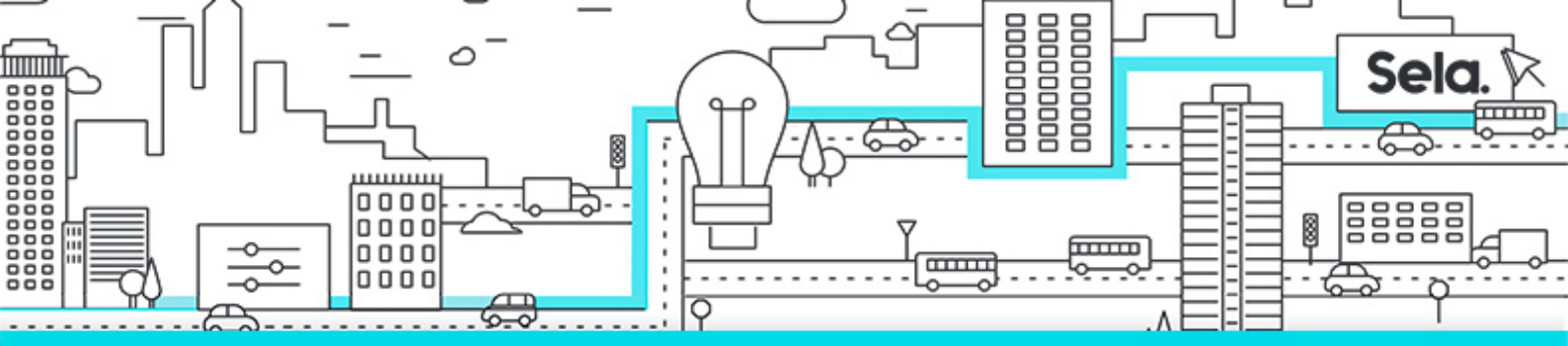
- Working with Variables
- Conditional Statements
- Control of Flow Statements

### • Views and Temporary Tables

- Working with Views
- Using Temporary Tables
- Manipulating Data in a Temporary Table

### • Advanced Querying

- The CASE Clause
- Combining Multiple Result Sets
- Using Sub-Queries



- Common Table Expressions
- Window Functions
- Using PIVOT and UNPIVOT

- **Querying Best Practices**

- Think Set-Based, not Row-By-Row
- Use SARGable Predicates
- Retrieve Only the Required Data
- Avoid Implicit Conversions
- Sort the Data Only If You Have To
- Try Several Approaches