SQL Development – One Day Course Agenda

Overview

We are moving to a data-driven culture and more than ever, it's important that you and your team have the ability to search through data to find insights to inform decisions. Organisations are using various forms of data sources including large, relational databases, so having a basic understanding of SQL is a great skill not only for data analysts or scientists, but for everyone.

It is critical to know how to handle errors and manage queries when using SQL scripts. Errors can cause inconsistencies in your database or lead to incorrect decision making.

This one-day course is designed to give you a primer in the fundamentals of SQL and working with data so that you can begin analysing it, and brings your team up to speed with the foundational elements of SQL development, learning how to communicate with relational databases through SQL.

Learning Outcomes

At the end of this course delegates should be able to:

- Learn how to use SQL to access, create, and update data in a database
- Use SQL commands – this includes filtering, sorting, manipulating strings, dates, & numerical data from different sources for analysis
- Perform basic and more complex queries, utilising essential query words and functionality
- Learn various aggregate functions that help perform complex database operations
- Create datasets to answer business questions and problems using SQL
- Convert timestamps of all types to common formats and perform date/time calculations
- Learn about joins, selecting and performing the optimal joins
- Learn how to use case statements for conditional logic
- Learn how to handle errors and discover how to manage transactions in case of an error
- Learn to write scripts to catch and handle errors
- Learn to convert a query into a scheduled job

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One Day Course – Example Agenda

#	Topic
1.	**Manipulation in SQL** • Introduction to SQL • Relational Databases • Statements • Create, Insert, Select, Update, Delete • Types of Analysis
2.	**Querying SQL** • Introduction to SQL commands to query • These include items such as Select, As, Distinct, Where, Is Null, Between etc
3.	**Aggregating** • Performing calculations using SQL • Introduction to calculations including Count, Group By, Max/Min etc
4.	**Multiple Tables in a Database** • Introduction to accessing multiple tables • Combining tables automatically/manually • Combining tables with SQL • Joins • Unions
5.	**Handling Errors** • Error handling script – Try/Catch • Learn to write scripts for multiple operations • Correcting errors • Error function syntax • Using error functions
6.	**Summary and Close**