TCS Training

Structured Query Language (SQL) - Introduction

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Professional Delivery – Printed Workbooks – Step-by-step Reference Guide – Certificates – After Course Support

Aim: The aim of this course is to equip you with the knowledge to extract meaningful data from a database. The Introduction level course covers retrieval of data including filters, sums, and calculations and also covers updates and deletions of data. This course does not require any previous knowledge of SQL however, an understanding of relational databases is a preference.

Course Objectives	Explanation / Example
Understand the principles of a relational database	Covers the tables in relational databases and why they're not just in one table of data. How they relate to each other, ensuring the understanding of primary and foreign keys
Work with the Select statement	Select is the most basic statement when SQL programming – extracting information
Use comments	Adding comments to code – writing code that doesn't run
Sort retrieved data	Order data - alphabetical or numerical ordering of extracted data
Filter data	Filter using various operators and pattern matching for text
Work with AND and OR	Filtering data on more than one criteria e.g. Salary is more than 1000 and town is Southampton or Portsmouth
Concatenate data	Joining together information. e.g. Firstname and Surname fields to make full name
Use mathematical operators	Adding, subtracting, multiplying and dividing information
Use Aggregate functions	Sums, Averages, Minimum, Maximum, Counts
Insert, update and delete data	Adding records, updating information and deleting records in databases using SQL code
Extract data from multiple tables	Build code to extract data from many tables