

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