
SQL Introductory

National Competency Standard (ICA05):

ICAB4136B Use structured query language to create database structures and manipulate data



Objectives

On completion of this course, attendees will be able to use SQL to develop complete computer reporting systems without writing a line of programming code. You should come to this course if your work involves the storage and retrieval of lists of information capable of being queried through an SQL interface (Oracle, Ingress, Access etc).

Pre-Requisites

Those attending this course should be familiar with personal computers and be competent in the use of the keyboard and mouse.

Duration

One day.

Course Outcomes

1. Understand fundamental database concepts, relational tables, primary and foreign keys.
2. Describe the history of SQL.
3. Understand basic SQL structure and syntax.
4. Select simple recordsets from tables.
5. Utilise SQL conditional operators.
6. Use statistical and grouping functions.
7. Create advanced multiple table queries involving both inner and outer joins.

Course Content

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| <ul style="list-style-type: none">• Relational Databases• Relational Model• Designing a Database• Normalisation• Table Types• Linking Tables• Primary Keys• Foreign Keys• SQL and the Select Statement• History of SQL• Implementing SQL• The Select Statement• The Where Clauses• The Equality Operators• The Inequality Operators• The Logical Operators• The Between Operator• The Null keyword• The In Operator | <ul style="list-style-type: none">• The Like Operator• Calculating Values• Grouping and Aggregate Functions• Aggregate Functions• The Count Function• The Distinct Keyword• The Sum Function• Calculations in Summary Functions• Grouping Records• The Having Clause• Multi Table Queries• Joining Two Tables• Table Aliases• The Cartesian Product• Joining More Than Two Tables• Inner and Outer Joins• Subqueries• Single Row Subqueries |
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