

# A Practical Introduction to Structured Query Language (SQL)

## Description

This online course provides a practical, hands-on introduction to SQL. It starts from first principles to enable you to develop your own queries from scratch.

It begins with terms and definitions and a simplified overview of relational database concepts.



Emphasis is placed on the data retrieval capabilities of SQL. This is illustrated with worked examples and followed up with practical exercises for you to try yourself.

## Practical exercises

Worked examples and practical exercises are based around a fictional private airline company called SkyJets.

No software needs to be installed to complete this course. Practical exercises are supported by an interactive SQL console, available on-line through your browser. This enables you to write your own SQL statements to interrogate the SkyJets database and observe your results.

## Course content

- 1  • Presentation: Course Outline
  - What's in the course
  - Order in which topics are introduced
  - Session coverage
- 2  • Foundations and Concepts Session
  - Presentation: Session Outline
    - Foundations, concepts, references
  - Foundations
    - SQL standards, SQL origins, SQL uses
  - Relational Concepts
    - RDBMs, relations, primary keys, relationships
  - Quiz

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  - Introduction to SkyJets
    - Presentation: Session Outline
      - Introduction to SkyJets, database design, interactive SQL console
    - Presentation: SkyJets Airline & Database
      - Logical data structure, outline table descriptions
    - Demonstration: Interactive SQL Console
      - Easy-to-use interactive console, accessing iSQL
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  - Practical 1
    - Presentation: Session Outline
      - Columns, arithmetic
    - Demonstration: Columns
    - Demonstration: Arithmetic
    - Exercises
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  - Practical 2
    - Presentation: Session Outline
      - Row selection, multi-value conditions, compound conditions
    - Demonstration: Row Selection
    - Demonstration: Multi-Value Conditions
    - Demonstration: Compound Conditions
    - Exercises
- 6
  - Practical 3
    - Presentation: Session Outline
      - Ordering
    - Demonstration: Ordering
    - Exercises
- 7
  - Practical 4
    - Presentation: Session Outline
      - Grouping
    - Demonstration: Groups
    - Exercises
- 8
  - Practical 5
    - Presentation: Session Outline
      - Table joins, types of join
    - Demonstration: Table Joins
    - Demonstration: Join Types
    - Exercises
- 9
  - Practical 6
    - Presentation: Session Outline
      - Subqueries, correlated subqueries
    - Demonstration: Subqueries
    - Demonstration: Correlated Subqueries
    - Exercises
- 10
  - Practical 7
    - Presentation: Session Outline
      - Set operators
    - Demonstration: Set Operators
    - Exercises

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- Practical 8
    - Presentation: Session Outline
      - Data updates
    - Demonstration: Data Updates

## Contact

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