

# Relational Database Design (SQL03)

ID SQL03 Prix CHF 1 780,- (Hors Taxe) Durée 2 jours

## A qui s'adresse cette formation

DB users who want to get into database creation. Users who want to optimize their queries. People who want to understand and evaluate databases.

## Pré-requis

Good SQL knowledge as in the course SQL Standard Intensive Training

## Objectifs

You can understand database designs, query correctly and efficiently (with the appropriate SQL knowledge). You can design and create simpler databases.

## Contenu

### Motivation

### Basic terms and DB concepts

### Data dictionary and meta databases

### Data integrity

- Data consistency
- Data protection
- Data security
- Transactions

### Overview: models

- Hierarchical model
- Network model
- Relational model
- Object-oriented models

### Normalize

- From the 1st to the 3rd normal form
- BCNF, 4th, 5th normal form

## Overview: Design Methods

- Objectives, principles of design methods
- Method according to Zehnder
- ERD from Chen

## The Entity Relationship Diagram (ERD)

- Formation of entity sets and relationships between entity sets
- Normalizing an ERD and mapping the ERD to data structures
- Identification keys, foreign keys, global and local attributes

## Definition of consistency conditions

- Inherent, external consistency conditions
- Classes of consistency conditions

## Reproduction of transactions

## Outlook, trend of DBMS and trends

- Distributed database structures
- Graph databases (NoSQL)
- Document databases (NoSQL)
- Typical cloud data structures

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## Centres de formation dans le monde entier



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