



Introduction to Relational Database Design

Course ISI-1332 1 Day Instructor-led, Hands-on

Introduction

This class is a lecture/discussion format class which focuses exclusively on relational database design. Though some computer programs will be referenced in this class, the references to those programs are meant to help guide your building of relational databases. This class will focus exclusively on relational database design.

At Course Completion

After completing this course, students will be able to:

- Understand what a relational database is
- Identify reports users will want
- Create a scope statement
- Identify columns
- Split information into tables
- Create relationships
- Identify data entry forms

Prerequisites

For this course, a basic understanding of Windows and a spreadsheet program like Microsoft Excel is what you will need. If you have worked with data in any way, shape, or form, you will do just fine in this class.

Course Materials

The student kit includes a workbook and other necessary materials for this class.

Course Outline

Module 1: What is a Relational Database?

- What is a relational database?
- What makes data a database and not a spreadsheet?
- What makes a relation database "relational"?
- What are the parts of a relational database?

Module 2: Identifying Reports Users Will Want

- Planning database reports
- Identifying existing data

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Module 3: Creating a Scope Statement

- Defining the problem
- The use cases for the database
- Following business rules
- Defining what is not in the database
- The database platform

Module 4: Identifying Columns

- Identifying classes
- Identifying class attributes
- Identifying objects
- Defining columns

Module 5: Splitting Information Into Tables

- Making sure every record is unique
- Breaking columns down to their lowest forms
- Avoiding repeats of information
- Avoiding multiples of the same column
- Columns need to relate to a primary key
- Keeping historical data

Module 6: Creating Relationships

- One-to-one relationships
- One-to-many relationships
- Many-to-many relationships
- Enforcing referential integrity
- Cascading updates
- Cascading deletes

Module 7: Identifying Data Entry Forms

- What use a form and how does it make data entry easier?
- Single-record forms
- Multi-record forms
- Split forms
- Forms with subforms