

# Designing Relational Databases

Course code: NRD

Students design optimal structure of relational database, find out right number of entities, relations and attributes, they also define constraints (primary keys, foreign keys, unique, check, not null).

## Who is the course for

The course is primarily set for users who are responsible for design, administration or querying relational databases.

## What we teach you

Students learn design optimal relational database structure and obtain necessary knowledge for administration or querying relational database.

## Required skills

None

## Course Outline

Introduction to relation database modeling

Definition of database

Traditional data storage file systems

Relational database management systems

How to do " a right design "

Best Practise in data modeling

Terminology and database design concepts

Basic terms in data models

Identification of model objects

Entity

Attribute

Relation

Relation properties

Primary and foreign key

Advanced relations

E-R diagrams

What is E-R diagram

Benefits of E-R diagrams in design

Creation of E-R Diagram

Normal forms

Benefits of normalized data

Normal forms (1-3 Normal Form)

Denormalization

Physical database model

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Transformation of E-R diagram into physical database

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Data integrity - why to use

Benefits and the use of CASE software in database design

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