

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

GOPAS Praha

Na Strži 2097/63
140 00 Praha 4 - Krč
Tel.: +420 226 201 390
info@gopas.cz

GOPAS Brno

Nové sady 996/25
602 00 Brno
Tel.: +420 530 513 590
info@gopas.cz

GOPAS Bratislava

Dr. Vladimíra Clementisa 10
Bratislava, 821 02
Tel.: +421 902 903 132
info@gopas.sk



Copyright © 2026 GOPAS, a.s.,
All rights reserved

Designing Relational Databases

Transformation of E-R diagram into physical database

Index

Data integrity - why to use

Benefits and the use of CASE software in database design

GOPAS Praha

Na Strži 2097/63
140 00 Praha 4 - Krč
Tel.: +420 226 201 390
info@gopas.cz

GOPAS Brno

Nové sady 996/25
602 00 Brno
Tel.: +420 530 513 590
info@gopas.cz

GOPAS Bratislava

Dr. Vladimíra Clementisa 10
Bratislava, 821 02
Tel.: +421 902 903 132
info@gopas.sk



Copyright © 2026 GOPAS, a.s.,
All rights reserved