



# Fundamentals of Data Management

## Pass Tasks 4.1: Functional Dependencies and Normalisation

### Overview

In this tutorial, you'll practise identifying functional dependencies and ensuring a relational database is in third normal form.

### Purpose

Learn to identify problems with database schemas and how to solve them using normalisation.

### Task

Solve the functional dependency and relational design problems outlined below.

### Time

This task should be completed in your fourth lab class and submitted for feedback in the fourth lab or at the beginning of lab 5.

### Resources

- Online module (from Canvas)
- Elmasri & Navathe, Fundamentals of Database Systems, Chapter 15
- Connolly & Begg, Database Systems, Chapter 14
- Online resources, e.g.
  - <https://www.youtube.com/watch?v=oGOBN5TKY9E>
  - <http://www.cs.nott.ac.uk/~nza/G51DBS/dbs11.pdf>
- You can use a specialised tool or simply use tables in your lab report.

### Feedback

Discuss your solutions with the tutorial instructor.

### Next

Get started on module 5.

## Pass Tasks 4.1 — Submission Details and Assessment Criteria

Document your solutions to the tasks in document using a word processor or other suitable software. Upload a pdf to Doubtfire. The tutors will discuss them with you in the lab.

## Subtask 4.1.2

Bring the outcome of task 4.1.2 into Second Normal Form.

Document the steps and resulting table(s) and give reasons why they are necessary to achieve 2NF.

Discuss this with the tutor before you proceed to the next task.

Document the solution and upload it.