Fundamentals of Data Management

Pass Tasks 4.1.3: 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.

Resources

- https://www.tutorialspoint.com/dbms/database_normalization.htm

- 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 Credit Task 4.2.1.

Pass Tasks 4.1.3 — 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.

Bring the outcome of task 4.1.2 into Third Normal Form.

Document the steps and resulting table(s) and give reasons why they are necessary to achieve 3NF.

Document the solution and upload it.