

Practice Problem for the Bonus Part of Take Home Assignment 2

The table titled *Student* given below stores a set of attributes found in a University database. The following conditions apply:

- Each student in the *Student* table is in a program and can take any number of courses during the program.
- A course may be taken as part of any program and is always taught by a particular instructor.

You are required to show the table(s) in first, second, and third normal forms storing all the data currently stored in the following unnormalized *Student* table. In addition, show the relationships among the table(s) you create in each normal form.

Student

StudentID	FirstName	LastName	ProgramCode	ProgramLengthInMonths	CourseCode	CourseTitle	Instructor
000001	John	Doe	MSc	24	CPSC653	Computational Geometry	Jerry Miller
					CPSC689	Modelling For Computer Graphics	Dave Jones
					CPSC607	Biological Computation	John Stiles
000002	Richard	Miles	PhD	48	SENG697	Agent-Based Software Engineering	Ben Stuart
					CPSC607	Biological Computation	John Stiles
000003	Mary	Lange	MSc	24	CPSC653	Computational Geometry	Jerry Miller
000004	Jane	Roe	BSc	48	CPSC457	Principles of Operating Systems	Greg Brown
					CPSC653	Computational Geometry	Jerry Miller

This practice problem has been designed with concepts from the following two sources:

[1] P. Cherry, Central Queensland University: *Normalisation Example 2* (15 November, 2008).

http://webfuse.cqu.edu.au/Courses/aut2001/95169/Extra_Examples/Normalisation_Example_2/

[2] Microsoft Help and Support: *Description of the database normalization basics* (15 November, 2008).

<http://support.microsoft.com/kb/283878/en-us>