CITS1402 Relational Database Management Systems
Lectures for Semester 2 2015
Overview and Administration

Unit coordinator: Gordon Royle
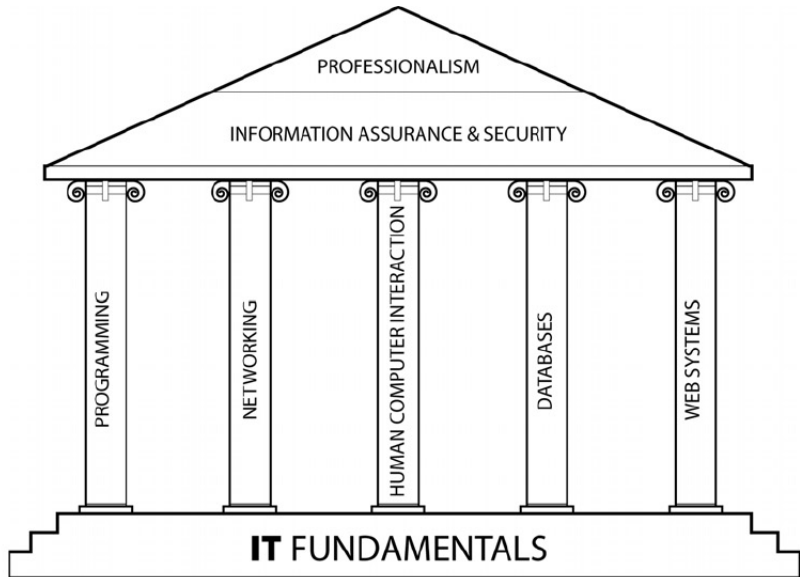Lecturer Week 1: Mark Reynolds

July 25, 2015

Description

This unit deals with data modelling through the theory and practice of database design, implementation and use. Several database models are addressed, with a strong focus on the relational model and its theoretical grounding in sets and relational algebra. The process of problem decomposition into entity relations, the design of appropriate relational schemas, and their refinement through normalisation underlies this unit. Critical issues surrounding the design of query languages and their implementation are addressed, and information retrieval is practised using a specific query language. Students learn database connectivity by building systems in one of several programming languages that support a connectivity Application Programming Interface (API).

On completion of this unit, students will be able to:

- understand existing database implementation and create refinements and improvements through analysis;
- understand the 'business' requirements to design a database;
- refine the database to improve and ensure correctness and reliability;
- correctly program structured query language (SQL) queries and reports; and
- build an application layer interface for easier user interaction.

PROFESSIONALISM

INFORMATION ASSURANCE & SECURITY

PROGRAMMING

NETWORKING

HUMAN COMPUTER INTERACTION

DATABASES

WEB SYSTEMS

IT FUNDAMENTALS

The Information Technology Discipline

The unit will be structured around the theoretical knowledge and practical skills required to design, implement and use a relational database effectively. The lectures will cover the theoretical aspects of all the stages of this process, together with how these are implemented in a modern RDBMS, with a particular focus on how these ideas are reflected in the SQL specification. The laboratory sessions will focus on the practical mastery of a specific SQL implementation (namely, MySQL) and how to use it in practice.

Answers to everything:
http://undergraduate.csse.uwa.edu.au/units/
CITS1402/index.php

People and Places

Unit coordinator: Professor Gordon Royle
Consultation: TBA

Other Lecturer: Professor Mark Reynolds

Various Tutor Demonstrators: TBA

Attend two lectures each week and one two-hour tutorial:

Type	Time	Day	Location
Lecture	9 am	Monday	Physics: Ross LT
Lecture	11 am	Thursday	Maths: Weatherburn LT
Tutorial	see OCLR		A CS Lab

Text Book and Resources

Not mandatory. Any introductory database textbook will cover the material in this unit. A good one however is: Database Systems By Garcia-Molina, Ullman and Widom

Software requirements
It is a good idea to get and install MySQL and MySQL Workbench. This will allow you to practice on your own computer. MySQL and MySQL Workbench can be downloaded via the web site.

Assessment

Type	Percent	Date
Weekly Exercise Sheet (10x)	10%	Every Week (from week 2)
pre-project design document	10%	Week 7
Project	20%	Week 13
Exam	60%	November

Laboratory Work starts in week 2.

Submissions are via cssubmit.

Plagiarism

Do not submit the work of other people.

Penalties are severe.

If you are unsure of a particular situation, please check
`http://www.student.uwa.edu.au/learning/`
`studysmarter/getsmart/plagiarism`

Help

Link to Help1402 on web page.

`https://secure.csse.uwa.edu.au/run/help1402`

See lecturer.

Enjoy!