



THE UNIVERSITY OF
MELBOURNE

Introduction to INFO90002

Database Systems & Information Modelling
INFO90002

Week 1 – Overview of the subject
Dr Tanya Linden

Database Systems





WELCOME

Coordinator/Lecturer:

Dr Tanya Linden

Best way to get in touch:

- Email lindent@unimelb.edu.au



INFO90002 Announcements

Tutorials start this week (week 1)!

- Learn how to install MySQL Workbench and Server
 - You don't need / not allowed to install anything in lab rooms
 - ❖ Labs run Windows OS
 - Bring your laptop to the lab to get guidance for installation

Monday 11 March – Labour day – NOT a public holiday, all classes as normal



Why this subject matters

- database = key building block in many technology careers
- database = one of the most widely-used technologies
 - embedded within most of the interesting ICT of today
 - social media, apps, websites, banking, scientific research ...
- What you will learn (As reflected by past students)
 - It (the subject) has provided valuable insight on how information is processed in the world today
 - SQL is actually a lot of fun!
 - From your class, I did not only learn technical knowledge but also the importance of time management, commitment, and teamwork.

Why Databases?

A Day in Susan's Life

See how many databases she interacts with each day

In the morning, Susan goes grocery shopping



Where are the product data stored?

Is the product quantity in stock updated at checkout?
Does she pay with a credit card?



Later, she picks up her prescription at the pharmacy



Where is the pharmacy inventory data stored?

What data about each product will be in the inventory data?

What data is kept about each customer and where is it stored?



In the afternoon, she orders some items online



Where are the product and stock data stored?

Where does the system get the data to generate product "recommendations" to the customer?



At night, she plans for a trip and buys airline tickets and hotel reservations online



Where does the online travel website get the airline and hotel data from?

What customer data would be kept by the website?

Where would the customer data be stored?



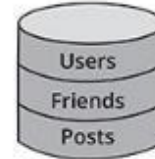
Before going to bed, Susan checks her social media accounts



What particular customer data is kept by each website?

Where is the data about the friends and groups stored?

Where are the "likes" stored and what would they be used for?



Source: Coronel and Morris 2023
Figure 1.1 The Pervasive Nature of Databases



About the subject

Prerequisites, not-allowed subjects, credit for experience

- Have you studied DB already? Don't study it again - get credit!
- Learn something NEW and EXCITING

Semester schedule: the big picture

- Modelling
- SQL
- Normalisation
- Advanced Database Concepts and Ideas



Teaching staff

Subject coordinator/Lecturer

- Tanya Linden

Tutors

- Nathan van der Heiden
- Neven Tomov
- Peter Huynh
- Toby Profitt
- Hiruni Kegalle

Consultation session Friday 12.00-2.00 via Zoom
(link in Canvas), one of the tutors will be attending
the session to answer questions
15-20 mins p/p, others also need help

Interacting with staff

- Canvas Ed Discussions (**All general questions are answered here**)
- Email for *personal* questions only from your **student email account**
(e.g. AEA, personal issues, formal extension requests)
 - ✓ include **SUBJECT CODE** (INFO90002) and **STUDENT ID** (987654) otherwise your email will not be acknowledged (**No student ID – No answer from me**)



Student representatives

- 1-2 Volunteers
 - Must be able to speak truth to power!
 - Must watch all lectures and attend all tutorials
 - Must agree to
 - have name and email address listed on Canvas for other students to be able to get in touch
 - be a point of contact for other students to discuss any issues/concerns about the subject
 - where appropriate, let me know about any concerns with the subject (without identifying the student who raised with them)
 - attend the Student-Staff Liaison Committee (SSLC) meeting to feed back on subject experience, issues, concerns, highlights, etc. Often at this point enthusiastic student reps might run a class survey, etc. to collate information
- No extra credit for this task but you can put it on your CV
- If I get more than 2 applications, it will be a random draw from the “hat”
- So if you want to volunteer, email lindent@unimelb.edu.au



Resources

Textbook

- Carlos Coronel & Steven Morris. “Database Systems: Design, Implementation, & Management” 14th edition. Cengage.
<https://au.cengage.com/c/database-systems-design-44-implementation-44-management-14e-coronel-morris/9780357673034/>

All subject materials will be on Canvas

Software

- MySQL as server and client

How to succeed in this subject

- Practice! (especially Data Modelling and SQL skills)
- Use all the learning resources provided (including attending classes)
- Discussion Forum – Ed Discussions via LMS (ask and answer questions)

Cengage

Carlos Coronel • Steven Morris

Database Systems

Design, Implementation, & Management

14TH Edition

eBook discount code for 10% Off
at the checkout: WOW10



Assessment



- Assignment 1: data modelling (20%) - group assignment
 - Due in Week 6, **hurdle component**
- Assignment 2: SQL (10%) - individual assignment
 - Due end of Week 9, **hurdle component**
- 2 Individual timed Quizzes in weeks 6 and 12, each worth 10% (total - 20%)
 - Week 6 Lecture Time, second hour (TBC)
 - Week 12 Lecture Time, first hour (TBC)
- End of semester exam (50%, 2 hours)
 - June, **hurdle**
 - **On campus/in person**

hurdle component

A penalty of 10% per day applies to all late submissions. Submissions that are 5 days late get 0.

Special Consideration

If you believe you are entitled for special consideration:

- To get special consideration for **assignments** or **tests**, email your subject coordinator **before the due date**.
- Send your evidence, e.g. medical certificate (one day medical certificates are **not** considered).

Work commitments, being overseas, *other assessments* are NOT grounds for special consideration

- To get special consideration for the exam contact STOP 1

Disability or long-term effect issues: please contact STOP 1 or Student Equity and Disability Support team





Do not guess or assume or hope for a miracle...

Murphy's Laws directly applicable (from my experience of teaching):

- **Nothing is as easy as it looks**
- **Everything takes longer than you think**

If you have a question, ask a staff member

Check Canvas for deadlines (not staff, or classmates)

Rumours that assignment deadline has been extended are **not** a valid reason for special consideration.

Other non-valid excuses:

- My hard drive/laptop is broken
- My computer got a virus and I cannot recover the files
- The Internet at home stopped working...



**It is your
responsibility to
keep back-up copies**

Very important: save your drafts of assignments to Google drive or OneDrive or DropBox or...



Plagiarism



It is the University policy that cheating and plagiarising by students in any form is not permitted.

Work submitted for assessment purposes must be the independent work of the student concerned (for group work - the team of students concerned).

Plagiarism

- copying of another's work without proper acknowledgment is not permitted
- Or **allowing another person to view or copy your work**

Do NOT share your assignment files with other students! Even after the marks are released!

Do not become a victim of “tutoring/student study” site scams

- You may be blackmailed



Universities can and do revoke degrees up to 5 years post graduation

Do not underestimate Staff intelligence!

See Uni of Melbourne academic integrity policy <https://academicintegrity.unimelb.edu.au/>



Academic Integrity Violation

Cheating is tempting

If you are caught violating academic integrity, you will be reported to the FEIT academic integrity committee

If you are caught violating academic integrity, you will not be entitled to Special Consideration (i.e. Fail for the subject will stand, regardless of other reasons that affected your performance)

4.128. Students **are not eligible for special consideration** for an assessment task where there is an outstanding allegation, or a finding of, academic misconduct in that task whether or not the assessment task was completed.



How to succeed: AQF Master-level Expectations

You should, on average, invest 10 hours per week of work on this subject (this is standard for a Masters-level subject), e.g.:

- 3 hours in class/tutorial
- 2-3 hours reading/practicing
- 4-5 hours assessment tasks

Full time Study and Full time Job

- You can do fulltime work well
- You can do fulltime study well
- You **cannot** do full time study and fulltime work well
 - Please reconsider your study and work commitments now.
I've yet to meet anyone who has done well at both.



A Message for Students with Industry Experience

You may know SQL

You may know Modelling

Industry students generally do poorly because:

- Don't follow the instructions
- Don't do well in normalisation and advanced theory topics

Industry experienced students do very well

- SQL
- Crows Foot Modelling

We can only assess what we teach in INFO90002, **NOT** what you learned in Industry



Australian Qualification Framework – Masters Level (Level 9)

Graduates at Masters level will have:

- Specialised knowledge and skills for research, and/or professional practice and/or further learning
- Advanced and integrated understanding of a complex body of knowledge
- Expert, specialised cognitive and technical skills in a body of knowledge or practice
- Ability to **apply knowledge and skills** to *demonstrate autonomy*, expert judgement, adaptability and responsibility as a practitioner or learner

See the Australian Qualifications Framework:

<https://www.aqf.edu.au/aqf-qualifications>



Our job. Your job.

We can't (and won't) tell you what to do

We will give you the necessary knowledge and skills practice to be able to learn

We will tell you if you're going the wrong way (if you ask)

You will need to synthesize and critically apply the knowledge

You must demonstrate comprehension, application, synthesis and critical thinking

Memory and Recall is Junior School (AQF 1-6)

Application is Undergraduate level (AQF 8)

You are studying at Level 9 of the (AQF9)



Using database software

We will use *MySQL* as server and client in this subject

You can use either:

- the University's database server
 - accessible from labs, or from home via VPN*
 - Your assignment 2 solution **must be able to run on this server!**
- and/or, your own computer
 - do lab exercises and assignments at home

Server address info90002db.eng.unimelb.edu.au : port 3306

- your username and password will be given out during the lab
- not available outside the university without a VPN

If you want to use your own computer ...

- download MySQL from <http://dev.mysql.com/downloads/mysql/>
- get both Server and Workbench

See Useful Resources in Modules on LMS for more details.

Also guidance will be given in week 1 tute. Use Ed Discussions for troubleshooting.



Study Support

Academic English Tutorials (AET) program

This 9-week tutorial series involves **no additional assessments** and can help you further develop your academic and English language skills within the context of your discipline.

Topics covered

- Academic writing and referencing
- Critical reading and note taking
- Oral presentations
- Participating in tutorials
- Australian academic culture and expectations
- Managing time

For more information and to apply:

<https://students.unimelb.edu.au/academic-skills/English-language-development/academic-english-tutorials-for-graduate-coursework-students>



Improve your English with 10ME

With our 10ME Online Program you receive prompts and suggestions for a 10-minute daily practice that will help you in the long run

<https://students.unimelb.edu.au/academic-skills/resources/language-development/improve-your-english-in-10-minutes>

Note, it is important that you can understand study instructions and write good answers.

Many tasks expect good English comprehension skills for successful completion of tasks at the satisfactory level.

Dictionaries are not allowed at the exam.