COMP90007
Internet Technologies

Ling Luo

Semester 2, 2024

Lecturers

Dr Ling Luo (Subject Coordinator)

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Associate Professor Adel Nadjaran Toosi

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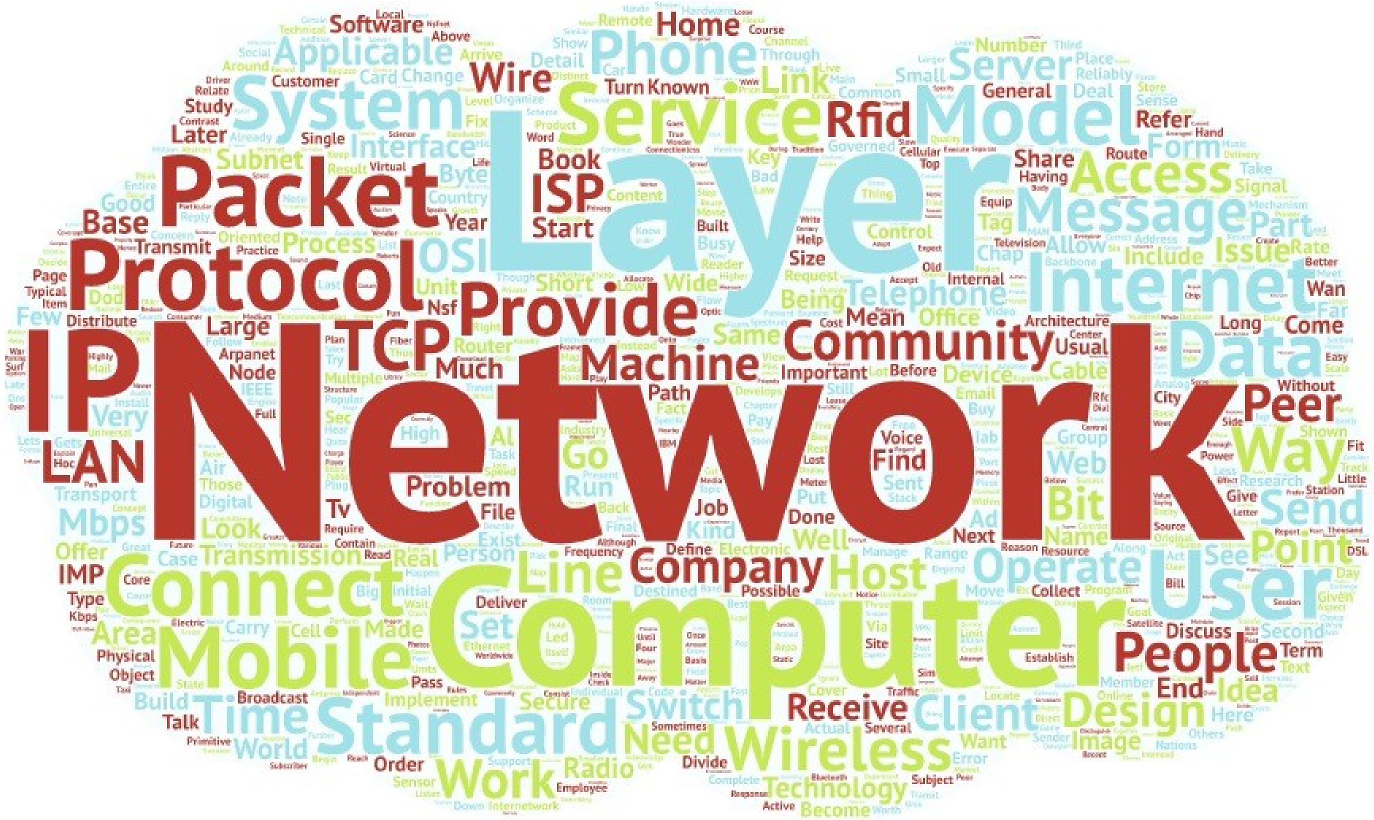
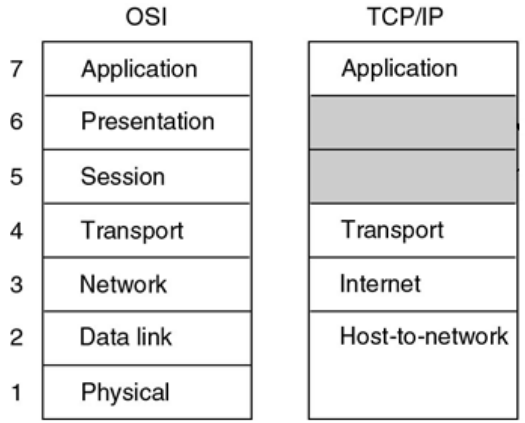
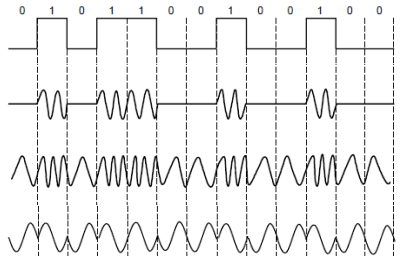
Overview of Topics

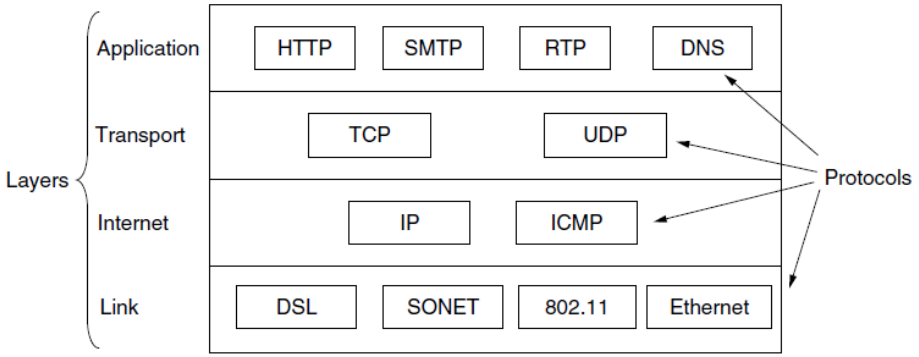


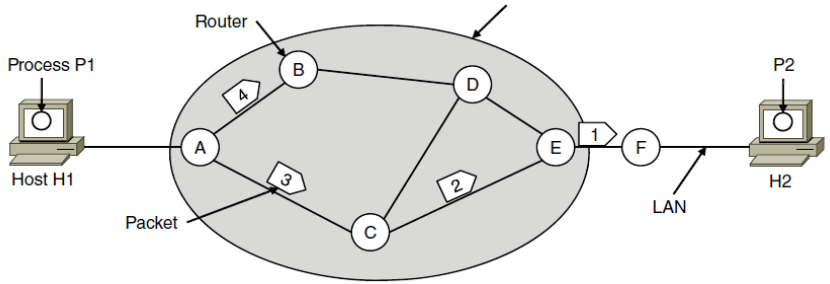
Overview of Topics

- **Basics of computer networks** through a study of layered models of computer networks and applications.
- **Main Topics**:
  - Introduction to Internet;
  - Reference model layers, protocols and services;
  - Data transmission basics;
  - Network topologies, routing;
  - TCP/IP suite;
  - Network applications
  - …









Lectures

- **3 lectures per week for 12 weeks**
  - Mondays 10:00 – 11:00
  - Thursdays 11:00 – 13:00
  - The recordings will be available after class on Canvas
  - The 3rd lecture is designed for improving interactivity e.g. QA, guest lectures, live software demo.

Tentative Schedule

Week	Topic
1	Introduction
2	Physical Layer
3	Data Link Layer
4	Medium Access Control
5	Network Layer
6	Network Layer
7	Transport Layer
8	Transport Layer
9	Application Layer
	Non-teaching period
10	Application Layer
11	Network Security
12	Review

Tutorials

- **1-hour tutorial per week for 11 weeks**
  - Starting from Week 2
  - All on-campus
  - Tutorials are the key place to solve questions interactively, measure and test things and get help for projects
- Tutors
  - Rahul Sharma (head tutor)
  - Cecilia Chen
  - Yifei Wang
  - Songlin Du
  - Chenhao Gu

- Each tutor will set their own mode of contact, please meet them in your tutorials next week

Date	Start Time	Tutor
Tue	17:15	Rahul
Tue	18:15	Rahul
Wed	14:15	Yifei
Wed	15:15	Yifei
Thu	14:15	Rahul
Fri	9:00	Cecilia
Fri	11:00	Cecilia

- Each student is expected to attend the same tutorial throughout the semester for their tutor to follow the progress properly

Subject Material

- **Canvas LMS** is the primary portal for the subject: https://canvas.lms.unimelb.edu.au/courses/184227

  – Announcements
  – Lecture and tutorial materials in Modules
  – Assessments
  – Grades
  – Discussion forum
  – Other subject information: handbook, academic integrity, guides etc.

Communication

- **Announcements on Canvas**
- **General enquiries: Discussion forum on Canvas**
  - Check discussion forum regularly
  - We encourage all students to join in discussions – answering other students' questions is one of the best ways to improve your own understanding
  - Please do not post sections of your assignments publicly!
- **Personal/private concerns: Email the instructors**
  - Please include "COMP90007" and your student ID in email subject
  - If you email us about a general enquiry, we may ask you to re-post your question in the forum

Assessments (1)

- **2 Assignments**, 10% (5% of total mark for each assignment)
  - Similar to tutorial questions
  - Good preparation for exams
  - One for each half of the semester, they will be due around week 5 and 10 respectively

- **2 Projects**, 30%
  - **Project 1**: hands-on networking experience/measurements, 15%

  This project will cover the first half of the semester in terms of your practical work and will be due around Week 8.
  - **Project 2**: written report on a networking related topic, 15%

  This will cover the second half of the semester and will be due around Week 12.

Assessments (2)

- **Final exam**, 60%
  - Centrally managed and timetabled
  - Questions are similar to assignments that you will work on during the semester
  - Reviewing lectures and reading the textbook in the last minute will not help as there will be too much material to cover

Assessments (3)

- **Assignments and Project 1 are individual work, Project 2 can be completed individually or in a group of two**
- **Hurdle on assessments**, 50% for each type of assessments
  - 50% overall
  - 50% in the two homework assignments
  - 50% in the Project 1 and Project 2
  - 50% in the end-of-semester written examination

This means just doing the final exam well is not enough to pass the subject

Academic Integrity

- More information: https://academicintegrity.unimelb.edu.au/
  - **Plagiarism**: Presenting the work of another person as your own
  - **Self-plagiarism**: Students cannot re-use any part of their work that has already been submitted for assessment without proper citation.
  - **Collusion**: unauthorised collaboration with another person or persons
  - **Copyright**: Students cannot sell or publish subject materials.

Academic Integrity

- **Using AI tools**?

  Not allowed in this subject

  “Using artificial intelligence software such as ChatGPT or QuillBot to generate material for assessment and representing this as your own ideas, research or analysis is not submitting your own work.”

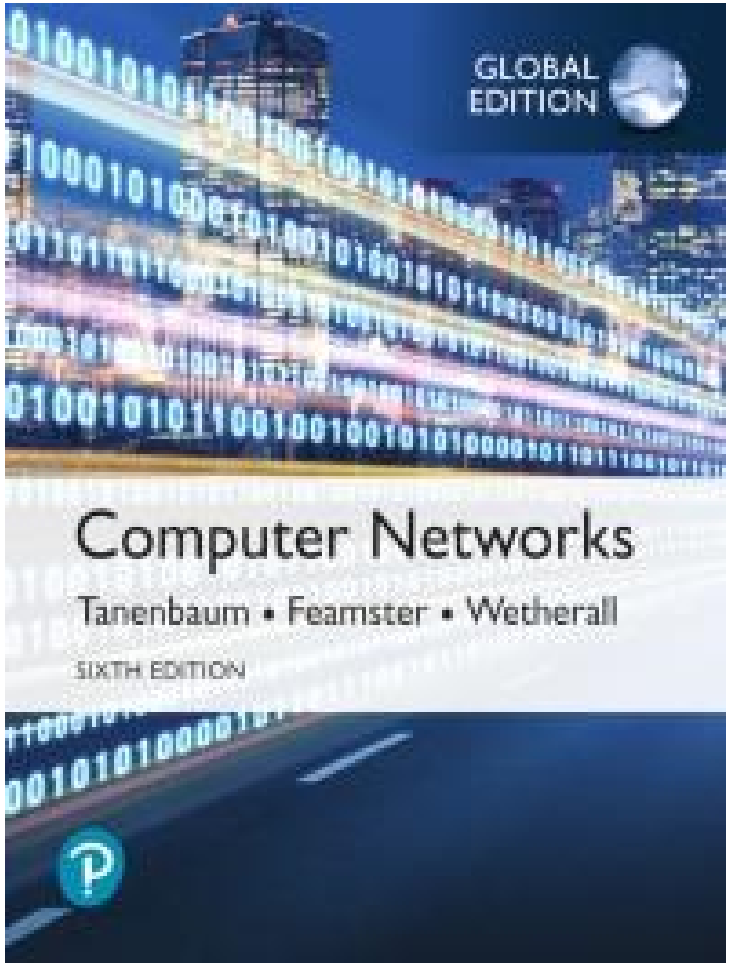
  https://academicintegrity.unimelb.edu.au/plagiarism-and-collusion/artificial-intelligence-tools-and-technologies

Textbook

- **Computer Networks, 6th edition,** By: Andrew S. Tanenbaum, Nick Feamster, and David J. Wetherall

  Library has online version (link on Canvas)

  Suggested readings will be posted on Canvas each week



FAQ

- **Will I have to program in this subject?** No, but you need to know one programming language to comprehend some concepts
- **What if I have learnt computer networks?** Consider applying for advanced standing
- **Will there be team projects?** Project 2 can be completed in a group of two or individually
- **What would the final exam be like?** Nothing surprising if you attended the subject with a genuine effort on all fronts
- **What is examinable in the exams**: Everything, you will know how much you need to know about each bit once you listen to the lectures/tutorials

Questions?