

COMP1521 26T1

Week 10 Lecture 2: The Final Lecture

Review and Exam

Announcements: Assessments

Week 9 Test: Due tomorrow (thursday) 9pm

Assignment 2: Due Friday 6pm

Week 10 lab:

- Practice exam in cse labs worth 0 marks,
- **Lab 10** regular exercises are due Tuesday midday next week (week 11)

Week 10 Test: Due Thursday 9pm next week

Announcements: Revision

- **Practice Exam** this week in in-person labs.
 - These questions will not be released
 - Please attend an in person lab today or Thursday or Friday to see the environment.
- **Revision Sessions in week 11**
 - First session basics (MIPS, bitwise, basic files)
 - You can also get help with bitwise operators revision questions from the previous revision session.
 - Second session (files, UTF-8, processes, threads)

Announcements: Past Papers

- **Past Papers**
 - One released now
 - One more released Friday
 - Two more released Tuesday Week 11
- **Solutions**
 - Tuesday Week 11
 - Thursday Week 11
 - Saturday Week 11
- **Autotests** will be available.
 - Submitting your answers with give won't work.

Today's Lecture

- Course Overview
- Assessment
- Final Exam
- Revision



Course Goal

- Transform you into a **systems programmer**
 - Understand how a computer fundamentally works
 - Describe how programs work at a low level, with a deep understanding of runtime behaviour
 - Better reason about and debug your programs
 - Better reason about security issues

Questions we can now (hopefully) answer

- What's in a compiled file?
- How does your CPU run a compiled file? (and what if we write those instructions ourselves 🤖??)
- How are variables represented on our computer?
- What magic are the functions in `stdio.h` doing?
- Why **?** and how 🧠 do emoji 🙄 even 😲 exist 🥰 ??
- How do computers multitask?

Syllabus

- Writing programs in (MIPS) assembler
 - how (C) data structures are represented at machine level
 - how (C) programming language constructs are implemented as (MIPS) assembler
- Bit-level operations, representation of integers
- Representation of reals as floating point (IEEE754)
- Representation of characters as Unicode (UTF-8)
- Systems programming, including: file operations processes
- Introduction to threads/concurrency (pthreads)

Assessment

- 15% labs
- 10% weekly tests
- 15% assignment 1 (mips metro)
- 15% assignment 2 (stdio)
- 45% final exam

To pass, you **must**:

- score 50/100 overall
- score **18/45 (40%)** on the **final exam** component

(For example, 55/100 overall, 17/45 on final exam would result in 55 UF not 55 PS)

Pass Rate

- We manually inspect the work of students just below the pass threshold
 - If we see many students who've sufficiently shown competency with basic course material but not passing, the exam mark or other components may be scaled up for everyone
- COMP1521 is a challenging course, but pass rate is around the same as the average for level 1 UNSW courses

Lab Marking

- Labs in weeks 1-5, 7-10
- Each week's lab (regular + challenges) is worth 2 marks
 - There are 9 labs, which means there are 18 marks.
 - If you receive more than 15 marks, your mark will be capped at 15.
- These 2 marks are allocated such that:
 - 1.6 marks are split evenly between each of the regular lab exercises.
 - 0.4 marks are split evenly between each of the challenges.
- This means that if you scored full marks on every regular lab exercise this term, you could score a maximum of
 - $9 * 1.6 = 14.4$ marks - very close to 15!
- Most students usually get 12+/15

Weekly Test

- Max test mark each week:
 - 1.7 marks
- Best 6 of 8 marks summed and capped to give mark out of 10
- Most people usually get 7+/10

Exam Details

Date : Thu 07/05/2026

Times: 09:45 - 13:00, 12:50 - 16:40 including corralling

Sessions : 2

Duration : 3 hours, 10 minutes reading time

Check your student ID cards and get a new one if it is lost or expired.

- a passport or an Australian driver's licence are also acceptable forms of ID, must not be digital.

The Final Exam: When and Where

Invigilated and held in CSE labs

Morning and afternoon sessions available

- You have been asked to indicate a preference
- We tried to allocate you to your preferred session where possible
- If you have a clash, the CSE exams team has already accounted for this
- You have received an email confirming your final allocation

Exam Seating

- Your allocation information is available here:
<https://cgi.cse.unsw.edu.au/~exam/26T1/seating/register.cgi/allocations/>
- The exact time and location of your exam is now available.
 - Please make careful note of this information,
 - Arriving at the incorrect time or location may result in you being unable to sit the exam.
 - If there is any issue with your allocation please contact cse.exams@unsw.edu.au ASAP.

The Final Exam: When and Where

Afternoon session starts before morning session finishes

- This is so that we can corral afternoon students to ensure they cannot communicate with morning students
- This means you **may not leave the morning session early**
- This also means that **may not be late to the afternoon session**

The Final Exam: The rules

- UNSW on-campus exam rules apply
 - see <https://www.student.unsw.edu.au/exam/rules>
- You must:
 - **Bring your student card**
if student card lost bring hard copy of government photo ID
 - Have your phone, other electronic devices and watches switched off and in your bag
 - Have a completely clear water bottle if you choose to bring one
 - Not bring your own keyboard/mouse or other hardware
- Deliberate violation of exam conditions will be treated as serious misconduct, and may be referred to the student conduct and integrity unit (SCIU).

The Final Exam: Special Consideration

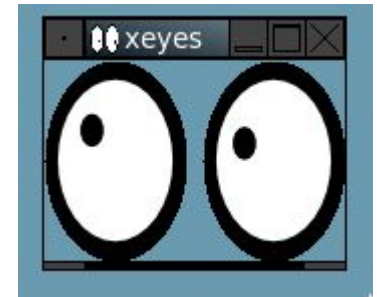
- This exam is covered by UNSW's Fit-to-Sit policy.
- By starting the exam, you are saying **“I am well enough to finish the exam.”**
- If you are unwell before the exam: see a doctor, apply for Special Consideration, and don't attend.
- If you become unwell during the exam: **talk to an exam supervisor ASAP**

The Final Exam: The exam environment

- Closed book exam - no materials allowed
- Restricted exam environment. **Not your** cse account.
- No access to
 - dcc-help or dcc-sidekick command
 - internet
 - course website
 - your own files
 - This means no personal editor configuration files

The Final Exam: The exam environment

- You will have access to
 - **MIPS documentation** and **C and Linux cheatsheet** (the same docs as in weekly tests)
 - **command line man** (recommended: learn to use `man -k`).
 - Gedit, Vim, Emacs, Nano, VSCode all provided as editors
- VSCode comes with
 - Xavier's mipsy extension
 - clangd, clang-format, syntax highlighters
- Standard CSE lab machine commands available
 - Including `dcc`, `mipsy`, `man`, `python3`, `xeyes`
- `mipsy_web` provided to use in-browser



The Final Exam: The Format

- 10 minutes reading time, 3 hours working time
- 10 questions ... *not* of equal difficulty, not *necessarily* worth equal marks
 - Generally, easier questions are towards the start of the exam, harder questions towards the end.
 - But difficulty is subjective, of course.

The Final Exam: The Format

- Each question answered in a separate file.
- Questions will involve writing programs
 - Some questions may ask you to write **C** (a .c file)
 - Some questions may ask you to write **MIPS** (a .s file)
 - Other languages are **not** permitted
- Answers will be submitted using a command (similar to give)
- Questions will include examples.
- You may, or may not, be given starter code or other files.
 - If you are not given starter code, you must create your own files.
 - The file name will be specified in the question.

The Final Exam: The Format

- Autotests will be available for all questions.
 - **Passing autotests does not guarantee any marks** - do your own testing.
 - It is **not** sufficient to just match supplied examples.

Demo: examples of “bad” code that may match some or all autotests but would get 0 marks.

The Final Exam: The Format

- Questions may specify additional limitations or restrictions imposed on your programs.
 - You **must** follow these restrictions or limitations otherwise you will not receive any marks.
 - Questions will be reviewed by a human to ensure you have followed them.

The Final Exam: Marking

- **No marks awarded for style or comments.**
 - But a human marker may *need* to be able to deduce the behaviour of your program
 - And you should probably be able to read your own code
 - Please use reasonable style, variable names, so that we can give you the mark that you deserve
 - Comments only necessary to tell the marker something
 - Do not include identifying info in comments

The Final Exam: Marking

- Answers will be run through automatic marking software.
 - Please follow the input/output format shown exactly - autotest is a guide to help you achieve this.
 - There are also unseen autotests we use in automarking
 - Please make your program behave as specified.
- Answers that don't pass **all** automarking tests are handmarked, guided by automarking.

The Final Exam: Marking

- Minor errors will only result in a small penalty.
 - Eg. an answer correct except for missing whitespace would receive almost full marks.
- No marks given unless an answer shows substantial progress towards a solution (>33%)
- No marks just for starting a question and writing some generic code.
- Zero marks for submitting starter code.

The Final Exam: Special Conditions

- Any ELP extra time has been handled by the CSE exam team - you should see this on the allocations page
- All students see the same exam question text.
- The text shows the standard exam deadline, any extra time is additional to it.
 - If in doubt, talk to the exam supervisor.
- Email us if you have any concerns regarding ELP conditions.

Exam Preparation

Remember to:

- eat
- sleep
- drink water
- take all your medication.



You can't perform well if your body is falling apart.



If you are sick get a doctor's certificate and apply for special consideration.

What should you aim to study for

Focus on

- Areas covered by standard lab exercises
- Areas covered by the weekly tests
- Areas covered by the assignment

The first 8 questions on the exam will focus on concepts seen here.

What should you aim to study for

- These topics may show up in the final 2 questions of the exam.
 - Concepts seen in challenge exercises
 - Topics not covered by labs/tests/assignments
 - Complex aspects of creating processes/threads
 - this includes pipes (possibly in last exam question only)
- Note: The last question in the exam is considered to be a challenge exam question. Don't be stressed or upset if you don't finish it (or get up to it).

Supplementary Exams

- If you miss the original exam due to **illness/misadventure**, you may be eligible for a supplementary exam; apply for special consideration.
- Students with borderline results are **not** offered supps. (except potential graduands.)
- Similar format to final exam.
- Supp exams will be in 26T2 0 Week in cse labs

What did you like?

One aim of COMP1521 is to give a taste of many topics:

- liked **MIPS**, **Assembly** and hardware?
 - COMP3222, COMP3211...
- curious about **programming languages**?
 - COMP3131 (compilers), COMP3141 (functional Programming), COMP3161(theoretical), COMP6991 (Rust + concurrency), ...

What did you like?

One aim of COMP1521 is to give a taste of many topics:

- liked **operating systems**?
 - COMP3231/3891 (OS and EXT OS), COMP9242 (Advanced OS), ...
- liked **concurrency**?
 - COMP3153 (algorithmic verification), COMP6721 (informal methods - program correctness), COMP6991 (Rust)
- liked ***nix shell**?
 - COMP2041

COMP1521 - the bad

- Not enough tut/lab time with processes and concurrency
- No time to talk about caching or virtual memory
- Labs: a decent bit of work, but hopefully you learned a lot
- Assignments: a **lot** of work, but hopefully you learned a lot

COMP1521 - the Good

- Generally comprehensive lab exercises and test questions
- Our amazing tutors!!
- The hardworking students!!!!

Thanks to

- Your lovely teaching staff
 - Admins
 - Tutors and lab assistants
 - Forum staff
 - Help session staff
 - Assignment author (Alex)
 - Content improvers
 - Assignment markers
- All of you!

Revision Questions

- `contains_lowercase.c`
- `directory_search.c`
- `recursive_directory_search.c`
- `posix_grep.c`

myExperience:

- How did we do?
- What worked well?
- What worked better?
- Let us know:
- Please give your tutors feedback - myExperience is the best way to give them feedback, and it will more likely than not make their day.

<https://myexperience.unsw.edu.au/>

And that's a wrap

- **Good luck** 🎉
- We hope you've learnt useful things in this course.
- We hope you get the mark you're aiming for!
- You are nearly there!!! Then you can get a nice break!!!
- [UNSW Wellbeing](#)

Reach Out

Content Related Questions:

[Forum](#)

Admin related Questions email:

cs1521@cse.unsw.edu.au



Student Support | I Need Help With...

My Feelings and Mental Health

Managing Low Mood, Unusual Feelings & Depression



Mental Health Connect

student.unsw.edu.au/counselling
Telehealth



**In Australia Call Afterhours
UNSW Mental Health Support
Line**

1300 787 026
5pm-9am



Mind HUB

student.unsw.edu.au/mind-hub
Online Self-Help Resources



**Outside Australia
Afterhours 24-hour
Medibank Hotline**

+61 (2) 8905 0307

Uni and Life Pressures

Stress, Financial, Visas, Accommodation & More



**Student Support
Indigenous Student
Support**

student.unsw.edu.au/advisors

Reporting Sexual Assault/Harassment



**Equity Diversity and Inclusion
(EDI)**

edi.unsw.edu.au/sexual-misconduct

Educational Adjustments

To Manage my Studies and Disability / Health Condition



**Equitable Learning Service
(ELS)**

student.unsw.edu.au/els

Academic and Study Skills



**Academic Language
Skills**

student.unsw.edu.au/skills

Special Consideration

Because Life Impacts our Studies and Exams



Special Consideration

student.unsw.edu.au/special-consideration