

COMP1511/1911

Programming Fundamentals

Week 9
Lecture 2

myExperience

- Please fill out myExperience
 - Please
- <http://myexperience.unsw.edu.au/>
- Incentives
 - 70%: I will livestream the hit video game Survivor: Castaway Island, based on the hit TV show Survivor



Prac Exam

- Online students sign up for a in-person TLB for week 10 practice final exam
 - If you're in an online tut
 - Still go to it
 - Sign up for an in-person one
 - Gain experience in the exam environment!
- Sign up here: <https://buytickets.at/comp1511unsw/2330803>



Week 10 and 11 Drop In Sessions

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- You can book a 30 minute time slot with a tutor for one on one help if you need assistance!
 - <https://buytickets.at/comp1511unsw/2330281>



Revision Sessions

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- Week 11 revision sessions will help go over the course content in preparation for final exam
 - <https://buytickets.at/comp1511unsw/2325770>



Previously On...

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- Linked lists
 - Inserting
 - Traversing
 - Deleting
 - Assignment 2 esque program

Today

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- Exam time!!
 - Let's learn about the exam
- Revision?
 - Let's revise...about the exam

Where is the Code?

- Lecture code is updated every hour on the hour
- Live lecture code can be found here
 - <https://cgi.cse.unsw.edu.au/~cs1511/26T2/>



Exam Info

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- Format
- Preparation
- Hints and Tips

The Exam

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- What is in it?
 - Everything we've learnt so far :)
- Lots of focus on
 - Simple if statements
 - Simple while loops
 - Strings
 - Arrays
 - Pointers
 - Linked Lists

Time/Date

- Friday 21st of August 2026
- There will be TWO sessions of the exam.
 - The students sitting the exam in the afternoon will be corralled for a period of 20-30 minutes as we conduct the changeover
 - The exam will be in different CSE lab locations, and you will be given a seating arrangement closer to the date of the exam, so you know where you need to be and at what time
- The sessions are:
 - Morning: 9:45-13:00
 - Corraling: 12:50-13:20 (although arrive at 12:50, corraling doors can close at 13:00)
 - Afternoon: 13:20-16:40

Time/Date

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- KEEP AN EYE ON YOUR EMAILS
 - You will get an email from the CSE Exams team to pick a session
 - This is first in best dressed
- Students with ELPs and exam classes will be allocated a session that works

Practice Exam

- The lab next week will provide you with a test environment that will be similar to your exam
 - This will allow you to familiarise yourself with the setup
 - Give is the same as in your labs/weekly tests
 - Autotests are run the same way etc
 - YOU CANNOT SEE YOUR AUTOTEST HISTORY
 - IF IN DOUBT, JUST RUN IT AGAIN
 - AUTOTESTS != MARKS
 - Submit as many times as you want
 - Only last submission will be marked
- We DO NOT keep track of your autotests, so you NEED to SUBMIT your final answers/code

Exam Hurdles

- There's an array hurdle, question 2 or 4
 - You must earn a mark of 50% or more in at least one array hurdle question
 - You cannot pass COMP1911 unless you achieve the above requirement
- There's a linked list hurdle, question 1 or 3
 - You must also earn a mark of 50% or more in at least one linked list hurdle question
- THESE QUESTIONS WILL BE CLEARLY MARKED ON THE EXAM AS HURDLES
 - You cannot pass COMP1511 unless you achieve BOTH the above requirements

Exam Conditions

- Close book(ish)
 - Our course website will be open, which means you will have access and are allowed to refer to:
 - Any lecture material or code
 - Any tutorial material or code
 - Any laboratory material or code
 - NOT YOUR SOLUTIONS, JUST OUR PROVIDED SOLUTIONS
- Exam conditions still apply
 - Do not communicate with anyone about the exam within 24 hours of the exam start time
 - This is considered plagiarism
- No discussion of the exam or sharing your code with anyone except for COMP1511 staff

Exam Marking

- Passing autotests in the exam is an indication of correct performance of your program and progress towards a correct solution
 - IT DOES NOT DIRECTLY TRANSLATE TOWARDS MARKS AWARDED
- If your code did not pass all the automarking cases (a combination of autotests and hidden tests ran during marking) then your code will be manually marked
 - Assess your understanding of the underlying concepts assessed in the question.
- Note Q5-8 (debugging questions) are NOT manually marked.

What to Bring

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- You need a valid physical ID
 - UNSW student ID is preferred
 - Please get one
 - UNSW only accepts these for their exams
 - CSE accepts passport, drivers license/RTA
 - <https://www.unsw.edu.au/student/contact-us>
- Also bring
 - Pen
 - Water
- DO NOT BRING/LEAVE IN YOUR BAG
 - ANY NOTES AND SUCH
 - ANY ELECTRONICS
- WE ARE MONITORING THE ROOMS CONSTANTLY

Issues

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- If you experience any issues during the exam, please raise your hand and wait for an invigilator
 - IF YOU DO NOT TELL US, WE CANNOT DO ANYTHING ABOUT IT
 - DO NOT WAIT TO RAISE THE ISSUE UNTIL AFTER THE EXAM!!!!
 - RAISE THE ISSUE AS SOON AS IT HAPPENS!!!

Setting Up

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- When you come into the room and seat yourself, there will be instructions provided to you on how to start the exam
 - The code will already be there and the paper will open automatically
 - Similar to lab exam and prac exam in Week 10, the starter code will already exist for you to work from

Fit to Sit

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- UNSW has a fit to sit policy
 - <https://www.student.unsw.edu.au/exam-rules>
- By sitting the exam on the scheduled assessment date, you are declaring that you are fit to do so and CANNOT later apply for Special Consideration.

Fit to Sit

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- If, during an exam you feel unwell to the point that you cannot continue with the exam, you should take the following steps:
 - Stop working on the exam and take note of the time
 - Please raise your hand and let the invigilator know you are unwell.
 - IMMEDIATELY submit a Special Consideration application saying that you felt ill during the exam and were unable to continue
 - You MUST provide a medical certificate dated within 24 hours of the exam, along with any record of the conversation you have had with us (basically that you have let us know you feel unwell before leaving)
- Fit to Sit Policy
 - <https://www.student.unsw.edu.au/exam-rules>

Supp Exam

- If you are granted special consideration based on the Fit to Sit university policy, a supplementary exam will be held in 0-Week of T3
 - 7th September to 13th September
- If you think you will need to sit this exam, make sure you are available
- Details of dates
 - <https://www.student.unsw.edu.au/exam/supplementary>

Week 11 Revision Classes

- In Week 11, we will be running some revision classes
 - We will also be running drop in sessions
- Registration and details have been announced
 - <https://buytickets.at/comp1511unsw/2325770> - Revision
 - <https://buytickets.at/comp1511unsw/2330281> - Drop in



Exam Format

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- 11 Questions
 - Q1 – Q4: Programming Questions (12 marks each)
 - HURDLES
 - Q5 – Q8: Application Questions (5 marks each)
 - Require you to understand what pieces of code are doing
 - Debugging
 - Q9 – Q10: Programming Questions (11 marks each)
 - Q11: Programming Questions (10 marks each)
 - Similar in style to the questions you did in your problem sets, revision exercises
 - These are also rated to give you an idea of how difficult each question is

Programming Questions

- Questions are similar to the Revision Exercises and Problem Sets
 - Stages of difficulty from basic to very hard (will be marked in the same rating system as your problem sets)
 - Some will have provided code as frameworks
 - Each question will need to be written, compiled and tested
- You will have access to autotests (but they're just tests!)

Programming Questions

- Harder questions will have fewer autotests during the exam
 - There will be no specific style marking, so you don't need to explain your code in comments
 - But it needs to be readable so I can mark it!
 - If I cannot mark it, how can I give you partial marks? Much to think about...

Application Questions

- These questions will be about whether you understand core coding concepts and the C programming language
 - In the style: "Debug the following code to make sure it works to produce the desired output."
 - Some examples are in the Week 10 Prac Exam

Starting

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- When you begin the exam, any starter code you may need will already be there
 - Read all the questions before starting
 - Start with the easier questions
 - Prepare! A couple of minutes thinking and drawing a diagram will clarify how you're going to approach a question
 - Use your problem set/revision practice! Debugging and testing will be important here
 - Less questions answered completely is better than more questions partially answered

The Hurdles (Q1 and Q2) (●○○)

- Similar to Practical test Question 1 or 2
 - Question 1 is a linked list hurdle
 - Question 2 is an array hurdle
- Tests your ability to:
 - Create simple C programs
 - Use variables (int, double, char)
 - Use scanf and printf
 - Use if statements and WHILE loops
 - Use of simple structs
 - Use of arrays of int/double/struct in Q2
 - Use of linked list of ints/doubles (no insertion or removal of nodes) in Q1

The Hurdles (Q3 and Q3) (●●◉)

- Similar to Practical test Question 3 and 4
 - Question 3 is a linked list hurdle
 - Question 4 is an array hurdle
- If you have answered Q1 and Q2 CORRECTLY, this means that you have already passed the hurdles of the exam
- These are harder applications of the hurdles
- You will need to know everything from Q1 and Q2, in addition to
 - Looping through more than once (maybe)
 - Some insertion/removal of nodes in Q3
 - Testing more difficult conditions and keeping track of more than one thing.

Q9 and Q10 (●●●)

- Harder manipulation of arrays (Q9)
 - Possibly fgets or string manipulation
- Complex application of arrays or linked lists (Q10)
 - Potentially use malloc() and free() with structs and pointers
- Again, more complex combinations, and some questions requiring interesting problem solving

Q11 (●●●) and (💀)

- For those aiming for a HD mark
 - Everything taught in the course might be in these questions
 - Think "Exercises", even some of the hard ones!
 - Will also test your ability to break a problem down into its parts
- The Prac Exam has an example of past Question 11 so you can see the difficulty level
- Partial completion of this question will award some marks

Summary

- To pass the course you must
 - Pass the hurdle requirement
 - For COMP1511, achieve a mark of at least 6/12 in one linked list hurdle question AND one array hurdle question
 - Q1 and Q3 are the linked list hurdle questions
 - Q2 and Q4 are the array hurdle questions
 - For COMP1511, achieve a mark of at least 6/12 in one array hurdle question
 - Q2 and Q4 are the array hurdle questions
 - Achieve an overall course mark of at least 50.

Break time!

...probably?

Some Example Hurdle Questions (Q1)

- Given a linked list, print the smallest value in the linked list
- Given a linked list, count how many square numbers are in the linked list
- Given two linked lists, return the difference in the number of items in the two linked lists

Some Example Hurdle Questions (Q2)

- Given an array of structs, where each struct is:
 - ```
struct direction {
 int number;
 char dir;
};
```
- Print out the total of the number of steps taken in a specific direction. So for example, if direction is 'l', find all the structs with direction as 'l' and add the numbers in those structs up.

## Some Example Hurdle Questions (Q2)

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- Given a 2D array, Count the number of multiples of 4 in the array.

# What Should I Study?

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- Know how to use both arrays and linked lists
  - Go back and do the problem sets if you haven't already
  - The revision exercises on the course webpage are also very useful
- Variables, Structs, enums, IF, Looping, Functions, Arrays, Linked Lists are very important to understand!
- You will need to have some understanding of Strings, Pointers, and Memory Allocation to be able to work successfully with char arrays, and linked lists

# How Should I Study?

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- Week by week revision questions on the course website
- We will also release a few past papers in Week 11 to help revision
  - Also the Week 10 Prac exam
    - COME TO THE WEEK 10 PRAC EXAM EVEN IF YOU ARE USUALLY ONLINE FOR TLBS

# How Should I Study?

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- Practice problems you haven't seen before
  - You could use LLMs to generate new problems for you
    - An actual educational use case for LLMs???
- Don't do practice exams until you're ready to treat it like the real exam
  - Build your confidence first
- We provide a lot of cool revision resources for you to try, so please utilise them

# Marking

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- Most of the marking will be automated
  - Make sure your input/output format matches the specification
- Answers for hurdles will also be checked by hand
  - Marks will be earned for correct code, not for passing autotests
  - Minor errors, like a typo in an otherwise correct solution, will only result in a small loss of marks

# You've Got This

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- Whilst some parts of the exam (the later questions) have been designed to be very challenging, you do not need to complete them to be successful in getting a great mark in this subject
- Make sure you breathe!

# You've Got This

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- When you are struggling to understand a question (particularly linked lists) = DRAW DIAGRAMS!
- Go over your problem sets and revision questions for extra practice.
- Revision classes will be run in Week 11 - details coming

# Take Care of Yourself!

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- Eat beforehand
  - A non-zero number of students pass out on the day from stress + not eating
- Get some sleep
  - A non-zero number of students pass out on the day from stress + not sleeping
- Take your medication (if needed)
- Breathe!

# Thank You

Questions?