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of ADELAIDE



CRICOS PROVIDER 00123M

School of Computer Science

# COMP SCI 2201/7201 Algorithm & Data Structure Analysis

## Lecture 1 – Course Profile and Assessment Information

[adelaide.edu.au](http://adelaide.edu.au)

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# **Acknowledgement of Country**

We acknowledge and pay our respects to the Kaurna people, the traditional custodians whose ancestral lands we gather on. We acknowledge the deep feelings of attachment and relationship of the Kaurna people to country and we respect and value their past, present and ongoing connection to the land and cultural beliefs.

# Teaching Staff

- Dr Muhammad Uzair (Lecturer & Course Coordinator)  
[muhammad.uzair@adelaide.edu.au](mailto:muhammad.uzair@adelaide.edu.au)

# Course Outline

- Week 1-6: Integer arithmetic, (Matrix) multiplications, Complexity proofs, Linear time sorting, order statistics, Trees
- Week 7-12: Hashing, Graph algorithms, Turing machines, Halting problem, Complexity class, NP-completeness



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# Assessment

# Assessment

- This course has 2 components:
  - Written examination 60%
  - Practical assignments 40%
- You are expected to participate in all activities, attend lectures and submit your assignments on time.
- Hurdle: You need at least 40% of the mark of the written examination to pass this course.

# Grades

Mark	Grade		Notes
85-100%	High Distinction	HD	Great!
75-84%	Distinction	D	Very good
65-74%	Credit	C	Good
50-64%	Pass	P	Satisfactory
0-49%	Fail	F	Cannot count this course for points or as a pre-requisite.
0%	Fail No Submission	FNS	No work submitted for assessment
	Result Pending	RP	Mark has not yet been finalised.

If you see an RP on your transcript, it means that your mark is not currently available. If you don't know why, you should contact your course coordinator.

# Minimum Performance

- On each component with a hurdle, you are required to achieve at least 40% of the marks allocated in the component.
- If your mark for any component with a hurdle is less than 40% of the allocated marks for that component, and your overall mark is greater than 45 F, your overall mark will be **reduced** to 45 F.
- To pass the course, you must obtain a passing mark overall and achieve at least 40% of the available marks in components with a hurdle.

# Late submission policy

- You should hand your coursework in on time.
- If you hand in your work late, your mark will be capped, based on how many days late it is.
  - up to 1 day late — mark reduced to 75%, marks below 75% not affected.
  - up to 2 days late — mark reduced to 50%, marks below 50% not affected.
  - up to 3 days late — mark reduced to 25%, marks below 25% not affected.
  - More than 3 days late — mark is reduced to 0.
- If you handed in something on time, and it is worth more than something that you handed in late, you will get the higher mark.
- Hand in early!

# Repeating Students

- Students who repeat a course are expected to attempt all of the aspects of the course again. This includes making fresh attempts at all coursework assessment items.
- You may apply to the course coordinator to have your previous work counted but this is not usually granted.
- Make sure that you attend all of the lectures, do all of the work and study hard for the exam – you don't want to get stuck repeating the same course over and over.



# Modified arrangements

# Assignment extensions

- Extensions will not be granted for circumstances including minor ailments; travel, employment, family, customary, sport or leisure commitments; problems with balancing workloads; normal exam stress or anxiety.
- If you think your situation is exceptional, for extension requests, send and email with formal documents (such as a medical or counsellor's certification) to [cs2201cc@adelaide.edu.au](mailto:cs2201cc@adelaide.edu.au) before the assessment due date. You will be notified of the result of your request.

# Assignment extensions

- Students who deliberately submit false or fraudulent documentation may be referred to the Student Misconduct Tribunal.
- You will normally only receive an extension equivalent to the number of days covered by your documentation. Don't expect to get an extra week because you lost a day.

# Replacement exams

- Replacement exams will not be granted for circumstances including minor ailments; travel, employment, family, customary, sport or leisure commitments; problems with balancing workloads; normal exam stress or anxiety.
- Students granted a replacement exam are not eligible to sit the primary exam.
- Students who sit the primary exam will not be eligible to apply for a replacement exam unless a major issue arose during the exam.
- Students must make themselves available during the replacement exam period.

# Replacement exams (cont.)

- Students will not be entitled to an additional assessment if they have already sat a replacement exam, i.e., no supps on supps.
- Students granted a deferred replacement exam will not be eligible to sit the primary exam or the replacement exam (only under exceptional circumstances will a deferred replacement exam be granted).
- The University must notify students of the outcome of their replacement exam applications within 3 business days (if you already sat the primary exam, do not bother applying for a replacement exam).

# Replacement exams (cont.)

- Students who deliberately submit false or fraudulent documentation may be referred to the Student Misconduct Tribunal.
- For the full policy on Modified Arrangements, see:

<https://www.adelaide.edu.au/policies/3303>

# Additional/Replacement exam dates

- Go to the University Examinations Site for information on Additional/Replacement exams:
  - <http://www.adelaide.edu.au/student/exams/>



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# Academic honesty policies

# Academic Honesty Policies

- The University has strict policies prohibiting students from presenting other people's work as their own, whether that of students or from outside the University.
- You may not copy code from another student or give another student your code to copy from, unless specifically authorised to do so by a staff member.
- You may not copy code from anywhere else, without permission.
- **If caught, you may receive zero for the assignment, zero for the course or be expelled.**
- We don't give you assignment work just to keep you busy, we do it to develop your understanding and ability to apply important techniques.
- If you don't do the work yourself, you won't be able to do it in the examination and you won't be able to do it in the work force.
- Full policy available at the university webpages.

# Violations to policy

- Plagiarism
  - Using another person's ideas, designs, words or works without appropriate acknowledgment.
- Collusion
  - Another person assisting in the production of an assessment submission without the express requirement, or consent, or knowledge of the assessor.

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- 1. Do not submit any work or part thereof which is not yours.**
- 2. Do not submit any work for which you have received unfair assistance.**

# Example 1

- I had finished my assignment, and a classmate was asking for help. Since I am a kind person, I
  - Gave the classmate a copy of my code (or part thereof).

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## Example 2

- I had finished my assignment, and a classmate was asking for help. Since I am a kind person, I
  - Gave a few high-level tips to my classmate.
  - Discussed high-level concepts regarding the assignment with my classmate.



## Example 3

- My good friend/housemate/brother/twin and I are taking the same course. We have always worked together. When doing the assignment, we
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  - Divided the assignment work amongst ourselves to speed up progress.
  - Sat side-by-side and looked at each other's answers when doing the assignment.

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  - Sat side-by-side the assignment



answers when doing

## Example 4

- The assignment seems to be the same as the one given last year. I contacted my friend who took the course last year and got a copy of his solution.



# Example 5

- The assignment seemed to be similar to another given at a different university. So, I
  - Copied and submitted the model answers available at that university's website.
  - Took parts of the model answers and integrated them into my solution.



## Example 6

- I studied at a school/college/university where doing \_\_\_\_\_ is acceptable. So I assumed doing this at The University of Adelaide is also acceptable.



# How to avoid plagiarism/collusion

- If you get stuck, seek help from the lecturer, tutor or prac demonstrator rather than copying from someone else.
- **Starting your work** early will help you to avoid getting stuck at the last minute.

**When in doubt, ask your lecturer.**



# Submission practicals / practical examinations

# How to Submit your Practicals

- Go to <https://cs.adelaide.edu.au/services/websubmission/>
- There, find the directory name that you need to make in your svn repository for each assignment
- Use secure shell to have external access to university's computing resources:  
    ssh uss.cs.adelaide.edu.au
- Use svn commands to make the directory
- Upload (or make) your files in your directory
- Make sure your files are compiled with university's compiler
- Go back to <https://cs.adelaide.edu.au/services/websubmission/> and submit your work. **(Don't forget this!)** and check feedback
- Get help from
  - Your practical/workshop supervisors
  - <https://cs.adelaide.edu.au/current-students/handbook/external/>

# SVN

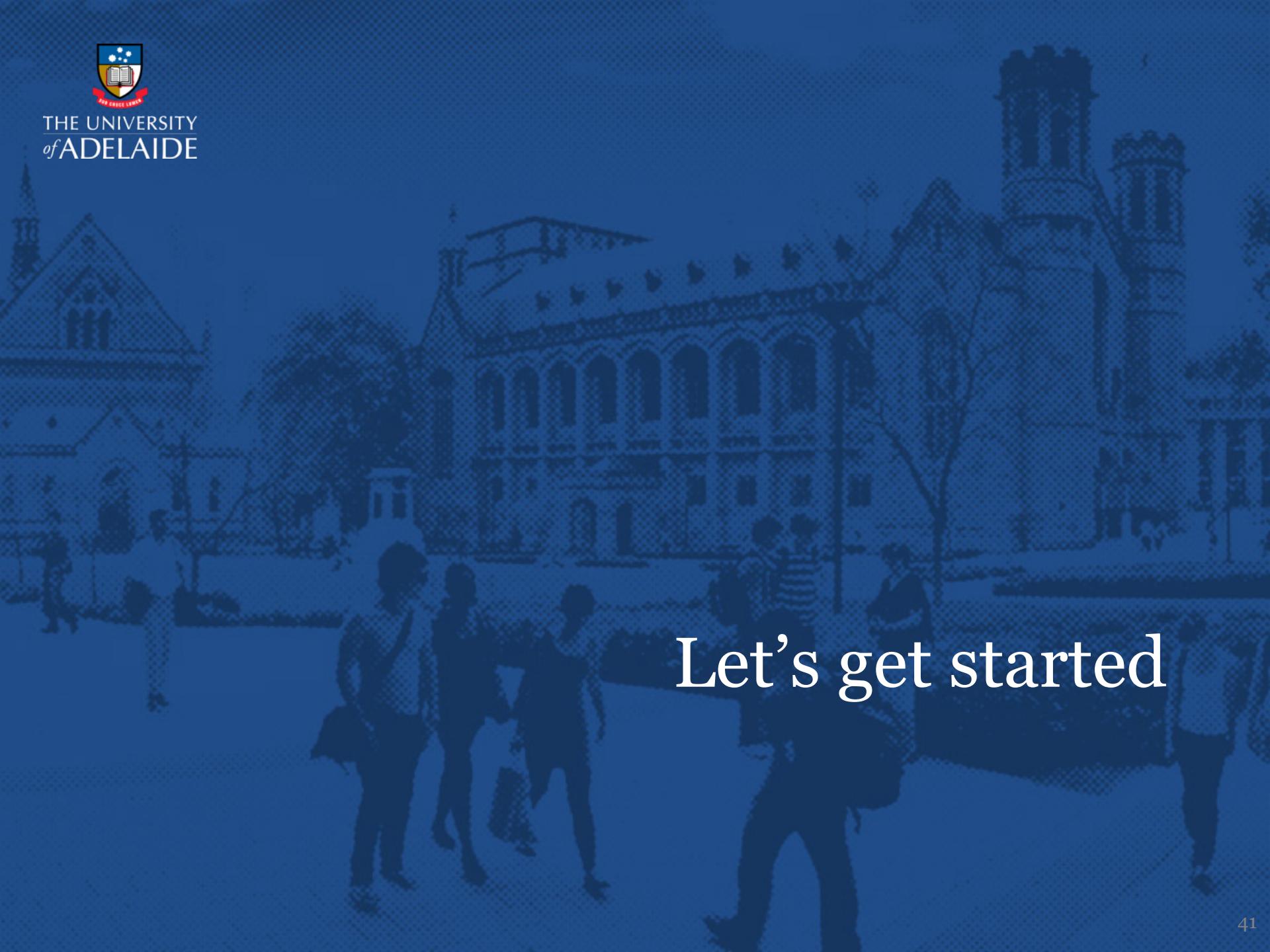
- You know what exactly the repository address of your assignment needs to be (from web-submission)
- Use svn commands to make that folder
  - `svn mkdir --parents https://version-control.adelaide.edu.au/svn /aXXXXXXX/what/ever/you/want -m "must have some comments"`
  - Either from your own terminal
  - Or from the server, which you connect to by ssh. If you have windows, use Putty (a free ssh client) to connect to the server through ssh
- If you don't have a working copy, check out this folder (or one of the parents) to get a fresh working copy of that
  - `svn co https://version-control.adelaide.edu.au/svn /aXXXXXXX/what/ever/you/want localFolderAddress`
  - Either on your own computer
  - Or on the server (first use ssh to connect)

# SVN

- If you already have a working copy of one of the parent folders,
  - Either make the assignment folder(s) locally and add them by svn commands
    - cd ExistingParentFolder
    - svn add NewFolderName
    - svn ci -m “comments”
  - Or use svn commands to make that folder(s) on the server
    - Then update your working copy folder. You will see the new directory in that
      - cd ExistingParentFolder
      - svn update
- Try not to have more than one working copy.

# Code on the server

- If your working copy is on the server
  - ssh to server each time you want to work on it
  - Go to your working copy folder
  - Use vim (or any other terminal-based text editor):  
  vim main.cpp
  - g++ -Wall main.cpp
  - ./a.out



Let's get started