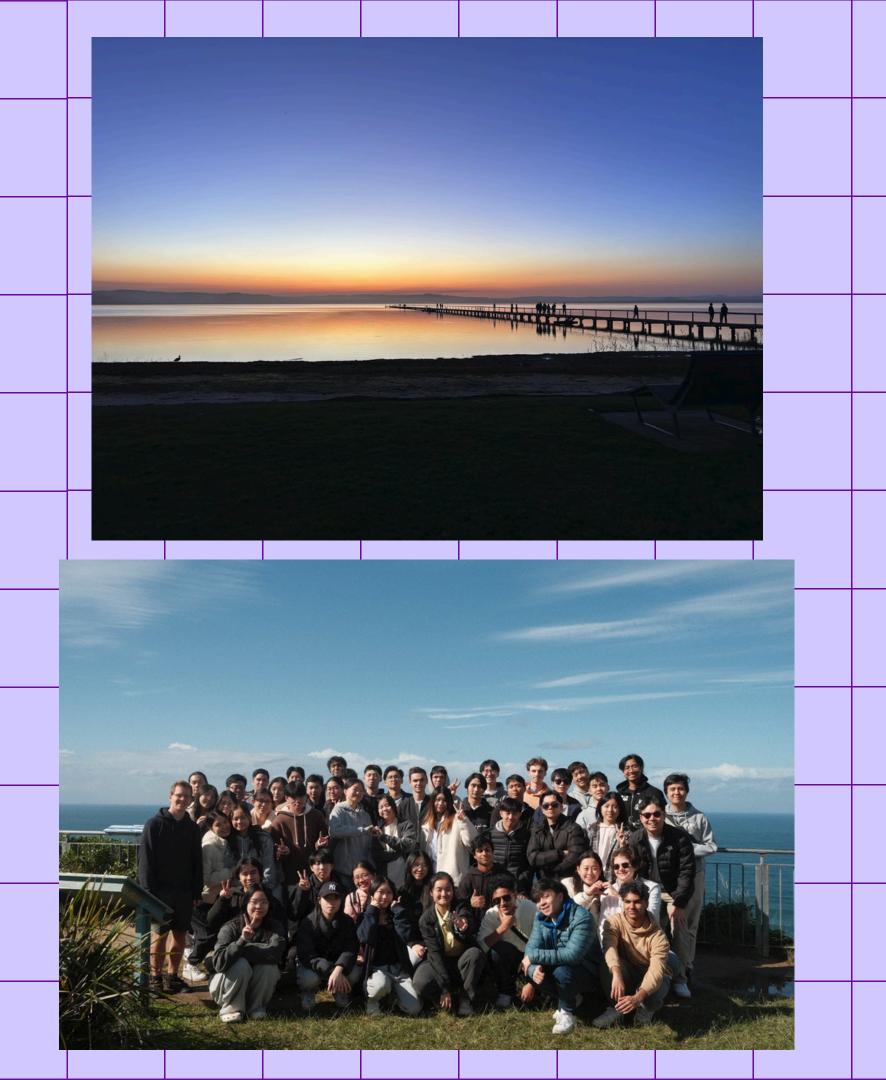# COMP(2041|9044)

Are you excited?!?!?!

WHO ME?

- Jeremy Le
- 3rd Year
- Computer Science / Mathematics
- No pets = cleaner house
- Full time unemployed
- Have taught:
  - COMP(1531 | 2041 | 2511 | 3121)
- DevSoc Administrative Officer
- Hobbies:
  - Cooking, Walks, Competitive Programming

RANDOM FLEXS

Contribued to dis

Contributors 3

Dylan-Brotherston Dylan Brotherston
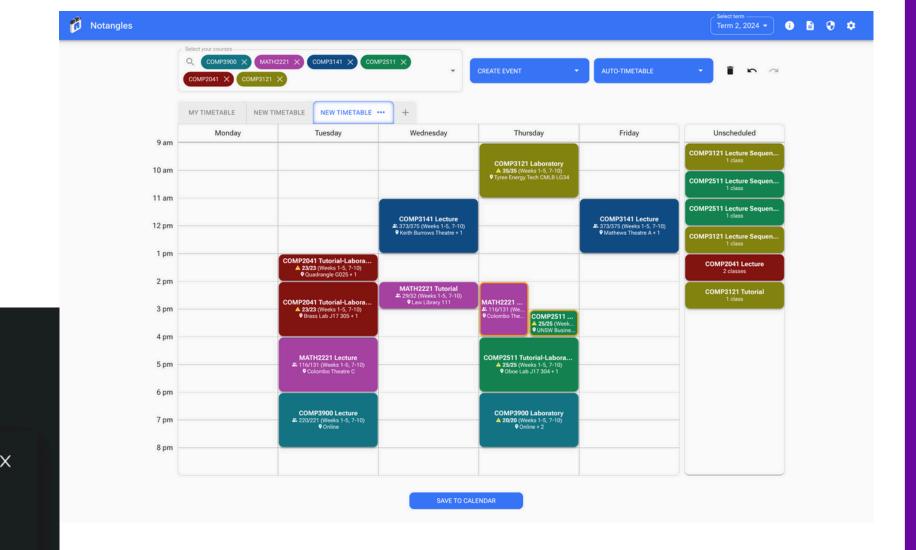
andrew-taylor Andrew Taylor

jeremyle56 Jeremy Le

Want to contribute?

Found a bug or have feedback? Open an issue on GitHub or share your thoughts on Discord!

Feeling brave? You can even fix it yourself by submitting a pull request!

Let's make **Circles** even better, together! 💜

Made this pop up on Circles

Getting Help

1. EdStem Forum
2. Help Sessions

In special cases:
1. Email me (jeremy.le1@unsw.edu.au)
2. Email the course (cs2041@unsw.edu.au)

Platforms

Course website (https://cgi.cse.unsw.edu.au/~cs2041/24T2/)
Youtube (for lectures)
EdStem Forum

ASSIGNMENT STRUCTURE

Weekly Tests (Week 3-10)	10
Assignment 1	15
Assignment 2	15
Labs	15
Final Exam (40% Hurdle)	45

What is an operating system?

An operating system is system software that manages computer hardware and software resources, and provides common services for computer programs.

What operating systems are being used in your house/tutorial room?

Typically one of Windows, macOS, Linux.

What operating system(s) do CSE lab computers run?

Linux (Debian), we can run:

```
$ uname -a
Linux vx13 6.1.0-18-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6.1.76-1 (2024-02-01) x86_64 GNU/Linux
```

Write a regex to match:
1. C preprocessor commands in a C program source file.
2. All the lines in a C program except preprocessor commands.
3. All lines in a C program with trailing white space (one or more white space at the end of line).
4. The names "Barry", "Harry", "Larry" and "Parry".
5. A string containing the word "hello" followed, some time later, by the word "world".
6. The word "calendar" and mis-spellings where 'a' is replaced with 'e' or vice-versa.
7. A list of positive integers separated by commas, e.g. 2,4,8,16,32
8. A C string whose last character is newline.

GREP FLAGS

```
fgrep/grep -F
grep/grep -G
egrep/grep -E
pgrep/grep -P


$ man 1 grep
```

CONFUSING GREP COMMAND LINE ARGS

```
$ grep -E hello
$ grep <p>|<br> /tmp/index.html
```

WHAT DOES THIS MATCH?

```
$ grep -Ev .
```

Write a regex to match the class of strings

In the examples, the expected matches are highlighted in bold.

a. encrypted password fields (including the surrounding colons) in a Unix password file entry, e.g.

```
root:ZHolHAHZw8As2:0:0:root:/root:/bin/bash
jas:nJz3ru5a/44Ko:100:100:John Shepherd:/home/jas:/bin/zsh
andrewt:ugGYU6GUJyug2:101:101:Andrew Taylor:/home/jas:/bin/dash
```

b. positive real numbers at the start of a line (using normal fixed-point notation for reals, *not* the kind of scientific notation you find in programming languages), e.g.

```
3.141 value of Pi
90.57 maximum hits/sec
half of the time, life is silly
0.05% is the legal limit
42 - the meaning of life
this 1.333 is not at the start
```

Write a regex to match the class of strings

c. Names as represented in this file containing details of tute/lab enrolments:

```
2134389|Wang, Duved Seo Ken        |fri15-spoons|
2139656|Undirwaad, Giaffriy Jumis  |tue13-kazoo|
2154877|Ng, Hinry                  |tue17-kazoo|
2174328|Zhung, Yung                |thu17-spoons|
2234136|Hso, Men-Tsun              |tue09-harp|
2254148|Khorme, Saneu              |tue09-harp|
2329667|Mahsin, Zumel              |tue17-kazoo|
2334348|Trun, Toyin Hong Recky     |mon11-leaf|
2336212|Sopuvunechyunant, Sopuchue |mon11-leaf|
2344749|Chung, Wue Sun             |fri09-harp|
...
```

d. Names as above, but without the trailing spaces (difficult).

   Hint: what are given names composed of, and how many of these things can there be?

This regular expression **[0-9]*.[0-9]*** is intended to match floating point numbers such as '42.5' Is it appropriate?

Write a grep -E command which will print any lines in a file **ips.txt** containing an IP addresses in the range **129.94.172.1** to **129.94.172.25**

THANK YOU!

Code and Slides Avaliable here

https://github.com/jeremyle56/tutoring/tree/24T2/24T2/cs2041