

WEEK 1

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

Contributed 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! ❤️

Notangles

Select term
Term 2, 2024

Select your courses
COMP3900 MATH2221 COMP3141 COMP2511
COMP2041 COMP3121

CREATE EVENT AUTO-TIMETABLE

MY TIMETABLE NEW TIMETABLE NEW TIMETABLE +

	Monday	Tuesday	Wednesday	Thursday	Friday	Unscheduled
9 am						COMP3121 Lecture Sequen... 1 class
10 am				COMP3121 Laboratory 35/35 (Weeks 1-5, 7-10) Tyree Energy Tech CMLB LG34		COMP2511 Lecture Sequen... 1 class
11 am						COMP2511 Lecture Sequen... 1 class
12 pm			COMP3141 Lecture 373/375 (Weeks 1-5, 7-10) Keith Burrows Theatre + 1		COMP3141 Lecture 373/375 (Weeks 1-5, 7-10) Mathews Theatre A + 1	COMP3121 Lecture Sequen... 1 class
1 pm		COMP2041 Tutorial-Labora... 22/23 (Weeks 1-5, 7-10) Quadrangle G225 + 1				COMP2041 Lecture 2 classes
2 pm		COMP2041 Tutorial-Labora... 23/23 (Weeks 1-5, 7-10) Brass Lab J17 305 + 1	MATH2221 Tutorial 29/32 (Weeks 1-5, 7-10) Law Library 111			COMP3121 Tutorial 1 class
3 pm				MATH2221 ... 116/131 (We... Colombo The...		
4 pm		MATH2221 Lecture 116/131 (Weeks 1-5, 7-10) Colombo Theatre C		COMP2511 ... 25/25 (Week... UNSW Busine...		
5 pm				COMP2511 Tutorial-Labora... 25/25 (Weeks 1-5, 7-10) Oboe Lab J17 304 + 1		
6 pm						
7 pm		COMP3900 Lecture 220/221 (Weeks 1-5, 7-10) Online		COMP3900 Laboratory 20/20 (Weeks 1-5, 7-10) Online + 2		
8 pm						

SAVE TO CALENDAR

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
```

BASIC REGEX

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?

MORE PRACTICE

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 Available here](https://github.com/jeremyle56/tutoring/tree/24T2/24T2/cs2041)

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