

# survey: which ones have you watched







# COMP1511 Week 7!

William's Flex Week: Assignments + Suits S1-3

# The Agenda

## Assignment 1

#### Assignment 1 Debrief!

- How was Assignment 1?
- 2D arrays vibes post-Assignment 1?
- Assignment 2 tips 'n tricks? Share!
- Help Sessions still running!
- Check-in week this week!

## Functions and Pointers

#### Let's code, but first...

- Problems with editing multiple variables in a helper function:
- Cannot return multiple variables
- Solutions:
- Pass a struct and copy from its values:
- Create struct
- Pass struct
- Return struct
- Copy from struct
- · Pass a pointer and edit directly:
- Pass pointer
- Profit!

## Malloc and Arrays

#### Let's code, but first...

- What does malloc stand for?
- What does **sizeof** stand for?
- What does malloc take as an argument?
- How is memory allocated with malloc?

### Pointers

# int n = 42; int \*p; int \*q; p = &n; \*p = 5; \*q = 17; q = p; \*q = 8; Let's step through this together!

## Struct Pointers

#### Let's code, but first...

- Does \* (dereference) work on structs?
- Does \* work on field accessing?
- i.e. \*my\_struct.field
- -> is shorthand!

## EOF Loops

- What's the difference between scanf and fgets?
- What does **fgets** stand for?
- How does **fgets** read strings?

# Assignment 1 Debrief!

- How was Assignment 1?
  - 2D arrays vibes post-Assignment 1?
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# How do pointers work?

```
int n = 42;
int *p;
int *q;
p = &n;
*p = 5;
*q = 17;
q = p;
*q = 8;
```

Let's step through this together!

- Problems with editing multiple variables in a helper function:
  - Cannot return multiple variables
- Solutions:
  - Pass a struct and copy from its values:
    - Create struct
    - Pass struct
    - Return **struct**
    - Copy from **struct**
  - Pass a pointer and edit directly:
    - Pass pointer
    - Profit!

- Does \* (dereference) work on **struct**s?
- Does \* work on field accessing?
  - i.e. \*my\_struct.field
- -> is shorthand!



- What does malloc stand for?
- What does sizeof stand for?
- What does malloc take as an argument?
- How is memory allocated with malloc?

- What's the difference between scanf and fgets?
- What does **fgets** stand for?
- How does **fgets** read strings?