

Reminder: census date is this Sunday (or it usually is) - talk to us in the lab today if you're worried about the course

# *COMP1511*

## WEEK 4

CLASS SEMESTER

---



# OVERVIEW

Arrays

Scanning in Loops  
(fixed #inputs)

Scanning in Loops  
(variable #inputs)

Functions Practice



# Arrays Practice

Arrays:

- Way of storing information
- Stores a fixed number of elements
- All elements in an array are of the same type
- Access information using an index

```
int fav_numbers[5] = {3, 2, 5, 6, 8};
```

0x0123	0x0127	0x012B	0x012F	0x0133
3	2	5	6	8



# CODE!

# Round Robin

## Rules:

- You will be writing code on the whiteboards, in groups, to solve two problems
- Only two people at the whiteboard at a time
- Every must do a task, no-one can do a second task before everyone else has gone
- No talking at the whiteboard (asking for help is ok, no talking and writing)
- You ARE allowed to plan/discuss/think as a group before leaving for the whiteboard

# Tasks

## Copy Array

- Create an array of doubles with 3 elements, each with a non-zero value.
- Create another array of doubles with 10 elements where every element initialised to 0.0.
- Create a while loop that loops through every element of the first array.
- Copy the elements of the first array into the second array (leave 0's at the end)
- Create a while loop that prints out all the elements of the second array.

## Largest Character

- Create a character array with exactly 8 elements.
- Create a character variable called `largest_character`, equal to the first character of the array.
- Create a while loop to loop through the character array.
- Create an if statement to check if the current character has a higher ascii value than `"largest_character"`
- Print out the largest character you've found.
- Ensure your code would pass "1511 style"
- Go join other teams, and sit with their groups to help them finish.

# Scanning in Loops

We want to scan temperatures into an array, and then find the largest of them.

What steps are we going to need?

Plan together

Pseudo-code in groups

Class Code



# SCANNING IN LOOPS

## FIXED VS VARIABLE AMOUNT OF SCANS

If we know how many times we want to scan previous option works well

What are some times we might not know how many times we want to scan from stdin?



# FUNCTIONS PRACTICE

```
struct colour {  
    int red;  
    int green;  
    int blue;  
};
```

```
struct colour make_colour(int red, int green, int blue) {  
    struct colour new_colour;  
  
    new_colour.red = red;  
    new_colour.green = green;  
    new_colour.blue = blue;  
  
    return new_colour;  
}
```