

comp1511 week 04

admin

- **assignment 1** has been released!
 - livestream is tomorrow, come along in person if you would like, I will be there :) will also be recorded
- this Sunday is census date – feel free to chat to me if you are concerned about your progress in the course
- help sessions and PASS sessions are in full swing!

agenda for today

- arrays
- scanf in loops
- functions
- assignment 1 walkthrough

array demo (see array.c)

array activity (see odd_only.c)

Odd Only (Tutor Demo)

- Create an integer array with at least 5 elements.
- Create a while loop which loops through every element of the array.
- Write an `if` statement which adds 1 to each **even** value. Do this within the `while` loop.
- Write another while loop which goes through the array *with a different iterator* (i.e. if you used `i` last time, use `j`)
- Print out the values in the array.

arrays practice

Copy Array (Student Round Robin)

- 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 (Student Round Robin)

- 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 values into array(see scan_into_array.c)

how do we scan 10 values into an array and find the maximum value?

scanning until ctrl+d (see scan_end_of_input.c)

we will write a program that will keep scanning in values until the user presses CTRL + D

functions

how can we write a function that squares a number?

functions kahoot

In this section, we will write a program that create functions to help us deal with colours.

The following struct will be useful for this tutorial:

```
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;  
}
```

<https://create.kahoot.it/share/writting-colours-22t3/49303d4d-b0c4-468e-90d6-4c92ce97bc8b>

assignment 1 walkthrough

- <https://edstem.org/au/courses/12009/lessons/37398/slides/260472>
- style tips:
 - include a header comment with all information
 - run 1511 style cs_carpark.c
 - #define all constants AND all char commands
 - e.g. #define PARK_CAR 'p', #define TRUE 1
 - make sure output matches examples in spec exactly
 - above every function, there should be a comment explaining its purpose
 - use helper functions!

any questions?