

Nicole Luong

Week 4

Arrays, Functions



**Before we
start**

Census Date: This Sunday!

Get started on Assignment 1

Arrays

- Create an integer array

	0	1	2	3	4	5
int	8	11	72	7	100	33

- Print out all the variables in the array

Array Round Robin

Instructions

In your groups:

- Discuss a plan to write these procedures.
- Only 2 people at whiteboard at a time.
- Every member must do a task. Divide equally!
- No talking at the whiteboard.

Odd Only

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

Copy Array

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

Array Round Robin Extension

Instructions

In your groups:

- Discuss a plan.
- Only 2 people at whiteboard at a time.
- Every member must do a task. Divide equally!
- No talking at the whiteboard.

Largest Character

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

Scanning into an Array

Scan 6 temperatures into an array and print the highest temperature

17

36

44

25

38

44

Plan together, write pseudocode in in your groups on the board

Scanning Until CTRL+D

What if you didn't know how many inputs would be entered?

Modify the highest temperature code to scan in up to 100 temperatures.

```
17 36 44 25 38 44 ... 1 ctrl+d
```

Food for thought:

- How big should you size this array?
- What does scanf return?

Function 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;  
}
```

Kahoot!

A decorative graphic consisting of several thick, light pink lines that intersect and loop across the left side of the slide, creating a stylized, abstract pattern.

Lab Time!

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