

## Lab 4

### Part 1

Input: 3, 9, 8, 5      Output: 0000000000  
   0000000000  
   000000

- Place file in same folder as cpp file.
- Take first int from file and use to initialise array. ✗

Won't take 3 as a constant:

- Ignore 3, use while loop to go through file.
- For loop, take each number and output 'O' until complete.
- New line for each loop output.
- Note: Couldn't separate commas from input. Left them out.



## Part 2

Input: 7, 3, 5, 3, 4, 2, 1, 4

Output:

```

      ○
    ○   ○   ○
  ○ ○ ○ ○   ○
○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○
```

- Still can't initialise array with 7.
- Use while loop to go through file.
- For loop, find highest number.
- Nested for loop to print rows and columns.
- output " if the row number + file value is less than highest number
- output ○ if the row number + file value is equal to or greater than highest number.
- Can use conditional operator (?)



## Part 3

Input: Data

Output: bar chart  
+  
line chart

- Change configuration manager from x86 to x64.
- System error. sfml-graphics-d-2.dll not found. Fixed ✓
- Exception thrown line 60?  
Start without debugging
- Try sample code. No output. Fixed
- Use similar structure to part 2.
- In loop no ~~data~~ output. Even without data from array and ~~data~~ a normal int instead