

Class Exercise

Week 13

Recursion

- Factorials

- A factorial of a number is the result of multiplying that number by all the positive integer values from that number down to 1
- For example the factorial of 4 would be $4 \times 3 \times 2 \times 1 = 24$
- Create a recursive program that will take in any value and calculate the factorial for that number.

Recursion

- Fibonacci Sequence
- In math, this sequence is 0 then 1, then the sum of the previous two numbers 1, then the sum of the previous two numbers (1, 1) 2, then the sum of the previous two numbers (1,2) 3 etc.
- 0,1,1,2,3,5,8,13,21,34,....
- Create a program that will display the Fibonacci sequence up to a certain number that is passed

Bubble Sort

- The bubble sort will sort an array by comparing two elements – and swapping them
 - The greater value is always placed on the right of the element
 - The first pass through the array will make sure that the largest value is located on the far right/ end of the array
 - The largest value bubbles to the top
- You will then work your way through the array moving the second highest value to the second last position.. then the third highest value to the third highest position... etc.