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Launchpad

Lecture - 8

2D Arrays & Recursion

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CODING BLOCKS

Passing 2D arrays into a function ?

Spiral Print ?

Array of Strings !

Call Stack!

Time to talk about Recursion!

What is Recursion?

Recursion in computer science is a method where the solution to a problem depends on solutions to smaller instances of the same Problem.

Parts of Recursive Algorithm

I. Base Case (i.e., when to stop)
II. Work toward Base Case
III. Recursive Call (i.e., call ourselves)

The "work toward base case" is where we make the problem simpler. The recursive call, is where we use the same algorithm to solve a simpler version of the problem. The base case is the solution to the "simplest" possible problem

Print Factorial of N

I. What is the recursive call?
II. What is the base case?

Print Nth Fibonacci Number

I. What is the recursive call?
II. Base Case?

Behind the scenes!

Lets code some more problems

I. Finding the first 7
II. Finding the last 7 in an array
III. Sum of Array
IV. Binary Search
V. Selection Sort

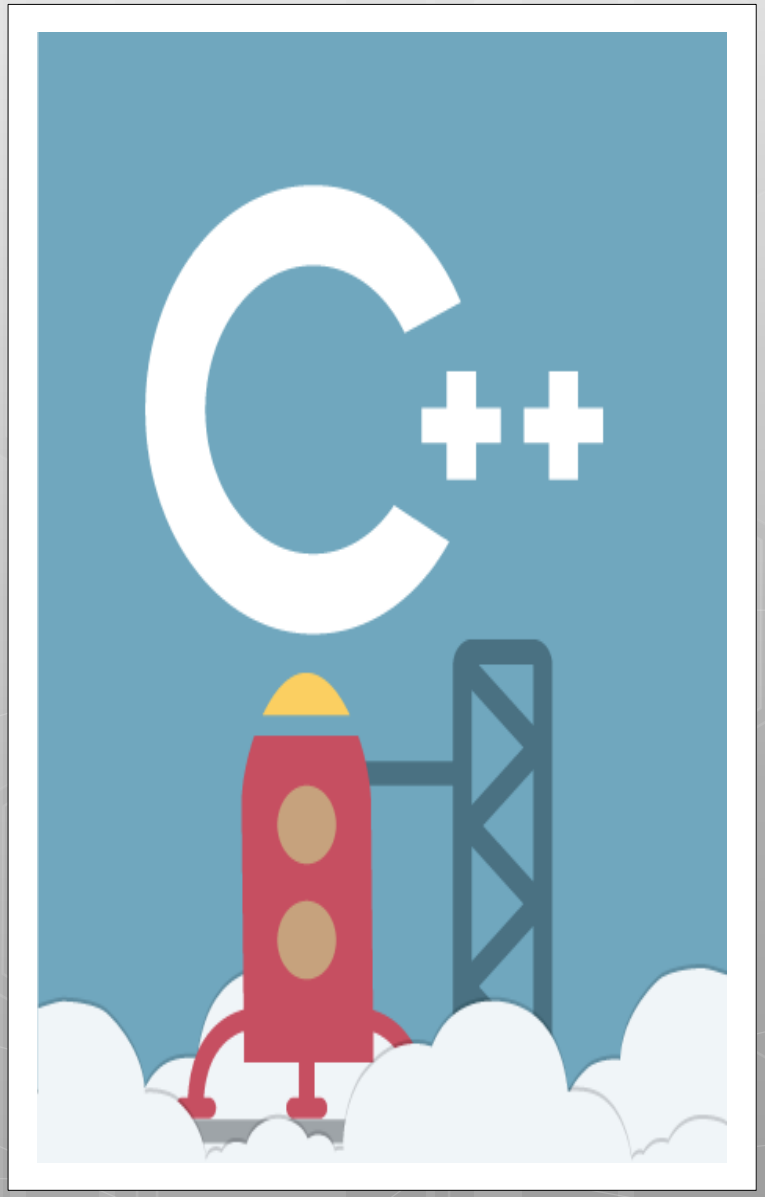
Time to try?

I. Write a program to calculate power (a^x) using recursion
II. Bubble Sort using recursion.
III. Print an String using recursion.

Merge Sort!

What is next class about?

I. More into recursion.



Thank You!

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