June 27, 2015

Launchpad

Lecture - 8

Recursion

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Status of Assignment?

Any doubts?

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

Print Nth Fibonacci Number

Behind the scenes!

Implement GCD using Euclid's Method!

Time to try?

I. Write a program to calculate product of two numbers using recursion
II. Write a program to check if a given string is palindrome or not using recursion!
III. Write a program to calculate power (a^x) using recursion

Binary Search Using Recursion!

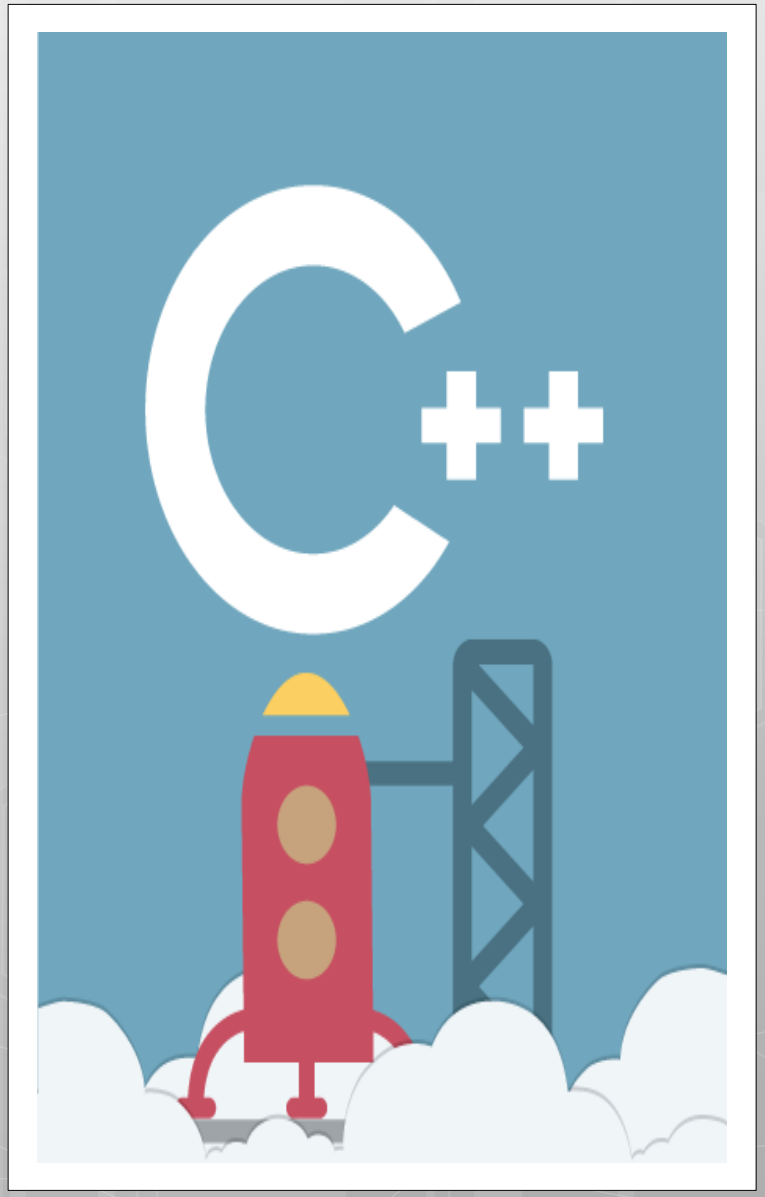
Merge Sort!

cin.getline

Quick Sort!

What is next class about?

I. Doubts + Problem Solving



Thank You!

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