NATIONAL UNIVERSITY
OF COMPUTER AND EMERGING SCIENCES

Course: Programming Fundamentals

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Due Dated: 29 Nov, 2019   5:00 PM

A note of warning: Start work on assignments as soon as they are given. Do not underestimate the demanding nature of this course.

Instructions:

- Plagiarism will result in **zero** credit in the assignment.
- Try to divide the task into smaller task and then solve it and make function of it.

Calculator problem

Write a Function that takes in a string as a parameter like "2+3". Your task is to perform operation accordingly to the operator present in that string. If there is no operator is present in the input string, print invalid in that case. Only 5 operators are allowed (+, *, -, /, ^).

Examples:

Input: "2+3"
Output: 5
Input: "2*3"
Output: 6
Input: "3/2"
Output: 1.5
Input: "2-3"
Output: -1
Input: "2^3"
Output: 8

2's Power problem

Write a function that take non negative integer as input from user and output will be the number is in power of '2' or not.
Examples:
Input: 16
Output: Yes
Input: 14
Output: No

Coin game

There are n coins in a line. Two players take turns to take a coin from one of the ends of the line until there are no more coins left. The player with the larger amount of money wins. Would you rather go first or second? Does it matter? Assume that you go first, describe an algorithm to compute the maximum amount of money you can win.(The price of one coin can vary).