

Algorithms and data structures

Tutorial 4 - Recursion

Dr. Doan Nhat Quang: doan-nhat.quang@usth.edu.vn

Exercise 1:

Write a program in C/C++ that uses only addition, subtraction, and comparison to multiply two numbers using recursion.

Exercise 2:

Write a recursive function in C/C++ that calculate the sum of all elements in a Linked List.

Exercise 3:

Write a program in C/C++ to solve the Hanoi tower using Stacks with the Linked List implementation. The mission is to move all the disks to some another tower without violating the sequence of arrangement and with few rules as following:

- Only one disk can be moved among the towers at any given time.
- Only the top disk can be removed.
- No large disk can be put over a small disk.

