

Recursion

Recursion: Sample Program List

basic_recursions.py

This program illustrates three basic recursive functions for computing the factorial of N, sum of 1, 2, ... , N, and N'th Fibonacci number.

list_recursions.py

This program illustrates a number of recursive functions for processing a list. Illustrated functions are three versions of finding the sum of all numbers in a list, finding the position of a given number in a list, counting the number of times a given number appears in a list, and two versions of reversing a list.

towers_of_hanoi.py

This program illustrates a recursive solution of the classical Computer Science problem Towers of Hanoi.

towers_of_hanoi2.py

This is a second version of the Towers of Hanoi program that shows the level of recursion by indenting the output lines.