Week 2: Recursion

1) Write a ***binary search*** to locate a target value within a sorted sequence of n elements stored in an array

2) ***Fibonacci sequence*** where F(0) = 0, F(1) = 1 and F(n) = F(n-1) + F(n-2)

3) In-place ***reverse*** an array using recursion.

4) Write a method that can raise a number x to the ***power*** of an arbitrary nonnegative integer n.

5) Find the ***size of a directory*** (more precisely a given path of a directory).

6) Describe a recursive algorithm to compute the integer part of the ***base-two logarithm of n*** using only addition and integer division.

7) Write a short recursive Java method that ***rearranges*** an array of integer values so that ***all the even values appear before all the odd values.***

8) Towers of Hanoi