Python Practical 10 Sep 2021

1) Write a function that takes the lengths of three sides: `side1, side2` and `side3` of a triangle as input from the user using `input` function and returns the area of the triangle as the output. Also, assert that sum of the length of any two sides is greater than the third side.

2) Write a recursive function to return the `n`th term of a Fibonacci sequence where `n` is taken as input from the user.

3) Write a recursive function that takes a number with two or more digits as an input and computes the sum of its digits.

4) Write a function that takes two numbers as input parameters and returns their least common multiple and highest common factor.

5) Write a function that finds the sum of `n` terms of the following series:

a) $1 - x^2/2! + x^4/4! - x^6/6! + \ldots x^n/n!$

b) $1 + x^2/2! + x^4/4! + x^6/6! + \ldots x^n/n!$

6) Write a function that takes two strings as an input from the user and counts the number of matching characters in the given pair of strings.