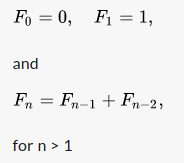
1. In mathematics, the Fibonacci numbers, commonly denoted Fn, form a sequence, called the Fibonacci sequence, such that each number is the sum of the two preceding ones, starting from 0 and 1:



The beginning of the sequence is this:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ...

The function fastFib(num) returns the fibonacci number Fn, of the given num as an argument.

**Examples**

fib\_fast(5) ➞ 5

fib\_fast(10) ➞ 55

fib\_fast(20) ➞ 6765

fib\_fast(50) ➞ 12586269025

:

Def febo(n):

If n ==0:

return 1

if n ==1:

return 1

return febo(n-2)+febo(n-1)

2. Create a function that takes a strings characters as ASCII and returns each characters hexadecimal value as a string.

**Examples**

convert\_to\_hex("hello world") ➞ "68 65 6c 6c 6f 20 77 6f 72 6c 64"

convert\_to\_hex("Big Boi") ➞ "42 69 67 20 42 6f 69"

convert\_to\_hex("Marty Poppinson") ➞ "4d 61 72 74 79 20 50 6f 70 70 69 6e 73 6f 6e"

:

Def convert(string):

Out =[]

For elem in string:

Out.append(hex(ord(elem)))

Retur str(out)

3. Someone has attempted to censor my strings by replacing every vowel with a \*, l\*k\* th\*s. Luckily, I've been able to find the vowels that were removed.

Given a censored string and a string of the censored vowels, return the original uncensored string.

**Example**

uncensor("Wh\*r\* d\*d my v\*w\*ls g\*?", "eeioeo") ➞ "Where did my vowels go?"

uncensor("abcd", "") ➞ "abcd"

uncensor("\*PP\*RC\*S\*", "UEAE") ➞ "UPPERCASE"

:

**def** uncensor(in\_string,in\_vowels):

window **=** 0

out\_string **=** ''

**for** ele **in** in\_string:

**if** ele **==** '\*':

out\_string **+=** in\_vowels[window]

window **+=**1

**else**:

out\_string **+=** ele

print(f'uncensor{in\_string,in\_vowels} ➞ {out\_string}')

4. Write a function that takes an IP address and returns the domain name using PTR DNS records.

**Example**

get\_domain("8.8.8.8") ➞ "dns.google"

get\_domain("8.8.4.4") ➞ "dns.google"

: import socket

def get\_domain(ip):

return socket. Gethostbyaddr(ip)[0]

5. Create a function that takes an integer n and returns the factorial of factorials. See below examples for a better understanding:

**Examples**

fact\_of\_fact(4) ➞ 288

# 4! \* 3! \* 2! \* 1! = 288

fact\_of\_fact(5) ➞ 34560

fact\_of\_fact(6) ➞ 24883200

:

def fact(n):

if n==1:

return 1

else:

return n\*fact(n-1)

number=1

for elem in range(1,n):

number \*= fact(elem)

return number