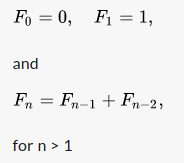
1. In mathematics, the Fibonacci numbers, commonly denoted Fn, form a sequence, called the Fibonacci sequence, such that each number is the sum of the two preceding ones, starting from 0 and 1:



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

**Ans:**

def fib\_fast(num):

f0=0

f1=1

for i in range(1, num):

f2=f0+f1

f0=f1

f1=f2

print(f2)

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"

**Ans:**

def convert\_to\_hex(string):

new\_str=""

for i in string:

new\_str+=format(ord(i), "x")+" "

print(new\_str)

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"

**Ans:**

def uncensor(string, vowels):

for i in vowels:

string=string.replace("\*", i, 1)

print(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"

**Ans:**

import socket

def get\_domain(ip):

d\_l=socket.gethostbyaddr(ip)

print(d\_l[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

**Ans:**

def fact\_of\_fact(num):

prod=1

for i in range(1, num+1):

prod\*=fact(i)

print(prod)

def fact(n):

if n ==1:

return 1

else:

return n\*fact(n-1)