# 1.1 Implement a recursive function to calculate the factorial of a given number

"""

1! = 1 × 1

2! = 2 × 1! --->2 × 1

3! = 3 × 2! --->3 × 2 × 1

.

.

10! = 10 × 9! --->10 × 9 × 8 ×...× 1

Formula - n × (n-1)!

"""

def fact\_rec(n):

if n==0 or n==1:

return 1

else:

return n\*fact\_rec(n-1)

number = int(input("Enter a value :"))

res = fact\_rec(number)

print("The factorial of {} is {}".format(number,res))

#Leap year

"""

year % 4 == 0 &

year % 100 != 0 /

year % 400 == 0

"""

def isLeapYear(year):

if (year % 4 == 0 and year % 100 != 0) or year % 400 == 0:

return True

else:

return False

year = int(input("Enter a year :"))

if isLeapYear(year):

print('{} is a leap year.'.format(year))

else:

print('{} is not aleap year.'.format(year))