class Solution:

def getPermutation(self, n: int, k: int) -> str:

def fact(num):

if num < 3:

return num

return fact(num - 1) \* num

s = []

k -= 1

val = [str(i) for i in range(1, n + 1)]

while n > 1:

curid = k // fact(n - 1)

curval = val[curid]

val.remove(curval)

s.append(curval)

k -= (fact(n - 1) \* curid)

n -= 1

s.append(val[0])

return "".join(s)