70)PERMUTATION SEQUENCE

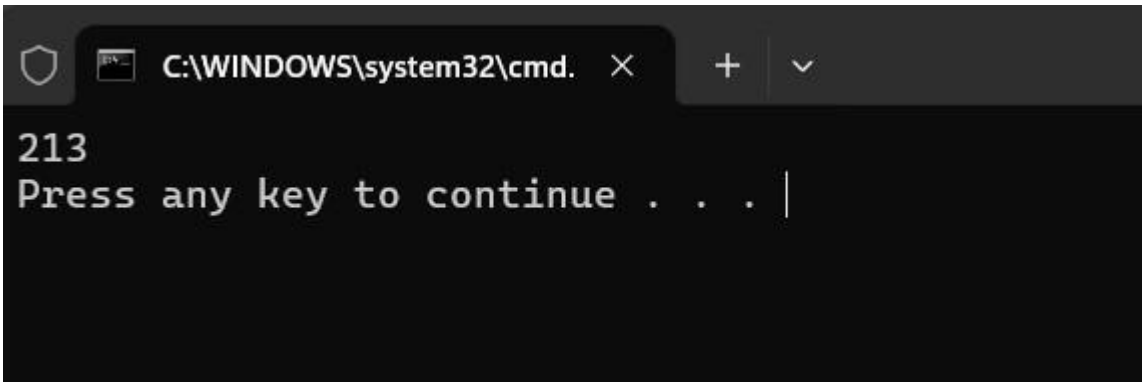
The set [1, 2, 3, ..., n] contains a total of n! unique permutations.

CODE:

```
def getPermutation(n, k):
import math     factorials =
[1] * n
   digits = [str(i) for i in range(1, n+1)]
       for i in range(2, n):         factorials[i] =
factorials[i-1] * i
       k -= 1            result = []     for i in
reversed(range(n)):         index = k //
factorials[i]         k %= factorials[i]
       result.append(digits.pop(index))

   return ''.join(result) a=3
k=3
print(getPermutation(a,k))
```

OUTPUT:



TIME COMPLEXITY : $O(2^n)$