65)COUNT AND SAY

The count-and-say sequence is a sequence of digit strings defined by the recursive formula:

- **countAndSay(1) = "1"**
- **countAndSay(n) is the way you would "say" the digit string from countAndSay(n1), which is then converted into a different digit string.**

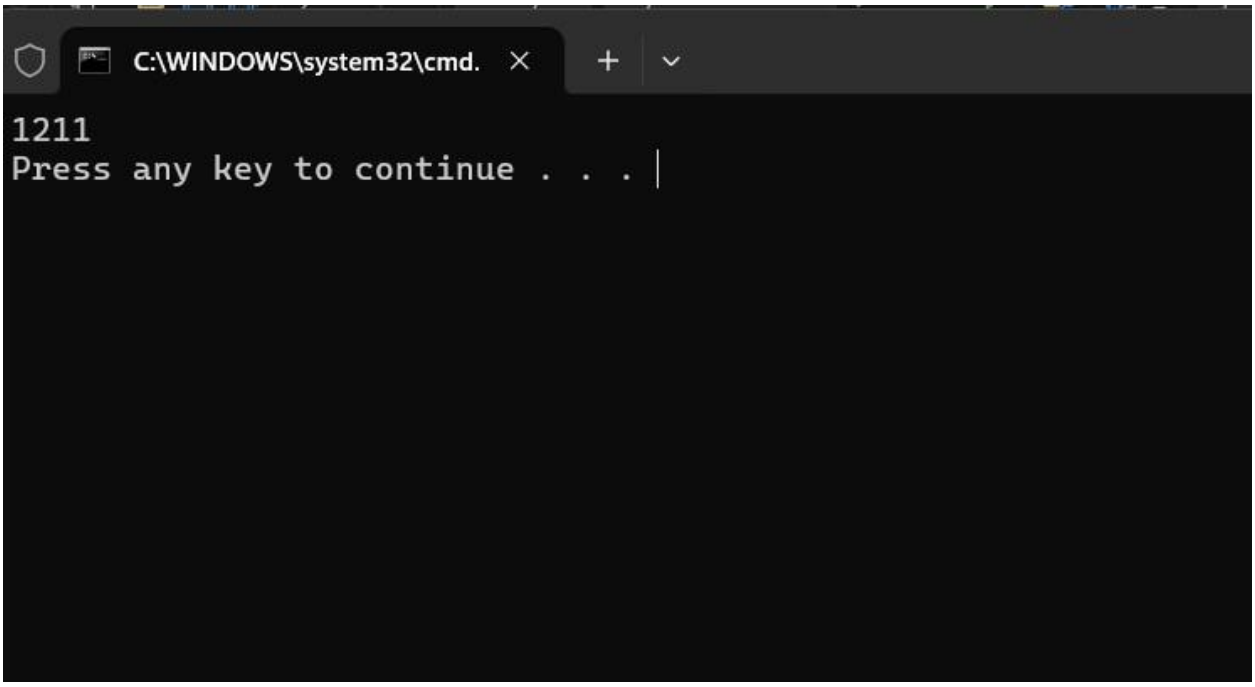
CODE:

```
def countAndSay(n):
if n == 1:        return
"1"

   prev_term = "1"     for _ in range(2, n + 1):        current_term = []        i = 0        while
i < len(prev_term):            count = 1            while i + 1 < len(prev_term) and
prev_term[i] == prev_term[i + 1]:                count += 1                i += 1
          current_term.append(str(count))
current_term.append(prev_term[i])            i += 1
       prev_term = "".join(current_term)

   return prev_term a=4
print(countAndSay(a))
```

OUTPUT:



TIME COMPLEXITY : $O(2^n)$