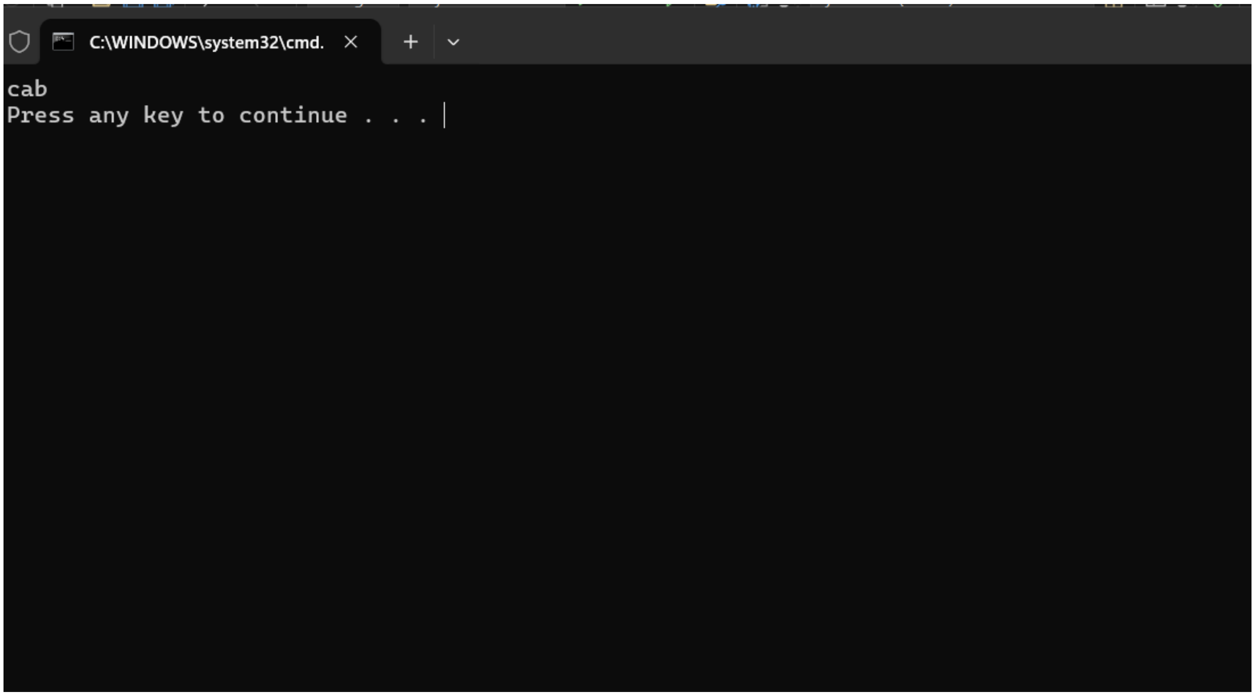
32)Perform String Shifts You are given a string s containing lowercase English letters, and a matrix shift, where shift[i] = [directioni, amounti]: ● directioni can be 0 (for left shift) or 1 (for right shift). ● amounti is the amount by which string s is to be shifted. ● A left shift by 1 means remove the first character of s and append it to the end. ● Similarly, a right shift by 1 means remove the last character of s and add it to the beginning. Return the final string after all operations. Example 1: Input: s = "abc", shift = [[0,1],[1,2]] Output: "cab" Explanation: [0,1] means shift to left by 1. "abc" -> "bca" [1,2] means shift to right by 2. "bca" -> "cab"

CODE:

```
def string_shift(s, shift):
    total_shift = 0
    for direction, amount in shift:
        if direction == 0:
            total_shift -= amount
        else:
            total_shift += amount
    total_shift %= len(s)
    return s[-total_shift:] + s[:-total_shift]

s = "abcdefg"
shift = [[1,1],[1,1],[0,2],[1,3]]
result = string_shift(s, shift)
print(result)
```

OUTPUT:



```
cab
Press any key to continue . . .
```

TIME COMPLEXITY : O(m+n)