Problem Link:

<https://leetcode.com/problems/total-characters-in-string-after-transformations-i/?envType=daily-question&envId=2025-05-13>

Solution:

class Solution {

public:

int lengthAfterTransformations(string s, int t) {

const int m = 1e9 + 7;

vector<long long> c(26, 0);

for(char ch : s)

{

c[ch - 'a']++;

}

for(int k = 0; k < t; ++k)

{

vector<long long> n(26, 0);

for(int i = 0; i < 25; ++i)

{

n[i + 1] = (n[i + 1] + c[i]) % m;

}

n[0] = (n[0] + c[25]) % m;

n[1] = (n[1] + c[25]) % m;

c = n;

}

long long r = 0;

for(int i = 0; i < 26; ++i)

{

r = (r + c[i]) % m;

}

return (int)r;

}

};