Problem Link:

<https://leetcode.com/problems/longest-binary-subsequence-less-than-or-equal-to-k/?envType=daily-question&envId=2025-06-26>

Solution:

class Solution {

public:

int longestSubsequence(string s, int k) {

int n = s.length();

int c = 0;

long long v = 0;

long long p = 1;

for(int i = n - 1; i >= 0; --i)

{

if(s[i] == '0')

{

c++;

}

else

{

if(p <= k && v + p <= k)

{

v += p;

c++;

}

}

if(p <= k)

p <<= 1;

}

return c;

}

};