Problem Link:

<https://leetcode.com/problems/using-a-robot-to-print-the-lexicographically-smallest-string/?envType=daily-question&envId=2025-06-06>

Solution:

class Solution {

public:

string robotWithString(string s) {

int n = s.length();

string r;

vector<char> v(n);

v[n - 1] = s[n - 1];

for(int i = n - 2; i >= 0; --i)

{

v[i] = min(s[i], v[i + 1]);

}

stack<char> t;

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

{

t.push(s[i]);

while(!t.empty() && (i == n - 1 || t.top() <= v[i + 1]))

{

r += t.top();

t.pop();

}

}

return r;

}

};