Problem 2434: Using a Robot to Print the Lexicographically Smallest String

Problem Information

Difficulty: Medium
Acceptance Rate: 62.51%
Paid Only: No
Tags: Hash Table, String, Stack, Greedy

Problem Description

You are given a string `s` and a robot that currently holds an empty string `t`. Apply one of the following operations until `s` and `t` **are both empty** :

* Remove the **first** character of a string `s` and give it to the robot. The robot will append this character to the string `t`. * Remove the **last** character of a string `t` and give it to the robot. The robot will write this character on paper.

Return _the lexicographically smallest string that can be written on the paper._

Example 1:

Input: s = "zza" **Output:** "azz" **Explanation:** Let p denote the written string. Initially p="", s="zza", t="". Perform first operation three times p="", s="", t="zza". Perform second operation three times p="azz", s="", t="".

Example 2:

Input: s = "bac" **Output:** "abc" **Explanation:** Let p denote the written string. Perform first operation twice p="", s="c", t="ba". Perform second operation twice p="ab", s="c", t="". Perform first operation p="ab", s="", t="c". Perform second operation p="abc", s="", t="".

Example 3:

Input: s = "bdda" **Output:** "addb" **Explanation:** Let p denote the written string. Initially p="", s="bdda", t="". Perform first operation four times p="", s="", t="bdda". Perform

second operation four times p="addb", s="", t="".

Constraints:

* `1 <= s.length <= 105` * `s` consists of only English lowercase letters.

Code Snippets

C++:

```
class Solution {
public:
string robotWithString(string s) {

}
};
```

Java:

```
class Solution {
public String robotWithString(String s) {

}
}
```

Python3:

```
class Solution:
def robotWithString(self, s: str) -> str:
```