

# Number following a pattern

Given a pattern containing only I's and D's. I for increasing and D for decreasing. Devise an algorithm to print the minimum number following that pattern. Digits from 1-9 and digits can't repeat.

Example 1:

Input:

D

Output:

21

Explanation:

D is meant for decreasing, so we choose the minimum number among all possible numbers like 21,31,54,87,etc.

Example 2:

Input:

IIDDD

Output:

126543

Explanation:

Above example is self-explanatory,

$1 < 2 < 6 > 5 > 4 > 3$

I - I - D - D - D

Your Task:

You don't need to read input or print anything. Your task is to complete the function `printMinNumberForPattern()` which takes the string `S` and returns a string containing the minimum number following the valid number.

Expected Time Complexity:  $O(N)$

Expected Auxiliary Space:  $O(1)$

Constraints:

$1 \leq \text{Length of String} \leq 8$