Given a string S that **only** contains "I" (increase) or "D" (decrease), let N = S.length.

Return **any** permutation A of [0, 1, ..., N] such that for all i = 0, ..., N-1:

* If S[i] == "I", then A[i] < A[i+1]
* If S[i] == "D", then A[i] > A[i+1]

**Example 1:**

**Input:** "IDID"

**Output:** [0,4,1,3,2]

**Example 2:**

**Input:** "III"

**Output:** [0,1,2,3]

**Example 3:**

**Input:** "DDI"

**Output:** [3,2,0,1]

**Note:**

1. 1 <= S.length <= 10000
2. S only contains characters "I" or "D".