```
class Solution {
  public List<String> letterCasePermutation(String S) {
     List<String> res = new ArrayList<>();
     helper(res, new StringBuilder(), S, 0);
     return res;
  }
  private void helper(List<String> res, StringBuilder sb, String s, int idx) {
     if (sb.length() == s.length()) {
       res.add(sb.toString());
       return;
     char c = s.charAt(idx);
     if (Character.isLetter(c)) {
       sb.append(Character.toUpperCase(c));
       helper(res, sb, s, idx+1);
       sb.deleteCharAt(sb.length()-1);
       sb.append(Character.toLowerCase(c));
       helper(res, sb, s, idx+1);
     } else {
       sb.append(c);
       helper(res, sb, s, idx+1);
     sb.deleteCharAt(sb.length()-1);
  }
```

Given a string S, we can transform every letter individually to be lowercase or uppercase to create another string. Return a list of all possible strings we could create.

```
Examples:
Input: S = "a1b2"
Output: ["a1b2", "a1B2", "A1b2", "A1B2"]

Input: S = "3z4"
Output: ["3z4", "3Z4"]

Input: S = "12345"
Output: ["12345"]
```