|  |  |  |
| --- | --- | --- |
| **B** | STRING PERMUTATION | |
| Input | Standard Input |
| Output | Standard Output |
| Time Limit | 5 seconds |

***Problem Description***

(String permutation) Write a recursive method to print all the permutations of a string. The user need to enter the string which consists of a set of characters.

***Input***

First line of the input contains *T* (1 <= *T* <= 200), the number of test cases. For each test case, there will a string of characters, *L* (1 <= *L* <= 20).

***Output***

For each test case, output a line in the format “Case # x:” where x is the case number (starting with 1), follow by the set of string permutation.

***Sample Input output***

|  |  |
| --- | --- |
| **Input** | **Output** |
| 3  abc  zxyw  p7\* | Case # 1:  abc  acb  bac  bca  cab  cba  Case # 2:  zxyw  zxwy  zyxw  zywx  zwxy  zwyx  xzyw  xzwy  xyzw  xywz  xwzy  xwyz  yzxw  yzwx  yxzw  yxwz  ywzx  ywxz  wzxy  wzyx  wxzy  wxyz  wyzx  wyxz  Case # 3:  p7\*  p\*7  7p\*  7\*p  \*p7  \*7p |