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Given an integer N, you need to output all the numbers that can be made using number 1 to N, one in quantity for each number, from the least number until the largest number. Yes! All the resulting numbers **will have length N** for this problem. For instance if N is 3, then all the numbers that can be made using number 1 to 3 are "123", "132", "213", "231", "312", and "321".

Note that for this problem, you **HAVE TO** use a **recursive solution**.

Format Input
The input begins with an integer T, indicating the number of test cases. In each test case, there is an integer N indicating the maximum digit.

Format Output
For each test case, output all the numbers that can be made from digit 1 to N, from the least number until the largest number.

Constraints
1 <= T <= 10
1 <= N <= 7

Sample Input	Sample Output
3 1 2 3	Case #1: 1 Case #2: 12 21 Case #3: 123 132 213 231 312 321

Note:
It's easier to do this problem **recursively**. Use this problem to understand recursion, so that you won't be having difficulties any more in doing recursive problem.