In Love with Loops

Print all triplets (x, y, z) where x ≤ A, y ≤ B, z ≤ C (0 ≤ A,B,C ≤ 20) and x < y < z in ascending order.

███ triplet (x, y, z) ██████ ███ ██████ x ≤ A, y ≤ B, z ≤ C (0 ≤ A, B, C ≤ 20) ███ x < y < z ████ ████ ██ ██████ ██████ ███
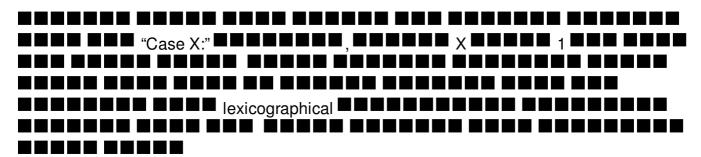
Input

First line contains the number of test cases T (T ≤ 20). Then each of the next T lines contains three integers A, B, C. Range of A, B, and C is stated above.

█████ █████ █████ █████ █████ █████ █████ ████████ T (T≤20). █████ ███████ T ██████ ██████ ████████████ █████ █████ █████ A,B,C █████ ████ █████ ████ ████ ███

Output

For each test case, first print the case number in the following format on a line: "Case X:" where X is the case number starting from 1. Then from the next line, print the triplets, one on each line in lexicographically ascending order. Integers in each triplets must be sorted in ascending order. See sample input output for more details.

███████ █████ ████ ██████ ███ ██████ ███████ ████ ███ "Case X:" █████████, █████ X █████ 1 ███ ████ ███ █████ █████ █████ ██████ ████████ █████ █████ ████ ████ ██ █████ ██████ ████ ███ ███████ ████ lexicographical █████████ █████████ ██████ ████ ███ █████ ███████ ████ █████████ █████ █████

(NB: Lexicographic order – A triplet (a1, b1, c1) is lexicographically smaller than another triplet (a2, b2, c2) if and only if one of the following conditions hold:

██:███: Lexicographic ████ – ████ ████████ (a1, b1, c1) ██████ ████████ (a2, b2, c2) ████ lexicographic █████████ █████ ███ ███ ███ ████ ███ █████ ████ █████ ████ ██████ ████ █████ ██:

(i)   a1 < a2

(ii)   a1 = a2 and b1 < b2

(iii)   a1 = a2 and b1 = b2 and c1 < c2)

Example

Input:

```
3
1 1 2
3 2 3
4 4 4
```

Output:

```
Case 1:
0 1 2
Case 2:
0 1 2
0 1 3
0 2 3
1 2 3
Case 3:
0 1 2
0 1 3
0 1 4
0 2 3
0 2 4
0 3 4
1 2 3
1 2 4
1 3 4
2 3 4
```