

# I Robot

Boda, Morsy, Anas and Aly are making Robot for their GP ... this robot is doing a lot of things, it can go to any place and discover everything by itself, it has fantastic Artificial intelligence, there is a small problem in this robot, they want the robot to take Decimal number and change it to binary number .. This task is very easy so you will do it to fix this problem.

## Input

The first line of input is the number of cases T. For each test case there is an integer in each line denotes the decimal number. The input numbers are not smaller than 0 and are not greater than  $2^{32}$

## Output

For each line of input, print "Case\_#i:\_X" where "X" is the binary number, "i" is the number of the test case (starting with 1) and "\_" is white space. the number of bits must be divisible by 4, and after every 4 bits there is "," except after last bit. Each output should be in a separate line.

### Input:

```
4
0
1
100
10000
```

### Output:

```
Case #1: 0000
Case #2: 0001
Case #3: 0110,0100
Case #4: 0010,0111,0001,0000
```