

Fibo String

Jojo is learning a series called Fibonacci series where fib[n] = fib[n-1] + fib[n-2]. Jojo wondered what if this Fibonacci series was applied to characters, where S[n] = S[n-1] + S[n-2]. For example if Jojo has S[0] = a and S[1] = b then S[2] = ba, S[3] = bab, S[4] = babba and so on.

Format Input

Inputs start with integer T which is the number of test cases. The next T line contains the integer n, which is the n-th Fibonacci sequence in question followed by two characters S[0] and S[1]. S[0] and S[1] is guaranteed to be only 1 alphabetical letter.

Format Output

The answer begins with the format "Case #X: S[n]" where X is the number of test cases and S[n] is the n-th order Fibonacci value.

Constraints

- $1 \le T \le 100$
- $1 \le n \le 15$

Sample Input 1 (standard input)

3 a b 3 a b 4 a b

Sample Output 1 (standard output)

Case #1: ba Case #2: bab Case #3: babba

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Sample Input 2 (standard input)

3 2 c d 4 a a 2 b b

Sample Output 2 (standard output)

Case #1: dc
Case #2: aaaaa
Case #3: bb



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Jojo sedang belajar sebuah deret yang disebut dengan deret fibonacci dimana fib[n] = fib[n-1] + fib[n-2]. Jojo penasaran bagaimana jika deret fibonacci ini diterapkan kepada karakter, dimana S[n] = S[n-1] + S[n-2]. Contohnya jika Jojo memiliki S[0] = a dan S[1] = b maka S[2] = ba, S[3] = bab, S[4] = babba dan seterusnya.

Format Input

Input diawali dengan bilangan bulat T yaitu banyaknya kasus uji. T baris berikutnya berisi integer n, yaitu urutan fibonacci ke-n yang ditanya diikuti dengan dua buah karakter S[0] dan S[1]. S[0] dan S[1] dijamin hanya berupa 1 buah huruf alfabet.

Format Output

Jawaban diawali dengan format "Case #X: S[n]" di mana X adalah jumlah kasus uji dan S[n] adalah nilai fibonacci urutan ke-n.

Constraints

- $1 \le T \le 100$
- $1 \le n \le 15$

Sample Input 1 (standard input)

3 a b 3 a b 4 a b

Sample Output 1 (standard output)

Case #1: ba Case #2: bab Case #3: babba

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Sample Input 2 (standard input)

3 2 c d 4 a a 2 b b

Sample Output 2 (standard output)

Case #1: dc
Case #2: aaaaa
Case #3: bb



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