

## Problem A. DNA Storage

Time limit	500 ms
Code length Limit	50000 B
OS	Linux

For encoding an even-length binary string into a sequence of **A**, **T**, **C**, and **G**, we iterate from **left to right** and replace the characters as follows:

- **00** is replaced with **A**
- **01** is replaced with **T**
- **10** is replaced with **C**
- **11** is replaced with **G**

Given a binary string  $S$  of length  $N$  ( $N$  is even), find the encoded sequence.

### Input Format

- First line will contain  $T$ , number of test cases. Then the test cases follow.
- Each test case contains two lines of input.
- First line contains a single integer  $N$ , the length of the sequence.
- Second line contains binary string  $S$  of length  $N$ .

### Output Format

For each test case, output in a single line the encoded sequence.

**Note:** Output is case-sensitive.

### Constraints

- $1 \leq T \leq 100$
- $2 \leq N \leq 10^3$
- $N$  is even.
- Sum of  $N$  over all test cases is at most  $10^3$ .
- $S$  contains only characters **0** and **1**.

**Sample 1**

Input	Output
4 2 00 4 0011 6 101010 4 1001	A AG CCC CT

**\*\*Test case 1:\*\*** Based on the rules `00` is replaced with `A`.

**Test case 2:** Based on the rules `00` is replaced with `A`. Similarly, `11` is replaced with `G`. Thus, the encoded sequence is `AG`.

**Test case 3:** The first two characters are `10` which is encoded as `C`. Similarly, the next two characters `10` are encoded as `C` and the last two characters `10` are encoded as `C`. Thus, the encoded string is `CCC`.

**Test case 4:** The first two characters are `10` which is encoded as `C`. Similarly, the next two characters `01` are encoded as `T`. Thus, the encoded string is `CT`.