

Problem 2: All About That Base

7 Points

Problem ID: dna

Rank: 1

Introduction

You are working as an unpaid lab intern in the genetic engineering division of Aperture Laboratories. Due to your diligent work ethic, you have completed all of your assigned work before your lunch break! However, your evil boss decides to assign you busy work, forcing you to manually analyze DNA strands until your shift is over! DNA is composed of two polynucleotide chains, each of which contains nitrogenous bases of type A, T, C, or G. Each base has its respective pair, with A pairing with T and C pairing with G. You don't want to spend the rest of the day staring at DNA strands, so you need to come up with a solution quick!

Your task is to create a DNA conversion program that will convert each base in a polynucleotide chain to its respective base pair.

Program Input

The first line of the input from STDIN will contain a positive integer T denoting the number of number of test cases that follow. Each test case will have the following input:

- A single line containing a string of DNA bases of length n , each of type A, T, C, or G

Example Input:

```
5
AAAATA
CGATAGAAGCTA
C
ATCGTAGCTGGGGAT
GGGGGGGGG
```

Program Output

For each test case, your program should output the respective polynucleotide chain that pairs with the input chain.

- Your output should correspond to the following pairs: A to T and C to G.

Example Output:

```
TTTTAT
GCTATCTTCGAT
G
TAGCATCGACCCCTA
CCCCCCCCC
```

Problem Constraints

$T \leq 1000$

$1 \leq n \leq 500$

The input chain will be entirely capitalized.

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