

Problem B DNA Decoder

Time limit: 3 seconds

Memory limit: 1024 megabytes

Problem Description

Teacher Whale has been working on a DNA-to-RNA transcription experiment, and everything was going well—until his assistant Jimmy made a critical mistake. Jimmy confused DNA transcription with DNA base pairing, and instead of transcribing the original DNA strand into RNA, he mistakenly produced the complementary DNA strand.

To make matters worse, time is running out and the experiment results are due soon! There's no time to redo everything manually. Teacher Whale needs your help!

Your task is to correctly transcribe the given DNA strands into RNA sequences.

In DNA, the base pairing rules are:

$$A \leftrightarrow T \quad C \leftrightarrow G$$

When DNA is transcribed into RNA (using the template strand), the rules are:

$$A \rightarrow U \quad T \rightarrow A \quad C \rightarrow G \quad G \rightarrow C$$

Input Format

Your program is to read from standard input. The input consists of T test cases, where $1 \leq T \leq 1,000$. The number of test cases T is given in the first line of the input. Each test case contains a string s , where $4 \leq |s| \leq 1,000$.

Output Format

Your program should write to standard output. For each test case, output a single line containing the correctly transcribed RNA sequence.

Technical Specification

- $1 \leq T \leq 1,000$
- $4 \leq |s| \leq 1,000$

Sample Input 1

```
2
ATCG
GCTATC
```

Sample Output 1

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UAGC
CGAUAG
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