Complementary Strand in a DNA

You are given the sequence of Nucleotides of one strand of DNA through a string S of length N. S contains the character A, T, C, and G only.

Chef knows that:

- A is complementary to T.
- T is complementary to A.
- C is complementary to G.
- G is complementary to C.

Using the string S, determine the sequence of the complementary strand of the DNA.

Input Format

- First line will contain T, number of test cases. Then the test cases follow.
- First line of each test case contains an integer N - denoting the length of string S.
- Second line contains N characters denoting the string S.

Output Format

For each test case, output the string containing N characters - sequence of nucleotides of the complementary strand.

Constraints

- $1 \leq T \leq 100$
- $1 \leq N \leq 100$
- S contains `A`, `T`, `C`, and `G` only

Sample 1:

Input	Output
4 4 ATCG 4 GTCC 5 AAAAA 3 TAC	TAGC CAGG TTTTT ATG

Explanation:

Test case 1**:** Based on the rules, the complements of `A`, `T`, `C`, and `G` are `T`, `A`, `G`, and `C` respectively. Thus, the complementary string of the given string `ATCG` is `TAGC`.

Test case 2**:** Based on the rules, the complements of `G`, `T`, and `C` are `C`, `A`, and `G` respectively. Thus, the complementary string of the given string `GTCC` is `CAGG`.

Test case 3: Based on the rules, the complement of `A` is `T`. Thus, the complementary string of the given string `AAAAA` is `TTTTT`.

Test case 4: Based on the rules, the complements of `T`, `A`, and `C` are `A`, `T`, and `G` respectively. Thus, the complementary string of the given string `TAC` is `ATG`.