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Contest Code: JUNE222D Problem Code: DNASTRAND



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:

- ullet 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

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

- $\bullet \quad 1 \leq T \leq 100$
- $1 \le N \le 100$
- $\bullet \quad S \text{ contains A, T, C, and G only} \\$

Sample Input 1 🖆

4

4

ATCG

4

GTCC

5

AAAAA

3

TAC

Sample Output 1 省

TAGC

CAGG

TTTTT

 ATG

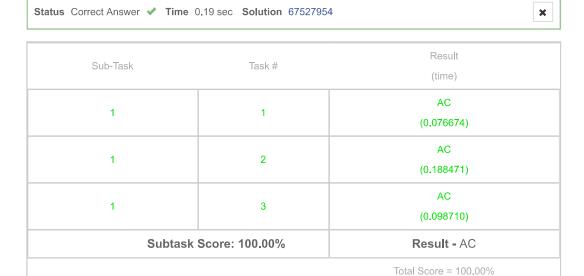
Explanation

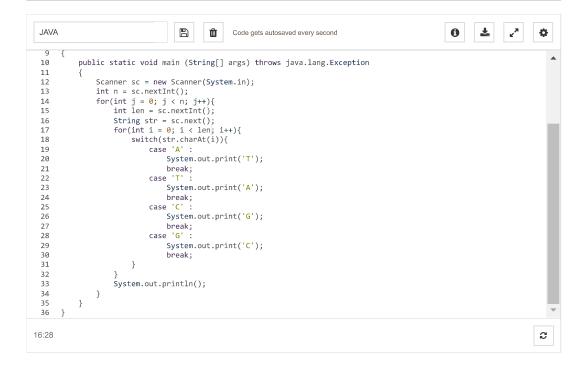
Test case 1: Based on the rules, the complements of A, T, C, and G are T, A, G, and C respectively. Thus, the complementary string of the given string ATCG is TAGC.

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.

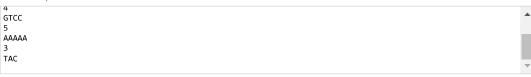
Test case 4: Based on the rules, the complements of T, A, and C are A, T, and G respectively. Thus, the complementary string of the given string TAC is ATG.



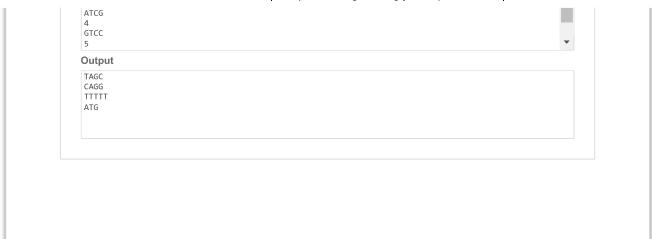


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