Translating DNA (to RNA) into Protein

Problem

The 20 commonly occurring amino acids are abbreviated by using 20 letters from the English alphabet (all letters except for B, J, O, U, X, and Z). **Protein strings** are constructed from these 20 symbols. Henceforth, the term **genetic string** will incorporate protein strings along with DNA strings and RNA strings.

The **RNA codon table** dictates the details regarding the encoding of specific codons into the amino acid alphabet.

Given:

An DNA string s (of length at most 10 kbp).

Return:

The protein string encoded by s.

HINT:

Transcribe the given DNA string into RNA before translating it into protein sequence

Use the codon table (Which is provided in this document as a python dictionary) for translating it to the protein sequence - to save you some time typing the whole codon table ;)

CODON TABLE DICTIONARY:

```
codon_table = {'AUA':'I', 'AUC':'I', 'AUU':'I', 'AUG':'M',
        'ACA':'T', 'ACC':'T', 'ACG':'T', 'ACU':'T',
        'AAC':'N', 'AAU':'N', 'AAA':'K', 'AAG':'K',
        'AGC':'S', 'AGU':'S', 'AGA':'R', 'AGG':'R',
        'CUA':'L', 'CUC':'L', 'CUG':'L', 'CUU':'L',
        'CCA':'P', 'CCC':'P', 'CCG':'P', 'CCU':'P',
        'CAC':'H', 'CAU':'H', 'CAA':'Q', 'CAG':'Q',
        'CGA':'R', 'CGC':'R', 'CGG':'R', 'CGU':'R',
        'GUA':'V', 'GUC':'V', 'GUG':'V', 'GUU':'V',
        'GCA':'A', 'GCC':'A', 'GCG':'A', 'GCU':'A',
        'GAC':'D', 'GAU':'D', 'GAA':'E', 'GAG':'E',
        'GGA':'G', 'GGC':'G', 'GGG':'G', 'GGU':'G',
        'UCA':'S', 'UCC':'S', 'UCG':'S', 'UCU':'S',
        'UUC':'F', 'UUU':'F', 'UUA':'L', 'UUG':'L',
        'UAC':'Y', 'UAU':'Y', 'UAA':'_', 'UAG':'_',
        'UGC':'C', 'UGU':'C', 'UGA':'_', 'UGG':'W'}
```

Sample Dataset

```
ATGGCCATGGCGCCCAGAACTGAGATCAATAGTACCCGTATTAACGGGTGA
```

Sample Output

```
MAMAPRTEINSTRING
```