

1L Implement PatternToNumber

PatternToNumber Problem

Convert a DNA string to a number.

Input: A DNA string *Pattern*.

Output: PATTERNTONUMBER(*Pattern*).

$$\text{GAC} \longrightarrow \overset{\text{G}}{(2*4^2)} + \overset{\text{A}}{(0*4^1)} + \overset{\text{C}}{(1*4^0)} \longrightarrow 33$$

Formatting

Input: A DNA string *Pattern*.

Output: An integer representing the output of PATTERNTONUMBER(*Pattern*).

Constraints

- The length of *Pattern* will be between 1 and 10^2 .
- *Pattern* will be a DNA string.

Test Cases

Case 1

Description: The sample dataset is not actually run on your code.

Input:

AGT

Output:

11

Case 2

Description: *Pattern* is made up of only one character.

Input:

CCC

Output:

21

Case 3

Description: *Pattern* is long, but is 'A'-dense.

Input:

AAAAAAAAAAG

Output:

2

Case 4

Description: *Pattern* has a length of 1.

Input:

T

Output:

3

Case 5

Description: A larger dataset of the same size as that provided by the randomized autograder. Check input/output folders for this dataset.

