

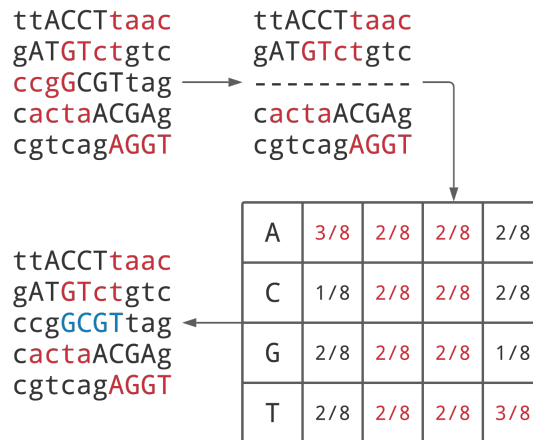
2G Implement GibbsSampler

Gibbs Sampler Problem

Implement *GibbsSampler*.

Input: A collection of DNA strings *Dna*, and integers *k*, *t*, and *N*.

Output: The strings resulting from running `GIBBSAMPLER(Dna, k, t, N)` with 20 random starts. Remember to use pseudocounts!



Formatting

Input: Space-separated integers *k*, *t*, and *N*, followed by a newline-separated collection of DNA strings *Dna*.

Output: A space-separated list of strings containing the strings resulting from running `GIBBSAMPLER(Dna, k, t, N)` with 20 random starts. Remember to use pseudocounts!

Constraints

- The integer *k* will be between 1 and 10^2 .
- The integer *t* will be between 1 and 10^2 .
- The integer *N* will be between 1 and 10^4 .
- The number of strings in *Dna* will be between 1 and 10^2 .
- The length of each string in *Dna* will be between 1 and 10^3 .
- Each string in *Dna* will be a DNA string.

Test Cases

Case 1

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

Input:

8 5 100

CGCCCCTCTCGGGGGTGTTCAGTAAACGGCCA GGGCGAGGTATGTGTAAGTGCCAAGGTGCCAG
TAGTACCGAGACCGAAAGAAGTATACAGGCGT TAGATCAAGTTTCAGGTGCACGTCGGTGAACC
AATCCACCAGCTCCACGTGCAATGTTGGCCTA

Output:

TCTCGGGG CCAAGGTG TACAGGCG TTCAGGTG TCCACGTG

Case 2

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