

We now redefine the Frequent Words Problem to account for both mismatches and reverse complements. Recall that $\overline{Pattern}$ refers to the reverse complement of $Pattern$.

Frequent Words with Mismatches and Reverse Complements Problem: Find the most frequent k -mers (with mismatches and reverse complements) in a DNA string.

Input: A DNA string $Text$ as well as integers k and d .

Output: All k -mers $Pattern$ maximizing the sum $Count_d(Text, Pattern) + Count_d(Text, \overline{Pattern})$ over all possible k -mers.

CODE CHALLENGE: Solve the Frequent Words with Mismatches and Reverse Complements Problem.

Sample Input:

ACGTTGCATGTCGCATGATGCATGAGAGCT
4 1

Sample Output:

ATGT ACAT