1G Compute the Hamming Distance Between Two Strings

Hamming Distance Problem
Compute the Hamming distance between two strings.

Input: Two strings of equal length.
Output: The Hamming distance between these strings.

Formatting

Input: Two DNA strings $Text_1$ and $Text_2$.
Output: An integer representing the Hamming distance between $Text_1$ and $Text_2$.

Constraints

- The length of $Text_1$ and $Text_2$ will be between 1 and 10^4.
- $Text_1$ and $Text_2$ will have equal lengths.
- $Text_1$ and $Text_2$ will be DNA strings.

Test Cases

Case 1

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

Input:
```
GGGCCGTTGGT
GGACCGTTGAC
```

Output:
```
3
```

Case 2

Description: This dataset checks if your code isn't keeping count (i.e. returns 0 when the answer is clearly nonzero) or if your code returns a negative value, which is impossible.

Input:
```
AAAA
TTTT
```

Output:
```
4
```

Case 3

Description: This dataset checks if your code is finding Edit Distance (which would be 2) instead of Hamming Distance.

Input:
```
ACGTACGT
TACGTACG
```

Output:
```
8
```

Case 4

Description: This dataset checks if your code is returning the number of matches (2) instead of the number of mismatches (6).

Input:

```
ACGTACGT
CCCCCCCC
```

Output:

```
6
```

Case 5

Description: This dataset checks if your code works on a dataset where the two input strings have no matches.

Input:

```
ACGTACGT
TGCATGCA
```

Output:

```
8
```

Case 6

Description: A larger dataset of the same size as that provided by the randomized autograder.