

Assignment - 02

Total Marks: 100

Deadline: 08/08/2025

Topic: String Manipulation in Python

1. Write a Python program to count the total number of words in a given sentence.
(Marks: 5)
2. Write a Python program to count the frequency of each character in a given string.
(Marks: 5)
3. Write a Python program to count how many vowels and consonants are present in a sentence. **(Marks: 5)**
4. Write a Python program to check if a word or sentence is a palindrome, ignoring punctuation and spaces. **(Marks: 5)**
5. Write a Python program to count the frequency of each word in a paragraph.
(Marks: 5)
6. Write a Python program to remove common English stopwords (like "is," "the," "a," and "an") from a given string. **(Marks: 5)**
7. Write a Python program to count the number of unique words in a sentence.
(Marks: 5)
8. Write a Python program to replace a specific word in a sentence with another word.
Input: A sentence, target word, and replacement word.
Output: Modified sentence with the replacement. **(Marks: 5)**
9. Write a Python program to find the most frequent word in a sentence or paragraph.
(Marks: 5)
10. Write a Python program to convert a sentence into title case format (each word's first letter capitalized). **(Marks: 5)**

Theory Question:

1. What is a String in Programming? (Marks: 10)
2. Difference Between String, Word, and Sentence in Text Processing (Marks: 10)
3. What is String Immutability, and Why Does It Matter? (Marks: 10)
4. What Are Common String Operations Used in NLP? (Marks: 10)
5. What Is Tokenization, and How Is It Related to Strings? (Marks: 10)