

Question 10 - Write a program to count the number of verbs, nouns, pronouns, and adjectives in a given particular phrase or paragraph, and return their respective count as a dictionary.

Note -

1. Write code comments wherever required for code
2. You have to write at least 2 additional test cases in which your program will run successfully and provide an explanation for the same.

Ans:

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In [1]: import re

def count_pos_tags(text):
    # Define regular expressions for matching different parts of speech
    noun_pattern = re.compile(r'\b[A-Za-z]+[s]?\\b', re.IGNORECASE)
    pronoun_pattern = re.compile(r'\b(I|me|my|mine|you|your|yours|he|him|his|she|her|hers|it|its|we|us|our|ours|
verb_pattern = re.compile(r'\b[A-Za-z]+(?:s|ed|ing)?\\b', re.IGNORECASE)
    adjective_pattern = re.compile(r'\b[A-Za-z]+\\b', re.IGNORECASE)

    # Initialize counts
    noun_count = 0
    pronoun_count = 0
    verb_count = 0
    adjective_count = 0

    # Find matches for each part of speech
    noun_matches = re.findall(noun_pattern, text)
    pronoun_matches = re.findall(pronoun_pattern, text)
    verb_matches = re.findall(verb_pattern, text)
    adjective_matches = re.findall(adjective_pattern, text)

    # Count the matches
    noun_count = len(noun_matches)
    pronoun_count = len(pronoun_matches)
    verb_count = len(verb_matches)
    adjective_count = len(adjective_matches)

    # Create and return the dictionary
    pos_counts = {
        'nouns': noun_count,
        'pronouns': pronoun_count,
        'verbs': verb_count,
        'adjectives': adjective_count
    }
    return pos_counts

# Test case 1
text = "I love to eat pizza."
result = count_pos_tags(text)
print(result)

#Test case 2
text = "The cat chased the mouse. It was quick and agile. The dog barked loudly."
result = count_pos_tags(text)
print(result)

{'nouns': 5, 'pronouns': 1, 'verbs': 5, 'adjectives': 5}
{'nouns': 14, 'pronouns': 1, 'verbs': 14, 'adjectives': 14}
```

In []:

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