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def longest word(sentence):
    words = sentence.split()
    longest = max(words, key=len)
    return longest
def char_frequency(sentence):
    freq = {}
    for char in sentence:
       if char.isalpha():
            char = char.lower()
            freq[char] = freq.get(char, 0) + 1
    return freq
def is_palindrome(word):
    return word == word[::-1]
def first_appearance(substring, sentence):
    return sentence.find(substring)
def word_count(sentence):
    words = sentence.split()
    word_count = {}
    for word in words:
       word count[word] = word count.get(word, 0) + 1
   return word count
def print_menu():
   print("Menu:")
   print("1. Find Longest Word")
   print("2. Character Frequency")
   print("3. Check Palindrome")
   print("4. Find First Appearance of Substring")
    print("5. Count Word Occurrences")
   print("6. Quit")
sentence = input("Enter a sentence: ")
while True:
   print menu()
    choice = input("Enter your choice (1-6): ")
    if choice == '1':
       print(f"Longest Word: {longest word(sentence)}")
    elif choice == '2':
        print(f"Character Frequency: {char frequency(sentence)}")
    elif choice == '3':
        word = input("Enter a word: ")
        print(f"Is '{word}' a Palindrome? {'Yes' if is_palindrome(word) else 'No'}")
    elif choice == '4':
        substring = input("Enter a substring: ")
        print(f"First Appearance of '{substring}': {first appearance(substring, sentence)}")
    elif choice == '5':
       print(f"Word Count: {word_count(sentence)}")
    elif choice == '6':
        break
       print("Invalid choice. Please enter a number from 1 to 6.")
```