Exercises

1. Write a Python program to find the frequency of each word in a given sentence.
2. Write a Python program to reverse a string word by word.
3. Write a Python program to check if a given string is a palindrome or not.
4. Write a Python program to find the first occurrence of a word in a given string.
5. Write a Python program to remove all the vowels from a string.
6. Write a Python program to count the number of words in a given sentence.
7. Write a Python program to capitalize the first letter of each word in a given sentence.
8. Write a Python program to sort the words in a given sentence in alphabetical order.
9. Write a Python program to find the longest word in a given sentence.
10. Write a Python program to find the most frequent word in a given sentence.

Exercises and Solution

1. Write a Python program to find the frequency of each word in a given sentence.

```
sentence = "Hello world hello"
words = sentence.split()
word_count = {}
for word in words:
    if word in word_count:
        word_count[word] += 1
    else:
        word_count[word] = 1
for word, count in word_count.items():
    print(f"{word}: {count}")
```

2. Write a Python program to reverse a string word by word.

```
string = "Hello world"
words = string.split()
reversed_words = words[::-1]
reversed_string = " ".join(reversed_words)
print(reversed_string)
```

3. Write a Python program to check if a given string is a palindrome or not.

```
string = "racecar"
if string == string[::-1]:
    print("The string is a palindrome")
else:
    print("The string is not a palindrome")
```

4. Write a Python program to find the first occurrence of a word in a given string.

```
string = "Hello world hello"
word = "hello"
if word in string:
    index = string.index(word)
    print(f"The word '{word}' first occurs at index {index}")
else:
    print(f"The word '{word}' does not occur in the string")
```

5. Write a Python program to remove all the vowels from a string.

```
string = "Hello world"
vowels = "aeiou"
no_vowels = ""
for char in string:
    if char.lower() not in vowels:
        no_vowels += char
print(no_vowels)
```

6. Write a Python program to count the number of words in a given sentence.

```
sentence = "Hello world"
words = sentence.split()
print(f"There are {len(words)} words in the sentence")
```

7. Write a Python program to capitalize the first letter of each word in a given sentence.

```
sentence = "hello world"
capitalized_words = []
for word in sentence.split():
```

```
    capitalized_words.append(word.capitalize())
capitalized_sentence = " ".join(capitalized_words)
print(capitalized_sentence)
```

8. Write a Python program to sort the words in a given sentence in alphabetical order.

```
sentence = "hello world"
sorted_words = sorted(sentence.split())
sorted_sentence = " ".join(sorted_words)
print(sorted_sentence)
```

9. Write a Python program to find the longest word in a given sentence.

```
sentence = "Hello world, how are you doing today?"
longest_word = max(sentence.split(), key=len)
print(f"The longest word is '{longest_word}'")
```

10. Write a Python program to find the most frequent word in a given sentence.

```
sentence = "Hello world hello"
word_count = {}
for word in sentence.split():
    if word in word_count:
        word_count[word] += 1
    else:
        word_count[word] = 1
most_frequent_word = max(word_count, key=word_count.get)
print(f"The most frequent word is '{most_frequent_word}'")
```