Assignment Solutions : Exploring Strings in Python

Question 1: Reverse a String

```
user_input = input("Enter a string: ")
reversed_string = user_input[::-1]
print("Reversed string:", reversed_string)
```

Question 2: Count Vowels and Consonants

```
user_input = input("Enter a string: ")
vowels = 0
consonants = 0
for char in user_input:
    if char.isalpha():
        if char.lower() in 'aeiou':
            vowels += 1
        else:
            consonants += 1
print("Vowels:", vowels)
print("Consonants:", consonants)
```

Question 3: Uppercase and Lowercase Conversion

```
user_input = input("Enter a string: ")
uppercase = user_input.upper()
lowercase = user_input.lower()
print("Uppercase:", uppercase)
print("Lowercase:", lowercase)
```

Question 4: Replace Substring

```
user_input = input("Enter a string: ")
old_substring = input("Enter the substring to replace: ")
new_substring = input("Enter the replacement substring: ")
modified_string = user_input.replace(old_substring, new_substring)
print("Modified string:", modified_string)
```

Question 5: Count Substring Occurrences

```
user_input = input("Enter a string: ")
substring = input("Enter the substring to count: ")
count = user_input.count(substring)
print("Occurrences:", count)
```

Question 6: Check Palindrome

```
user_input = input("Enter a string: ")
user_input = user_input.lower()  # Ignore case
reversed_input = user_input[::-1]
if user_input == reversed_input:
    print("Palindrome")
else:
    print("Not a Palindrome")
```

Question 7: Extract First Name

```
full_name = input("Enter a full name (First Last): ")
parts = full_name.split()
if len(parts) >= 2:
    first_name = parts[0]
    print("First Name:", first_name)
else:
    print("Invalid input. Please enter a full name in the format 'First Last'.")
```

Question 8: Find Substring Location

```
user_input = input("Enter a string: ")
substring = input("Enter the substring to find: ")
index = user_input.find(substring)
if index != -1:
    print("Substring found at index:", index)
else:
    print("Not Found")
```