**ASSIGNMENT -2**

**Part 1: Basic Slicing**

**1. Introduction to Slicing:**

**a. Given a string s = "Hello, World!", slice and print the following:**

**i. The entire string.**

S = "Hello, World!"

print(S)

**ii. The first 5 characters.**

Test = S[:6]

print(Test)

**iii. The last 5 characters.**

Test = S[-5:]

print(Test)

**iv. The string excludes the first and last characters.**

Test = S[1:12]

print(Test)

**v. Every second character in the string.**

Test = S[::2]

print(Test)

**2. Slicing with Negative Indices:**

**a. Use negative indices to slice and print the following from the string**

**1. The last 3 characters.**

Test = S[-3:]

print(Test)

**2. All characters except the last 2.**

Test = S[:-2]

print(Test)

**3. The string reversed.**

Test = S[::-1]

print(Test)

**Part 2: Advanced Slicing**

**1. Slicing Substrings:**

**a. Given a string sentence = "The quick brown fox jumps over the lazy**

**dog", slice and print the following:**

Lets assign S = "The quick brown fox jumps over the lazy dog"

**i. The word "quick".**

Test = S[4:9]

print(Test)

**ii. The word "lazy".**

Test = S[-8:-4]

print(Test)

**iii. The words "brown fox jumps"**

Test = S[10:26]

print(Test)

**2. Step Slicing:**

**a. Use step slicing to print the following from the string s:**

**i. Every third character.**

Test = S[0:43:3]

print(Test)

**ii. Every third character starting from the second character.**

Test = S[2:43:3]

print(Test)

**iii. The string reversed, stepping by 2.**

**Part 3: Practical Application**

**1. Extracting Information:**

**a. Given a string data = "2024-09-01,Sunny,25°C", extract and print**

**the following:**

Let’s assign Q = "2024-09-01,Sunny,25°C"

**i. The date.**

Test = Q[:10]

print(Test)

**ii. The weather condition.**

Test = Q[11:16]

print(Test)

**iii. The temperature**

Test = Q[-4:]

print(Test)

**2. Reformatting Strings:**

**i. Given a string phone\_number = "(123) 456-7890", reformat it to ‘123-456-7890’**

Let PN = "(123) 456-7890"

print(PN.replace(')','-').replace('(',' '))

**Part 4: Questions based on string methods**

**1. Upper and Lower Case Conversion:**

**i. Given a, World string s = "Hello!", perform the following:**

**b. Convert the string to all uppercase letters.**

s = "Hello!"

print(s.upper())

**c. Convert the string to all lowercase letters.**

s = "Hello!"

print(s.lower())

**d. Convert the string to title case.**

print(s.title())

**e. Capitalize the first letter of the string.**

s = "hello!"

print(s.capitalize())

**2. Finding Substrings:**

**s = "The quick brown fox jumps over the lazy dog"**

**perform the following:**

**a. Find the position of the substring "fox".**

print(s.find('fox')) = 16

**b. Check if the substring "cat" is in the string.**

print(s.find('cat')) = -1

**3. Replacing Substrings:**

**s = "The quick brown fox jumps over the lazy dog",**

**perform the following:**

**a. Replace "fox" with "cat".**

print(s.replace('fox','cat'))

**b. Replace all spaces with underscores.**

print(s.replace(' ','\_'))

**c. Split the string into a list of words.**

print(s.split())

**d. Split the string by the letter 'o'.**

print(s.split('o'))

**4.Joining Strings:**

**Given a list of words**

**words = ["The", "quick", "brown", "fox"],**

**perform the following:**

**a. Join the words with spaces.**

print(' '.join(words))

**b. Join the words with hyphens**

print('-'.join(words))