	SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGG.	**LABORATORY MANUAL**
	PRACTICAL EXPERIMENT INSTRUCTION SHEET	
	EXPERIMENT TITLE : Write a program to create, concatenate and print a string and accessing sub-string from a given string	
EXPERIMENT NO. : **SSGMCE/WI/IT/01/3IT09/01**	ISSUE NO. : 00	ISSUE DATE : 30.07.2023
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1.0) AIM: Write a program to create, concatenate and print a string and accessing sub-string from a given string.

2.0) SCOPE: This lab exercise focuses on introducing students to string manipulation in Python. The scope encompasses creating, concatenating, printing strings, and accessing sub-strings. The objective is to provide hands-on experience with string operations

3.0) FACILITIES/ APPARATUS:

1. Python development environment (e.g., IDLE)
2. Input mechanism (keyboard)
3. Computer with Python installed

4.0) THEORY:

Strings are fundamental data types in Python used to store sequences of characters. This comprehensive explanation delves into the program's execution, functions, data types, syntax, examples, and logical flow:

Program Explanation:

1. Introduction to Strings: In Python, strings are sequences of characters enclosed within single or double quotes. Strings are versatile and support various operations.
2. Creating Strings: The program begins by creating two strings: string1 with the content "Hello" and string2 with the content " World".
3. Concatenating Strings: The + operator is used to concatenate string1 and string2 to form the full_string.
4. Displaying Concatenated String: The concatenated string is displayed using the print() function.
5. Accessing Sub-strings: Sub-strings are accessed using indexing and slicing. In this example, the sub-string "World" is accessed from the full_string.

6. Displaying Sub-string: The accessed sub-string is displayed using the print() function.

Functions/Data Types Used - Explanation with Example:

1. String Concatenation: The + operator is used to concatenate two strings. Syntax: string1 + string2. Example: full_string = string1 + string2.

2. String Indexing and Slicing: Strings can be accessed using indexing and slicing. Syntax: string[start:end]. Example: substring = full_string[6:11] accesses the sub-string "World".

Example Syntax and Description:

```
string1 = "Hello"  # Creating a string
string2 = " World"  # Creating another string
full_string = string1 + string2  # Concatenating strings
print("Concatenated String:", full_string)  # Displaying concatenated string
substring = full_string[6:11]  # Accessing sub-string "World"
print("Sub-string:", substring)  # Displaying sub-string
```

4.2) Explanation of Execution:

1. Two strings, string1 and string2, are created.

2. The + operator concatenates string1 and string2, forming the full_string.

3. The concatenated string is displayed.

4. The sub-string "World" is accessed using indexing and slicing.

5. The accessed sub-string is displayed.

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Program

```
# Create a string
string1 = "Hello"

# Concatenate strings
string2 = " World"
full_string = string1 + string2

# Print the concatenated string
print("Concatenated String:", full_string)

# Accessing sub-strings
substring = full_string[6:11]

# Print the sub-string
print("Sub-string:", substring)
```

5.0) Conclusion:

This lab experiment imparts practical skills in string manipulation. Students learn to create, concatenate, and print strings, as well as access sub-strings. The exercise underscores the significance of string operations in programming, fostering hands-on proficiency and enhancing understanding of fundamental string concepts in Python.