Python: Strings

Today in my Python Full Stack Training at Codegnan, I explored one of the most important concepts in Python: Strings.

## What is a String?

A string in Python is a sequence of characters enclosed in single quotes (' '), double quotes (" "), or triple quotes (''' ''').

Example:

text1 = 'Hello'  
text2 = "World"  
text3 = '''Python'''

## String Operations:

Python allows many operations on strings:

**1. Concatenation (+) → Joining strings**

a = "Hello"  
b = "World"  
print (a + " " + b) # Hello World

**2. Repetition (\*) → Repeating strings**

text = "Hi "  
print (text \* 3) # Hi Hi Hi

**3. Indexing & Slicing → Accessing parts of a string**

word = "Python"  
print (word[0]) # P  
print (word[-1]) # n  
print (word[0:4]) # Pyth

## String Methods:

**Upper ():** Converts all characters to uppercase.

text = "hello"  
print(text.upper()) # HELLO

lower ():Converts all characters to lowercase.

text = "HELLO"  
print(text.lower()) # hello

**strip():** Removes extra spaces at the beginning and end.

text = " Python "  
print(text.strip()) # Python

## format(): **Inserts values into a string.**

name = "Siva"  
age = 22  
print("My name is {} and I am {} years old".format(name, age))

### find(): **Returns the index of the first occurrence of a substring. If not found, returns -1.**

text = "Hello World"  
print(text.find("World")) # 6  
print(text.find("Python")) # -1

### index(): **Similar to find(), but throws an error if the substring is not found.**

text = "Hello World"  
print(text.index("World")) # 6  
# print(text.index("Python")) # Error

### count(): **Counts how many times a substring appears.**

text = "banana"  
print(text.count("a")) # 3

## Key:

find() returns -1 if substring is missing.  
 index() throws an error if substring is missing.