PYTHON
BOOTCAMP

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INSPIRE INNOVATION

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STRING MANIPULATION

String Creation:

- Single Quote (one liner)
- Double Quote (one liner)
- Triple Quote (multi liner)

```
4    single_quote = 'Hello'
5    double_quote = "World"
6    triple_quote = """Multi-line
7    string"""
```

STRING MANIPULATION

String indexing and slicing:
- Indexing: number(position) for each character
- Slicing: grabbing multiple characters [start:stop:step]

```
10    text = "Python Programming"
11
12    print(text[0])       # (first character)
13    print(text[-1])      # (last character)
14    print(text[0:6])     # (slice 0 to 5)
15    print(text[:6])      # (from start to 5)
16    print(text[7:])      # (7 to end)
```

STRING MANIPULATION

String Methods:

- len(): Length
- strip(): remove space
- upper(): UPPERCASE
- lower(): lowercase
- title(): Titlecase
- replace(): ("old","new")

```python
19   name = " bob the builder "
20
21   print(len(name))                    # Length
22   print(name.strip())                 # Remove whitespace
23   print(name.upper())                 # Uppercase
24   print(name.lower())                 # Lowercase
25   print(name.title())                 # Title case
26   print(name.replace("bob", "jane"))  # Replace
```

STRING MANIPULATION

String Formatting:
- f-string
- str.format()
- %-formatting

```
29    name = "John Doe"
30    age = 30
31
32    message_1 = f"My name is {name} and I am {age} years old."        # f-strings
33    message_2 = "My name is {} and I am {} years old".format(name, age) # str.format()
34    message_3 = "My name is %s and I am %d years old." % (name, age)    # %-formatting
35
36    print(message_1)
37    print(message_2)
38    print(message_3)
```

STRING MANIPULATION

Exercise:

1. Build a simple text analyzer that counts words, characters, and sentences in a given text.

text = """Python is a powerful programming language. It's easy to learn and versatile!

You can use Python for web development, data science, and automation. The syntax is clean and readable.

This makes Python perfect for beginners and experts alike."""