

# Assignment

## Full-Day Python Strings Practice Plan

### Part 1: Warm-Up (Basics)

#### 1. Length & Indexing

- Store your favorite quote in a variable.
- Print its length.
- Print the first and last characters.

#### 2. Concatenation

- Store your first name and last name in separate variables.
- Combine them into one string with a space in between.

#### 3. Repetition

- Print `"Python!"` 10 times in a single line.
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### Part 2: String Methods Practice

#### 1. Convert `"learning python"` into:

- All uppercase
- All lowercase
- Title case

#### 2. Remove spaces from `" Clean me "`.

#### 3. Replace `"dog"` with `"cat"` in `"I have a dog"`.

#### 4. Count how many times `"a"` appears in `"Banana"`.

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### Part 3: Slicing & Substrings

#### 1. Extract `"thon"` from `"Python"`.

2. From `"I love programming"`, extract `"love"`.
  3. Reverse the string `"Python"` using slicing.
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## Part 4: Escape Characters

1. Print:

```
nginx
CopyEdit
Hello
World
```

1. Print:

```
makefile
CopyEdit
Name: John
Age: 25
```

using `\n`.

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## Part 5: Searching

1. Check if `"Python"` is present in `"I love Python programming"`.
  2. Find the index of `"code"` in `"Let's code in Python"`.
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## Part 6: Formatting

1. Use **f-string** to print:

- `"My name is Alice and I am 20 years old."`

1. Use `.format()` to print:

- `"Temperature today is 30°C"`
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## Part 7: Mini Challenges

1. Take a string from the user and:
    - Print it in reverse.
    - Check if it's a **palindrome** (same forward and backward).
  1. Ask the user for a sentence and count the number of words.
  2. Replace all vowels in a string with `"*"`.
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## Part 8: Creative Tasks

1. **Abbreviation Maker** → Input: `"World Health Organization"` → Output: `"WHO"`.
  2. **Word Replacer** → Ask user for a sentence and replace one word with another.
  3. **Caesar Cipher (Basic)** → Shift each letter by 1 ( `A → B` , `B → C` ).
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## Part 9: Small Projects

### 1. Username Generator

- Input: First name, last name, and birth year.
- Output: `firstname.lastnameYY` (e.g., `john.smith98` ).

### 1. Password Generator

- Ask for a word.
- Reverse it, make it uppercase, and add a random number at the end.

### 1. Pig Latin Converter

- For each word, move the first letter to the end and add `"ay"`.
    - `"python"` → `"ythonpay"`
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