

Module 4: String Manipulation

Module 4 covers String Manipulation in Python. Strings are sequences of characters and are one of the most common data types used in programming. This module explores how to perform operations such as concatenation, slicing, and common string methods for processing and analyzing text.

Learn about basic string operations, including how to concatenate strings, slice strings to extract substrings, and iterate through string characters.

Python provides a rich set of string methods for transforming, searching, and evaluating strings. This section introduces methods such as `str.upper()`, `str.lower()`, `str.replace()`, `str.find()`, and `str.split()`.

Understanding string manipulation is crucial for text processing, data cleaning, and preparation tasks. This module includes practical examples and exercises to apply string methods in various scenarios.

```
# Concatenation
greeting = "Hello"
name = "Alice"
message = greeting + " " + name
print(message)

# Slicing
s = "Hello, world!"
print(s[7:12])

# Common String Methods
print(s.upper())
print(s.lower())
print(s.replace("world", "Python"))
print(s.find("world"))
print(s.split(","))
```