Python

Data Types

What is Data Type:

- Python provides several built-in data types to store and manipulate data.
- **Python is a - Dynamically Type Programming language** where we are not explicitly mentioning the data types definition.

Below are the data types in the Python:

1. Numeric Types
2. Sequence Types
3. Mapping Type
4. Set Types
5. Boolean Type
6. Binary Types
7. None Type

1. Numeric Types:

a. int: Represents integers, which are whole numbers, positive or negative.

i. a = 10 # Example of an integer

b. float: Represents floating-point numbers (decimals).

i. b = 10.5 # Example of a float

c. complex: Used for complex numbers, consisting of a real and an imaginary part.

i. c = 2 + 3j # Example of a complex number

2. Sequence Types

a. str: Represents strings, which are sequences of Unicode characters.

i. name = "DevOps Automation" # Example of a string

b. list: A mutable, ordered collection of items, which can be of any data type.

i. fruits = ["apple", "banana", "cherry"] # Example of a list

c. tuple: An immutable, ordered collection of items.

i. coordinates = (10, 20) # Example of a tuple

3. **Dictionary Type**

a. dict: A collection of key-value pairs, where the keys must be unique.

i. person = {"name": "John", "age": 30} # Example of a dictionary

4. **Set Types**

a. set: An unordered collection of unique elements.

i. numbers = {1, 2, 3, 4} # Example of a set

b. frozenset: An immutable version of a set.

i. frozen_numbers = frozenset({1, 2, 3, 4}) # Example of a frozenset

5. **Boolean Type**

a. bool: Represents one of two values: `True` or `False`.

i. is_valid = True # Example of a boolean

6. **Binary Types**

a. bytes: Immutable sequence of bytes.

i. byte_data = b"hello" # Example of bytes

b. bytearray: A mutable sequence of bytes.

i. byte_array = bytearray(5) # Example of a bytearray with 5 empty byte

7. **None Type**

a. NoneType: Represents the absence of a value.

i. result = None # Example of None type