

Python Basics - Comments & Data Types

1. Comments in Python

Comments are notes in the code that are ignored by Python during execution. They are used to explain the code and make it easier to understand.

Types of Comments:

1. Single-line Comment → Starts with #

Example:

```
# This is a single-line comment
```

2. Multi-line Comment → Written inside triple quotes (''' ... ''' or """ ... """)

Example:

```
'''  
This is a  
multi-line comment  
'''
```

Diagram: Comments help developers understand code better but are ignored by the Python interpreter.

2. Data Types in Python

Data types define the type of data a variable can hold. In Python, variables are dynamically typed, meaning the type is decided at runtime.

Basic Data Types:

- int → Integer numbers (e.g., 10, -5)
- float → Decimal numbers (e.g., 3.14, -0.5)
- bool → Boolean values (True/False)
- str → String (text data, e.g., 'Hello')
- complex → Complex numbers (e.g., 2+3j)

Sequence Data Types:

- list → Ordered, mutable collection (e.g., [1, 2, 3])

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- tuple → Ordered, immutable collection (e.g., (1, 2, 3))
- set → Unordered collection of unique items (e.g., {1, 2, 3})
- dict → Key-value pairs (e.g., {'name': 'Ravi', 'age': 20})

Diagram: Data types in Python can be divided into Primitive (int, float, bool, str) and Collection types (list, tuple, set, dict).