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])

• 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).