

Day 01 – Python Basics: Arithmetic Operations & Data Types

- Understand and practice basic Python operations including arithmetic, data types, and the `type()` function.
- Performed basic arithmetic operations using `+`, `-`, `*`, `/`, `**`, `%`, and `//`.
- Identified data types using the `type()` function.
- Got familiar with Python's core types: int, float, complex, string, list, dict, set, tuple, and bool.

Arithmetic Operations

Below are some of the fundamental arithmetic operations supported in Python.

```
In [1]: print(3 + 2) # addition (+)
        print(3 - 2) # subtraction (-)
        print(3 * 2) # multiplication (*)
        print(3 / 2) # division (/)
        print(3 ** 2) # exponential (**)
        print(3 % 2) # modulus (%)
        print(3 // 2) # floor division (//)

5
1
6
1.5
9
1
1
```

Data Types in Python

Python supports several built-in data types. The `type()` function is used to check the type of a variable or value.

```
In [3]: print(type(10))           # Int
        print(type(3.14))        # Float
        print(type(1 + 3j))       # Complex
        print(type('Arman Pathan')) # String
        print(type([1, 2, 3]))   # List
        print(type({'name': 'Arman'})) # Dictionary
        print(type({9.8, 3.14, 2.7})) # Set
        print(type((9.8, 3.14, 2.7))) # Tuple
        print(type(3 == 3))      # Bool
        print(type(3 >= 3))      # Bool

<class 'int'>
<class 'float'>
<class 'complex'>
<class 'str'>
<class 'list'>
<class 'dict'>
<class 'set'>
<class 'tuple'>
<class 'bool'>
<class 'bool'>
```