Python Data Types Categories

Basic Types:

- **Int** : Whole nums (1, 2, 3).
- **Float** : Decimals (3.14, 2.5).
- **Complex** : Real+Imag (1 + 2j).
- **Bool** : True/False.
- **Str** : Text ("hello").

Container Types:

- **List** : Ordered items.

    [1, 2, 3]

- **Tuple** : Ordered, immutable.

    (1, 2, 3)

- **Set** : Unordered, unique.

    {1, 2, 3}

- **Dict** : Key-value pairs.

    {'k1': 'v1', 'k2': 'v2'}

User-Defined Types:

- **Class** : Obj blueprint.

In [ ]:

int

In [2]:
```python
# Numbers
print(1)
# Large Numbers

print(1e308)   # 1 * 10^308
print(1e309)   # 'inf' (exceeds int limit)
```

```
1
1e+308
inf
```

float

```
In [2]:  # Floating-Point Numbers
         print(102.5)  # Standard

         # Large Floating-Point Numbers

         print(1.8e307)  #Large
         print(1.8e308)  # Larger
         print(1.9e308)  # Too large (inf)
```

```
102.5
1.8e+307
inf
inf
```

bool

```
In [8]:  # Boolean Values
         print(True) #----- 1
         print(False)  # ----0
```

```
True
False
```

complex

```
In [2]:  # Complex Number
         print(5 + 0j) # it is a combination of real and imaginary
```

```
(5+0j)
```

str

```
In [6]:  # Strings with Different Quotation Styles
         print('Kolkata')        # single quotes
         print("Kolkata")        # double quotes
         print('''Kolkata''')    # triple single quotes
         print("""Kolkata""")    # triple double quotes
```

```
Kolkata
Kolkata
Kolkata
Kolkata
```

list

```
In [10]:  # List
          print([1,2,3,4,5,6,7,8,9,10])
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

tuple

```
In [11]:  # Tuple
          print((1,2,3,4,5,6,7,8,9,10))
```

```
(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
```

set

```
In [15]:  # Set
          print({1,2,3,4,5,6,7,8,9,10})
```

```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

dict

```
In [17]:  # Dictionary
          print({"Name":"Alok","Blood_group":"O-","Gender":"Male", "Age": 23})
```

```
{'Name': 'Alok', 'Blood_group': 'O-', 'Gender': 'Male', 'Age': 23}
```

```
In [15]:
```

```
Sakshi
```

```
Out[15]:  'Aditi'
```

```
In [ ]:
```