Ques. Type Casting/Type Conversion?

- The process of converting the value of one data type (integer, string, float, etc.) to another data type is called type conversion.
- Jab bhi hum ek data type ki value ko dusre data type ki value mai convert karte hai to usi ko hum bolte hai type conversion.
- Integers

```
x = int(1)
y = int(2.8)
z = int("3")
print(x)
print(y)
print(z)

Output:-
1
2
3
```

- Floats

```
# Floats
x = float(1)
y = float(2.8)
z = float("3")
print(x)
print(y)
print(z)

Oytput:-
1.0
2.8
3.0
```

- Strings

```
x = str("s1")
y = str(2)
z = str(3.0)
print(x)
print(y)
print(z)

Output:-
```

```
s1
2
3.0
```

Python has two types of type conversion.

1. **Implicit Type Conversion: -** In Implicit type conversion, Python automatically converts one data type to another data type. This process doesn't need any user involvement.

```
num_int = 123
num_flo = 1.23

num_new = num_int + num_flo

print("datatype of num_int:",type(num_int))
print("datatype of num_flo:",type(num_flo))
print("Value of num_new:",num_new)
print("datatype of num_new:",type(num_new))

Output:-
datatype of num_int: <class 'int'>
datatype of num_flo: <class 'float'>
Value of num_new: 124.23
datatype of num_new: <class 'float'>
```

2. **Explicit Type Conversion: -** In Explicit Type Conversion, users convert the data type of an object to required data type. We use the predefined functions like int(), float(), str(), etc to perform explicit type conversion.

```
num_int = 123
num_str = "456"

print("Data type of num_int:",type(num_int))
print("Data type of num_str before Type Casting:",type(num_str))
num_str = int(num_str)
print("Data type of num_str after Type Casting:",type(num_str))
num_sum = num_int + num_str
print("Sum of num_int and num_str:",num_sum)
print("Data type of the sum:",type(num_sum))

Output:-
Data type of num_int: <class 'int'>
Data type of num_str before Type Casting: <class 'str'>
Data type of num_str after Type Casting: <class 'int'>
Sum of num_int and num_str: 579
Data type of the sum: <class 'int'>
```