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Data Analysis With Python

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Type Casting

Type Conversion

The conversion of data from one type to another type whether it is int, float,

String, etc.

There are two types of type conversion.

1. Implicit Type Conversion
2. Explicit Type Conversion

Key Points to Remember

1. The data types of objects are converted using predefined functions by the user is the Explicit Type Conversion and is also called Type Casting,
2. Python interpreter itself performed the Implicit Type Conversion

Implicit Type Conversion

Automatic data conversion from one type to another itself by the python is

known as the implicit type conversion.

lower data type to upper data type involves no loss of data

Example 1: implicitly converting integer to float

```
a = 455

b = 1.24


c = a+b # b is converted to int automatically


print("num1 ", a)

print("num2 ", b)

print("new num ",c)
```

Output:

```
num1 455

num2 1.24

new num 456.24
```

Explicit Type Conversion

Explicit type Casting in python is done using the constructor function. We use predefined functions like `int()`, `float()`, `str()`, etc to perform explicit type conversion.

- int() – used to make an integer number from an integer literal, float literal or a string literal.
- float() – used to make a float number from an integer literal, float literal, or a string literal.
- str() – used to make a string from data types, including strings, integer literals, and float literals

Syntax :

```
<datatype>(data)
```

Typecasting can be done by assigning the required data type function to the expression.

Example 3: Addition of string and integer using explicit conversion

```
int1 = 345
str1 = "123"
str2=int(str1)

print("new number ",int1+str2)
```

Output:

```
new number 468
```

Example

```
int1 = int(2)
int2 = int(2.0) #float to int
int3 = int("2")  # string to int

print(int1)
print(int2)
print(int3)
```

output:

```
2

2

2
```

Example:

```
float1 = float(2.0)

float2 = float(2) #int to float

float3 = float("2")  # string to float


print(float1)

print(float2)

print(float3)
```

Output:

```
2.0

2.0

2.0
```