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Type Casting in Python (Implicit and Explicit) with Examples

Difficulty Level : Basic • Last Updated : 30 Jun, 2021

Prerequisites: [Python Data Types](#)

Type Casting is the method to convert the variable data type into a certain data type in order to the operation required to be performed by users. In this article, we will see the various technique for typecasting.

There can be two types of Type Casting in Python –

- Implicit Type Casting
- Explicit Type Casting

Implicit Type Conversion

In this, methods, Python converts data type into another data type automatically. In this process, users don't have to involve in this process.



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```
# implicit type Casting

# Python automatically converts
# a to int
a = 7
print(type(a))

# Python automatically converts
# b to float
b = 3.0
print(type(b))

# Python automatically converts
# c to float as it is a float addition
c = a + b
print(c)
print(type(c))

# Python automatically converts
# d to float as it is a float multiplication
d = a * b
print(d)
print(type(d))
```

Output:

```
<class 'int'>
<class 'float'>
10.0
<class 'float'>
21.0
<class 'float'>
```

Explicit Type Casting

In this method, Python need user involvement to convert the variable data type into certain data type in order to the operation required.

Mainly in type casting can be done with these data type function:

Int() : Int() function take float or string as an argument and return int type object.

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Let's see some example of type casting:

Type Casting int to float:

Here, we are casting integer object to float object with **float()** function.

Python3

```
# Python program to demonstrate
# type Casting

# int variable
a = 5

# typecast to float
n = float(a)

print(n)
print(type(n))
```

Output:

```
5.0
<class 'float'>
```

Type Casting float to int:

Here, we are casting float data type into integer data type with **int()** function.

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```
# type Casting

# int variable
a = 5.9

# typecast to int
n = int(a)

print(n)
print(type(n))
```

Output:

```
5
<class 'int'>
```

Type casting int to string:

Here, we are casting int data type into string data type with **str()** function.

Python3

```
# Python program to demonstrate
# type Casting

# int variable
a = 5

# typecast to str
n = str(a)

print(n)
print(type(n))
```

Output:

```
5
<class 'str'>
```

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Python3

```
# Python program to demonstrate
# type Casting

# string variable
a = "5"

# typecast to int
n = int(a)

print(n)
print(type(n))
```

Output:

```
5
<class 'int'>
```

Type Casting String to float:

Here, we are casting string data type into float data type with **float()** function.

Python3

```
# Python program to demonstrate
# type Casting

# string variable
a = "5.9"

# typecast to float
n = float(a)

print(n)
print(type(n))
```

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