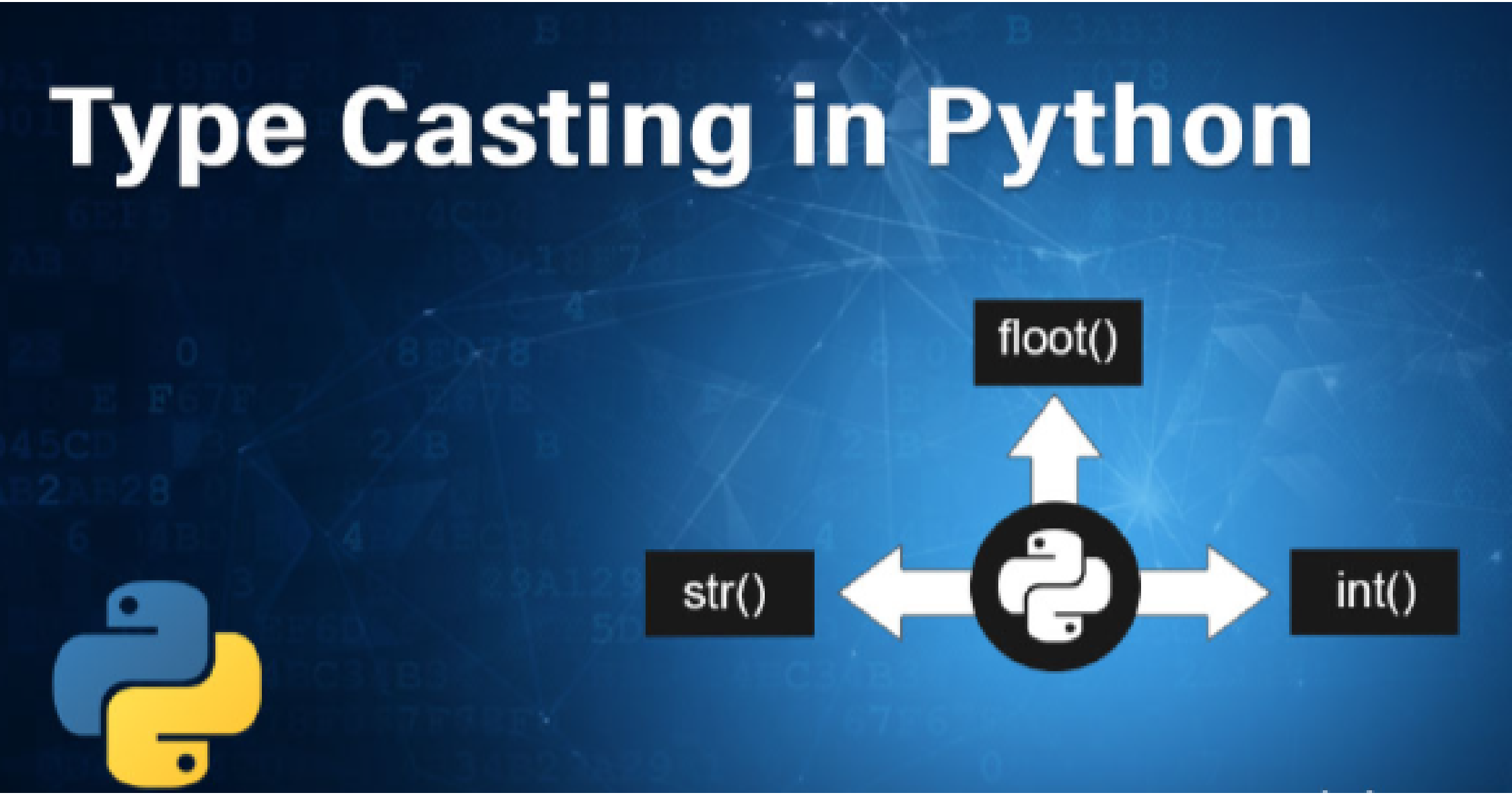
Python

Type Casting in Python



Type casting in Python

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.

```
# Python program to demonstrate
# 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 multipli

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

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'>
```

Typecasting float to int

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

Python3

```
# Python program to demonstrate
# 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'>
```

Type Casting string to int:

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

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))
```

Output:

```
5.9

<class 'float'>
```