

Python Casting

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0.1 Specify a Variable Type

There may be times when you want to specify a type on to a variable. This can be done with casting. Python is an object-orientated language, and as such it uses classes to define data types, including its primitive types.

Casting in python is therefore done using constructor functions:

1. `int()` - constructs an integer number from an integer literal, a float literal (by removing all decimals), or a string literal (providing the string represents a whole number).
2. `float()` - constructs a float number from an integer literal, a float literal or a string literal (providing the string represents a float or an integer).
3. `str()` - constructs a string from a wide variety of data types, including strings, integer literals and float literals.

Example:

Integers:

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

1
2
3

Example:

Floats:

```
[2]: x = float(1)
     y = float(2.8)
     z = float("3")
     w = float("4.2")
     print(x)
```

```
print(y)
print(z)
print(w)
```

1.0
2.8
3.0
4.2

Example:

Strings:

```
[3]: x = str("s1")
     y = str(2)
     z = str(3.0)
     print(x)
     print(y)
     print(z)
```

s1
2
3.0