Type Conversion or Type Casting:
Since Python is dynamically-typed, you may want to convert a value into another type. Every value in Python has a data type.

Python Explicit Data Type Conversion
Primitive Data Structures:
IntegersFloatStringsBoolean
Non-Primitive Data Structures:
ListsTuples Sets Dictionary

List of PYTHON Functions
1 int(x [,base])2 bool()3 float(x)
4 str(x)5 list(s)6 tuple(s)
7 set(s)8 dict(d)9 ord(x)
10 chr(x)11 complex(real,img)
12 eval()

int(x [,base]):
It converts a number in given base to decimal.

Syntax:
int(string, base)

Parameter :
string : consists of Any Number
base : (integer value) base of the number.

Example:
```
print(int(123))
print(int(123.098))
print(int(123.001))
```

Example:
```
print(int("1010",2))#10
print(int("1110",2))#14
print(int("1111",2))#15
```

Example:
```
print(int("12",8))#10
print(int("123",8))#83
print(int("34",8))#28
```

Example:
```
print(int("19",16))#25
print(int("4f",16))#79
print(int("98",16))#152
```

NOTE:
ValueError: int() base must be >= 2 and <= 36, or 0

Example:
```
print(int("111",2))#7
print(int("111",3))#13
print(int("111",4))#21
print(int("111",5))#31
```

bool()
It converts the value into a boolean.

Syntax:
bool(value)

The following values are considered false in Python:
    None
    False
    Zero of any numeric type. For example, 0, 0.0, 0j
    Empty sequence. For example, (), [], ''.
    Empty mapping. For example, {}

NOTE: All other values except these values are considered true

Example:
```
print(bool([])); print(bool(['a value']))
print(bool('')); print(bool('A string'))
print(bool(True)); print(bool(False))
print(bool(0)); print(bool(None))
print(bool(0.0)); print(bool(1))
```

float(x): To convert x to a floating-point number.

Syntax:
float(value)

Example:
```
a=100
print(float(a))
```

NOTE:
We can convert any value to float type except complex type.

str() : It is Used to convert integer into a string.

Syntax:
str(value)

Example:
```
a=100
print(type(a)) #<class 'int'>
print(str(a))
print(type(a)) #<class 'str'>
```

Example:
Python code to convert string to the float value
```
str1 = "10.23"
str2 = "1001"

#Printing str1 & str2 types
print("type of str1: ", type(str1))
print("type of str2: ", type(str2))

#Converting to float value
val1 = float(str1)
val2 = float(str2)
```

```
#Printing types and values of val1 & val2
print("type of val1: ", type(val1))
print("type of val2: ", type(val2))

print("val1 = ", val1)
print("val2 = ", val2)
```

list() :
It is used to convert any data type to a list type.

Syntax:
list(items)

Example:
```
MyStr="PYTHON"
print(type(MyStr))
MyList=list(MyStr)
print(type(MyList))
print(MyList)
```

tuple() : It is used to convert to a tuple.

Syntax:
tuple(items)

Example:
```
MyStr="PYTHON"
print(type(MyStr))
MyTuple=tuple(MyStr)
print(type(MyTuple))
print(MyTuple)
```

set() :
It returns the type after converting to set

Syntax:
set(items)

Example:
```
MyStr="PYTHON"
print(type(MyStr))
MySet=set(MyStr)
print(type(MySet))
print(MySet)
```

dict() :
It is used to convert a tuple of order (key,value) into a dictionary.

Syntax:
dict(key,value)

Example:
```
MyTup=(('a',1),('b',2),('c',3))
print(type(MyTup))
MyDict=dict(MyTup)
print(type(MyDict))
```

```
print(MyDict)
```

ord() :
It is used to convert a character to integer.

Syntax:
```
ord('Char')
```

Example:
```
MyChar='A'
print(ord(MyChar))#65
```

Example:
```
print(ord('स'))#2360
print(ord('ल'))#2354
print(ord('ఠ'))#3095
print(ord('1601#(('ف
```

chr(i)
Return the string representing a character whose Unicode code point is the integer i.

Syntax:
```
chr('number')
```

Example:
```
print(chr(65))#A
print(chr(90))#Z
print(chr(32))#
print(chr(49))#1
print(chr(123))#{
```

Example:
```
print(chr(2360))#स
print(chr(2354))#ल
print(chr(3095))#ఠ
print(chr(1601))#ف
```

complex : This function converts real numbers to complex number.

Syntax:
```
complex(real,imag)
```
Format: Real + Imaginary component j

Example:
```
a=1
print(type(a))#<class 'int'>
print(a)#1
b=complex(a)
print(type(b))#<class 'complex'>
print(b)#(1+0j)
```

Example:Output of the following Script

```
a=complex(1,2)
b=complex(2,3)
c=a+b;print(c)
d=a-b;print(d)
```

Example:Output of the following Script

```
print(complex(20))
print(complex(10.5))
print(complex(True))
print(complex(False))
print(complex("10"))
print(complex("10.5"))
```

Example:Output of the following Script

```
print(complex(True,False))
print(complex(1,-2))
print(complex(1,-0))
```