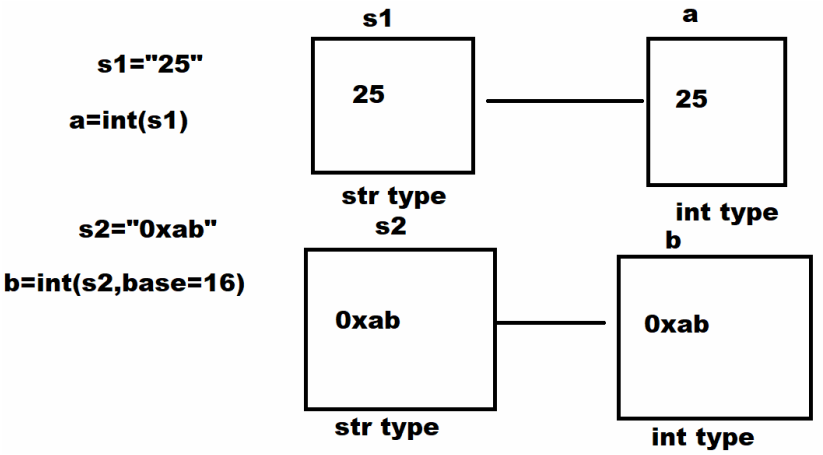
Example

```
>>> a=int("15")
>>> b=int("0xab")
Traceback (most recent call last):
  File "<pyshell#1>", line 1, in <module>
    b=int("0xab")
ValueError: invalid literal for int() with base 10: '0xab'
>>> b=int("0xab",base=16)
>>> c=int("0b101",base=2)
>>> d=int("0o12",base=8)
>>> print(a,b,c,d)
15 171 5 10
```

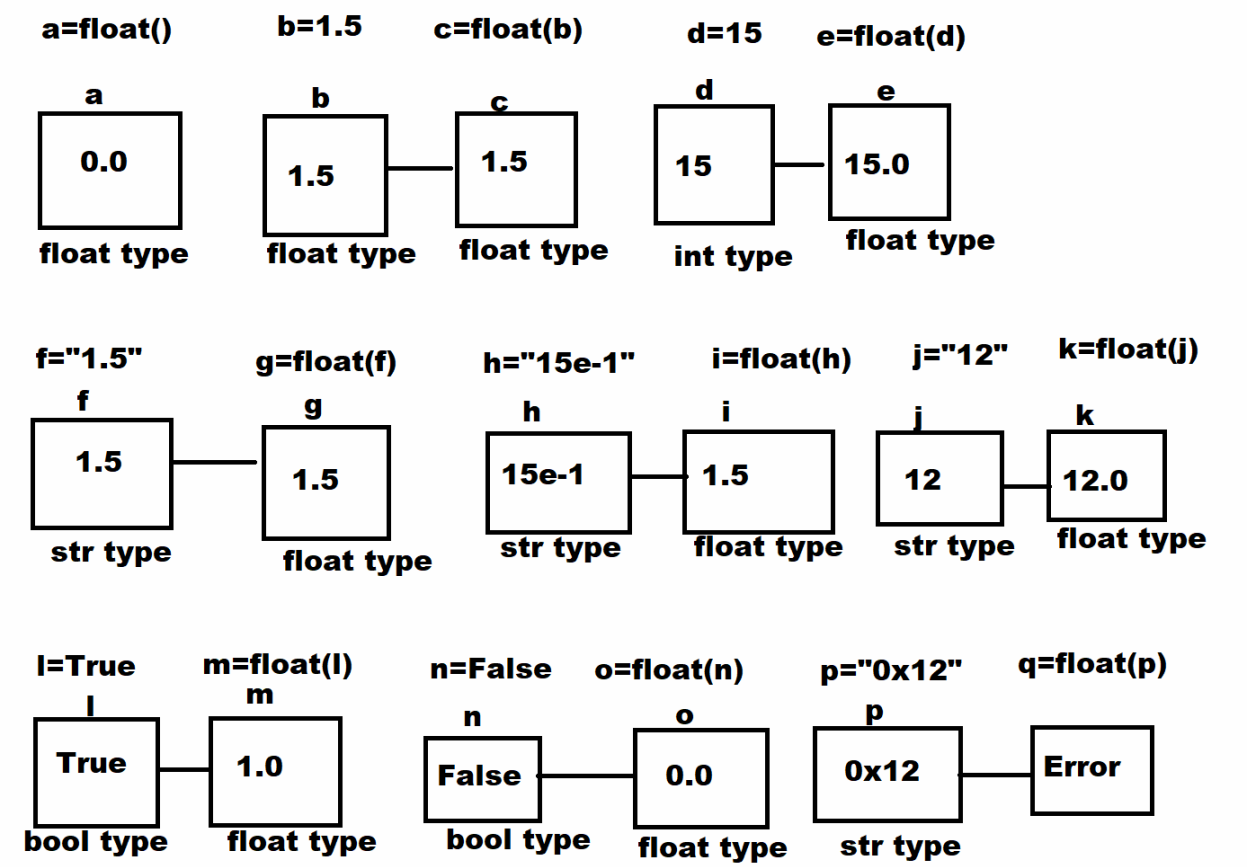


float function

This function is used to perform the following conversions

1. Float to float
2. Int to float
3. Bool to float
4. String to float

Syntax: float([value/variable/expression])



Example:

```
a=float()
b=float(1.5)
c=float(15e-1)
d=float(15)
e=float("1.5")
f=float("15e-1")
g=float("15")
h=float(True)
i=float(False)
print(a,b,c,d,e,f,g,h,i)
```

Output

0.0 1.5 1.5 15.0 1.5 1.5 15.0 1.0 0.0

Example

```
# Program to find area of circle
# area=pi*r*r

r=float(input("Enter R value of Circle "))
area=3.147*r*r
print(area)
```

Output

```
Enter R value of Circle 1.2
4.53168
```

Example:

```
a=input("Enter any value ")
print(a,type(a))
```

```
Enter any value 10
10 <class 'str'>

Enter any value 1.5
1.5 <class 'str'>

Enter any value 1+2j
1+2j <class 'str'>

Enter any value 10 20
10 20 <class 'str'>

Enter any value 1 2 3 4 5
1 2 3 4 5 <class 'str'>
```

Example:

```
# Write a program to input rollno,name,sub1,sub2 caluclate total,avg

# Input
rollno=int(input("Rollno: "))
name=input("Name :")
sub1=int(input("Subject1 Marks :"))
sub2=int(input("Subject2 Marks :"))
```

```
# Proces
total=sub1+sub2
avg=total/2

# Output
print("Rollno ",rollno)
print("Name ",name)
print("Subject1 Marks ",sub1)
print("Subject2 Marks ",sub2)
print("Total Marks ",total)
print("Avg Marks ",avg)
```

Output

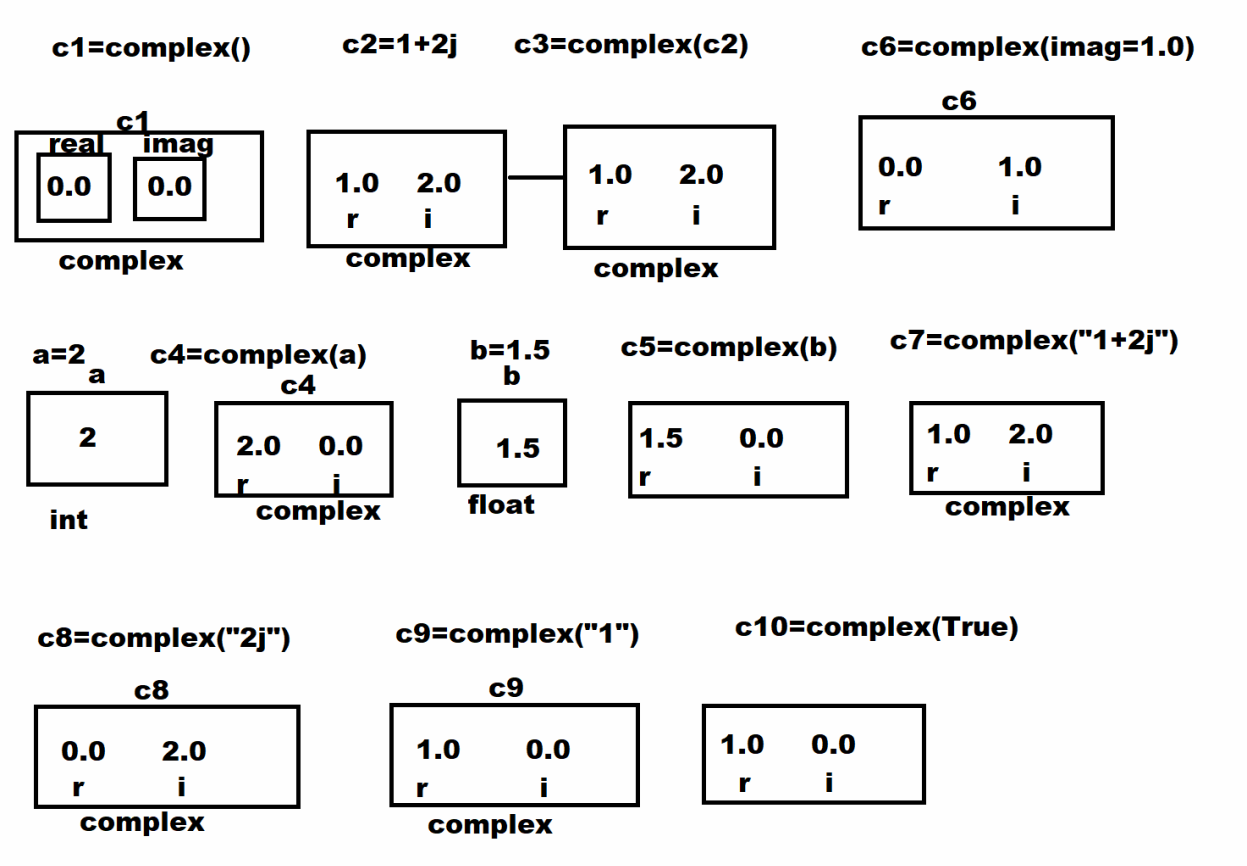
```
Rollno: 1
Name :naresh
Subject1 Marks :60
Subject2 Marks :40
Rollno  1
Name  naresh
Subject1 Marks  60
Subject2 Marks  40
Total Marks  100
Avg Marks  50.0
```

complex()

This function is used to perform the following conversions

1. Complex to complex
2. Int to complex
3. Float to complex
4. Bool to complex
5. String to complex

Syntax1: complex(real=0.0,imag=0.0)
Syntax2: complex(complex)



Example:

```
c1=complex()
c2=complex(1+2j)
c3=complex("1+2j")
c4=complex("1")
c5=complex("2j")
c6=complex(imag=2)
c7=complex(1)
c8=complex(real=1,imag=2)
c9=complex(True)
c10=complex(False)

print(c1,c2,c3,c4,c5,c6,c7,c8,c9,c10)
print(c1.real,c1.imag)
```

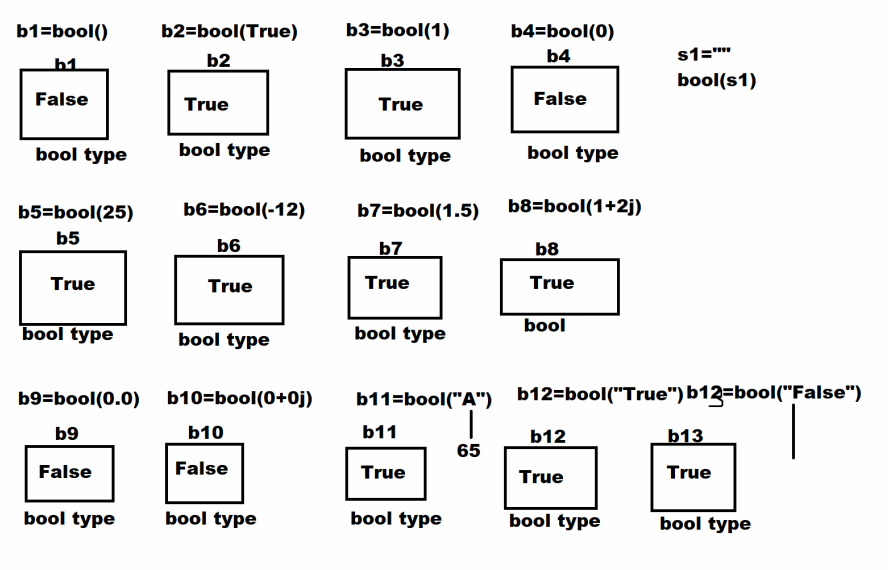
Output

```
0j (1+2j) (1+2j) (1+0j) 2j 2j (1+0j) (1+2j) (1+0j) 0j
0.0 0.0
```

bool()
This function is used to perform the following conversions

1. Bool to bool
2. Int to bool
3. Float to bool
4. Complex to bool
5. Str to bool

Syntax: bool([value/variable])



Example:

```
b1=bool()
b2=bool(True)
b3=bool(1)
b4=bool(0)
b5=bool(120)
b6=bool(-1)
b7=bool(1+2j)
b8=bool(0+0j)
b9=bool("A")
b10=bool("True")
b11=bool("False")
print(b1,b2,b3,b4,b5,b6,b7,b8,b9,b10,b11)
```

Output
False True True False True True True False True True True

str() function

This function is used to perform the following conversions

1. Str to str
2. Int to str
3. Float to str
4. Complex to str
5. Bool to string

Syntax: str([value])