In [1]:
```
10 + 5
```

Out[1]: 15

In [2]:
```
10 - 5
```

Out[2]: 5

In [3]:
```
2 * 3
```

Out[3]: 6

In [4]:
```
2 ** 3
```

Out[4]: 8

In [5]:
```
3 ** 2
```

Out[5]: 9

In [6]:
```
10 / 5
```

Out[6]: 2.0

In [7]:
```
10 // 5
```

Out[7]: 2

In [8]:
```
# BODMAS ( BRACKET, ORDER, DIVISION, MULTIPLICATION, ADDITION, SUBTRACTION)

(10 + 5) * 2
```

Out[8]: 30

In [9]:
```
10 + 5 * 2
```

Out[9]: 20

# 8th

# RULES TO DEFIN PHYTHON VARIABLE

In [25]:
```
v = 23
v
```

Out[25]: 23

In [27]:
```
1v = 34
1v
```

```
  Cell In[27], line 1
    1v = 34
    ^
SyntaxError: invalid decimal literal
```

In [29]:
```
v1 = 50
v1
```

Out[29]: 50

In [31]:
```
def = 78
def
```

```
  Cell In[31], line 1
    def = 78
        ^
SyntaxError: invalid syntax
```

In [33]:
```
Def = 78
Def
```

Out[33]: 78

In [35]:
```
import keyword
keyword.kwlist
```

Out[35]:
```
['False',
 'None',
 'True',
 'and',
 'as',
 'assert',
 'async',
 'await',
 'break',
 'class',
 'continue',
 'def',
 'del',
 'elif',
 'else',
 'except',
 'finally',
 'for',
 'from',
 'global',
 'if',
 'import',
 'in',
 'is',
 'lambda',
 'nonlocal',
 'not',
 'or',
 'pass',
 'raise',
 'return',
 'try',
 'while',
 'with',
 'yield']
```

In [37]:
```
NIT = 25
nit
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[37], line 2
      1 NIT = 25
----> 2 nit

NameError: name 'nit' is not defined
```

In [39]:
```
NIT
```

Out[39]:
```
25
```

In [54]:
```
h_ = 89
```

In [56]:
```
t =89
```

In [58]:
```
t
```

Out[58]:
```
89
```

In [60]:
```
aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa = 90
aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
```

Out[60]: 90

In [65]:
```
# variable concept we are cleared
```

In [67]:
```
a = 10
a
```

Out[67]: 10

In [69]:
```
a = 20
a
```

Out[69]: 20

In [71]:
```
a, b, c = 10, 20, 30

a
b
c
```

Out[71]: 30

In [73]:
```
print(a)
print(b)
print(c)
```

```
10
20
30
```

In [75]:
```
print(a,b,c)
```

```
10 20 30
```

# 9th

In [81]:
```
1nit = 67
```

```
  Cell In[81], line 1
    1nit = 67
    ^
SyntaxError: invalid decimal literal
```

In [83]:
```
_nit = 78
_nit
```

Out[83]: 78

In [85]:
```
a b = 7
```

```
  Cell In[85], line 1
    a b = 7
      ^
SyntaxError: invalid syntax
```

In [87]:
```
if = 90
```

```
  Cell In[87], line 1
    if = 90
       ^
SyntaxError: invalid syntax
```

In [89]:
```
IF = 89
IF
```

Out[89]: 89

# int

In [95]:
```
i = 4
i
```

Out[95]: 4

In [97]:
```
print(type(i))
```

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

# float

In [100…
```
f = 110.78
print(f)
print(type(f))
```

```
110.78
<class 'float'>
```

In [102…
```
f1 = 3e0
f1
```

Out[102… 3.0

In [104…
```
f2 = 3e1
f2
```

Out[104… 30.0

In [106…
```
f3 = 3e2
f3
```

Out[106… 300.0

In [110…
```
f4 = 2.3e3
f4
```

Out[110… 2300.0

In [114…
```
import keyword
keyword.kwlist
```

Out[114…
```
['False',
 'None',
 'True',
 'and',
 'as',
 'assert',
 'async',
 'await',
 'break',
 'class',
 'continue',
 'def',
 'del',
 'elif',
 'else',
 'except',
 'finally',
 'for',
 'from',
 'global',
 'if',
 'import',
 'in',
 'is',
 'lambda',
 'nonlocal',
 'not',
 'or',
 'pass',
 'raise',
 'return',
 'try',
 'while',
 'with',
 'yield']
```

# Boolen

In [117…
```
true
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[117], line 1
----> 1 true

NameError: name 'true' is not defined
```

In [119…
```
True
```

Out[119… True

In [121…
```
false
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[121], line 1
----> 1 false

NameError: name 'false' is not defined
```

In [123…
```
V
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[123], line 1
----> 1 V

NameError: name 'V' is not defined
```

In [125…
```
False
```

Out[125… False

In [127…
```
none
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[127], line 1
----> 1 none

NameError: name 'none' is not defined
```

In [129…
```
None
```

In [131…
```
True + False
```

Out[131… 1

In [133…
```
True
```

Out[133… True

In [135…
```
True + True
```

Out[135… 2

In [137…
```
True + False * True - False
```

Out[137… 1

In [139…
```
True + (False * True) - False
```

Out[139… 1

In [141…
```
True + (False * True) - True
```

Out[141… 0

In [143…
```
b = True + (False * True) - True
b
```

Out[143… 0

In [145…
```
num1=20
num2=30
add=num1+num2
add
```

Out[145… 50

In [147…
```
num1=20
num2=30
add=num1+num2
print('The addition of', num1, 'and', num2, 'is=', add)
```

```
The addition of 20 and 30 is= 50
```

# complex

In [150…
```
c = 10 + 20j
c
```

Out[150… (10+20j)

In [152…
```
type(c)
```

Out[152… complex

In [156…
```
d = 30 + 40j
```

In [158…
```
print(c)
print(d)
```

```
(10+20j)
(30+40j)
```

In [160…
```
c + d
```

Out[160… (40+60j)

In [162…
```
a = '5.5'
type(a)
```

Out[162… str

In [164…
```
c - d
```

Out[164… (-20-20j)

In [166…
```
a
```

Out[166… '5.5'

In [168…
```
c
```

Out[168… (10+20j)

In [170…
```
c.real
```

Out[170…
```
10.0
```

In [172…
```
c.imaginary
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[172], line 1
----> 1 c.imaginary

AttributeError: 'complex' object has no attribute 'imaginary'
```

In [174…
```
c.imag
```

Out[174…
```
20.0
```

In [ ]:
```
```