In [1]:
```
import sys
sys.version
```

Out[1]:
```
'3.13.5 | packaged by Anaconda, Inc. | (main, Jun 12 2025, 16:37:03) [MSC v.1929 6
4 bit (AMD64)]'
```

In [ ]:
```
October 14 2025
```

python variable = identifier = object syntax (variable = value)

In [2]:
```
v = 8
v
```

Out[2]:
```
8
```

RULES TO DECLARE PYHON VARIABLE

In [3]:
```
var = 8
VAR
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[3], line 2
      1 var = 8
----> 2 VAR

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

In [4]:
```
var
```

Out[4]:
```
8
```

In [5]:
```
v@ = 16
v@
```

```
  Cell In[5], line 1
    v@ = 16
       ^
SyntaxError: invalid syntax
```

In [6]:
```
v_ = 20
v_
```

Out[6]:
```
20
```

In [7]:
```
1var = 25
1var
```

```
  Cell In[7], line 1
    1var = 25
    ^
SyntaxError: invalid decimal literal
```

In [8]:
```
var1 = 8
var1
```

Out[8]:
```
8
```

In [9]:
```
'1var' = 9
```

```
  Cell In[9], line 1
    '1var' = 9
    ^
SyntaxError: cannot assign to literal here. Maybe you meant '==' instead of '='?
```

In [10]:
```
import keyword
keyword.kwlist
```

Out[10]:
```
['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 [11]:
```
len(keyword.kwlist)
```

Out[11]:
```
35
```

In [12]:
```
for = 8
```

```
  Cell In[12], line 1
    for = 8
        ^
SyntaxError: invalid syntax
```

In [13]:
```
def = 79
```

```
  Cell In[13], line 1
    def = 79
        ^
SyntaxError: invalid syntax
```

In [14]:
```
DEF = 10
```

In [15]:
```
DEF
```

Out[15]:
```
10
```

PYTHON VARIABLE DECLARATION 15th October

In [16]:
```
false = 56
```

In [17]:
```
false
```

Out[17]:
```
56
```

In [18]:
```
False = 56
```

```
  Cell In[18], line 1
    False = 56
    ^
SyntaxError: cannot assign to False
```

In [19]:
```
True = 8
```

```
  Cell In[19], line 1
    True = 8
    ^
SyntaxError: cannot assign to True
```

python data types

int
float
bool
string
complex

In [20]:
```
i = 5
i
```

Out[20]: 5

In [21]:
```
type(i)
```

Out[21]: int

In [22]:
```
f = 110.45
f
```

Out[22]: 110.45

In [23]:
```
type(f)
```

Out[23]: float

In [24]:
```
i
```

Out[24]: 5

In [25]:
```
f
```

Out[25]: 110.45

In [26]:
```
i
f
```

Out[26]: 110.45

In [27]:
```
print(i)
print(f)
```

```
5
110.45
```

In [28]:
```
i + f
```

Out[28]: 115.45

In [29]:
```
i - f
```

Out[29]: -105.45

In [30]:
```
i * f
```

Out[30]: 552.25

bool

In [31]:
```
true
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[31], line 1
----> 1 true

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

In [32]:
```
True
```

Out[32]: True

In [33]:
```
False
```

Out[33]: False

In [34]:
```
True + False
```

Out[34]: 1

In [35]:
```
False + False
```

Out[35]: 0

In [36]:
```
False * True
```

Out[36]: 0

In [37]:
```
True / True
```

Out[37]: 1.0

In [38]:
```
True // True
```

Out[38]: 1

In [39]:
```
s = hello
s
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[39], line 1
----> 1 s = hello
      2 s

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

In [40]:
```
s = 'hello'
s
```

Out[40]: 'hello'

In [41]:
```
s1 = "hello"
s1
```

Out[41]: 'hello'

In [42]:
```
s2 = ''' hello '''
s2
```

Out[42]: ' hello '

In [43]:
```
s3 = '''hello
            team'''
s3
```

Out[43]: 'hello \n   team'

In [44]:
```
c = 10 + 20j
c
```

Out[44]: (10+20j)

In [45]:
```
c.real
```

Out[45]: 10.0

In [46]:
```
c.imag
```

Out[46]: 20.0

In [47]:
```
c = 10 + 20j
d = 20 + 30j
```

In [48]:
```
print(c+d)
```

```
(30+50j)
```

In [49]:
```
print(c-d)
```

```
(-10-10j)
```

In [50]:
```
print(c*d)
```

```
(-400+700j)
```

In [51]:
```
c2 = 1 + 2J
```

In [52]:
```
c2
```

Out[52]: (1+2j)

Python variable completed Python datat type completed