In [3]:
```
import keyword
keyword.kwlist
```

```
['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 [ ]:
```
import pandas as pd
import numpy as np
```

data type

int --> variabel name = value

In [4]:
```
a = 5
type(a)
```

```
int
```

In [5]:
```
1a = 6
```

```
  File "<ipython-input-5-2788e874490d>", line 1
    1a = 6
     ^
SyntaxError: invalid syntax
```

In [6]:
```
if = 7
```

```
  File "<ipython-input-6-9b6cbf7468bb>", line 1
    if = 7
       ^
SyntaxError: invalid syntax
```

In [7]:
```
a1 = 1111
a1
```

```
1111
```

In [8]:
```
a2 = 0b11
a2
```

```
3
```

In [11]:
```
a3 = 0b111
type(a3)
```

```
int
```

In [10]:
```
a4 = 11
a4
```

```
11
```

In [12]:
```
a5 = 0b2
a5
```

```
  File "<ipython-input-12-0faf84abfeb1>", line 1
    a5 = 0b2
         ^
SyntaxError: invalid token
```

In [13]:
```
a6 = 0b3
```

```
  File "<ipython-input-13-de3f33ed8785>", line 1
    a6 = 0b3
         ^
SyntaxError: invalid token
```

In [14]:
```
a7 = 1b1
```

```
  File "<ipython-input-14-50369b9fe15d>", line 1
    a7 = 1b1
         ^
SyntaxError: invalid syntax
```

In [15]:
```
a = 0b101
a
```

```
5
```

In [16]:
```
bin(5)
```

```
'0b101'
```

In [17]:
```
bin(6)
```

```
'0b110'
```

In [19]:
```
0b110
```

```
6
```

In [20]:
```
0o111
```

```
73
```

In [21]:
```
oct(73)
```

```
'0o111'
```

In [22]:
```
0o76
```

```
62
```

In [23]:
```
0o9
```

```
  File "<ipython-input-23-a9d2c1573cd0>", line 1
    0o9
     ^
SyntaxError: invalid token
```

In [24]:
```
0o8
```

```
  File "<ipython-input-24-c8e060b98481>", line 1
    0o8
     ^
SyntaxError: invalid token
```

In [25]:
```
0o7
```

```
7
```

In [27]:
```
0o9
```

```
  File "<ipython-input-27-a9d2c1573cd0>", line 1
    0o9
     ^
SyntaxError: invalid token
```

In [28]:
```
#FLOAT DATATYEP

petrol = 110.89
petrol
```

```
110.89
```

In [29]:
```
type(petrol)
```

```
float
```

In [30]:
```
salary = 27890.45
salary
```

```
27890.45
```

In [31]:
```
petrol_ = 0b111.01
```

```
  File "<ipython-input-31-8aab7781cf03>", line 1
    petrol_ = 0b111.01
                    ^
SyntaxError: invalid syntax
```

In [32]:
```
salary_ = 0o34567.78
salary_
```

```
  File "<ipython-input-32-ca2311cd01e1>", line 1
    salary_ = 0o34567.78
                    ^
SyntaxError: invalid syntax
```

In [33]:
```
fl = 5e0
fl
```

```
5.0
```

In [34]:
```
type(fl)
```

```
float
```

In [35]:
```
5.3e1
```

```
53.0
```

In [36]:
```
5.3e2
```

```
530.0
```

In [37]:
```
5.3e3
```

```
5300.0
```

In [44]:
```
5.3E2
```

```
530.0
```

In [45]:
```
b = true
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-45-f11027c2d8d0> in <module>
----> 1 b = true

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

In [48]:
```
b = True
print(b)
print(type(b))
```

```
True
<class 'bool'>
```

In [50]:

```
keyword.kwlist
```

```
['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 [51]:

```
True + True
```

```
2
```

In [52]:

```
True-True
```

```
0
```

In [53]:

```
True*True
```

```
1
```

In [54]:

```
True/False
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
<ipython-input-54-9afea6e7b9a7> in <module>
----> 1 True/False

ZeroDivisionError: division by zero
```

In [55]:

```
False/False
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
<ipython-input-55-dc4a061ec12f> in <module>
----> 1 False/False

ZeroDivisionError: division by zero
```

In [56]:

```
False/True
```

```
False/True
```

```
0.0
```

In [57]:
```
False//True
```

```
0
```

In [58]:
```
bool(True)
```

```
True
```

In [59]:
```
int(True) # type ca
```

```
1
```

In [62]:
```
a = True
a
type(a)
```

```
bool
```

In [63]:
```
int(a)
```

```
1
```

In [64]:
```
int(False)
```

```
0
```

In [65]:
```
c = 10 + 20j
c
```

```
(10+20j)
```

In [66]:
```
type(c)
```

```
complex
```

In [70]:
```
c = 10 + 20j
```

In [71]:
```
c.real
```

```
10.0
```

In [72]:
```
c.imaginary
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
<ipython-input-72-5a7caf8e287d> in <module>
----> 1 c.imaginary
```

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

In [73]:
```
c.imag
```

```
20.0
```

In [74]:
```
c
```

```
(10+20j)
```

In [75]:
```
print(c.real)
```

```
10.0
```

In [76]:
```
print(c.imag)
```

```
20.0
```

In [77]:
```
c_1 = 5 + 10j
c_2 = 15 + 20j
```

In [78]:
```
c_1 + c_2
```

```
(20+30j)
```

In [79]:
```
c_1 - c_2
```

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

In [82]:
```
c_1 * c_2
```

```
(-125+250j)
```

In [83]:
```
real
imaginary
j = squar root of -1
```

```
  File "<ipython-input-83-37ec76b740b3>", line 3
    j = squar root of -1
              ^
SyntaxError: invalid syntax
```

In [84]:
```
# string
```

In [88]:
```
s = 'welcom to nit'
s
type(s)
```

```
str
```

In [89]:
```
s1 = "welcom to nit"
s1
```

```
type(s1)
```

```
str
```

In [91]:
```
s2 = '''welcom to nit'''
s2
```

```
'welcom to nit'
```

In [95]:
```
s3 = '''welcom
    to nit
        we are hear to learn ds ,ai '''
```

In [96]:
```
s3
```

```
'welcom \n    to nit\n        we are hear to learn ds ,ai '
```

In [97]:
```
a = 1 + 2j
b = 3 + 4j
a + b
```

```
(4+6j)
```

In [ ]: