

Keywords

- Keywords are the reserved words in python
- It has special meaning

```
In [1]: 1 import keyword
        2 print(keyword.kwlist)
```

...

```
In [2]: 1 import keyword
        2 print(len(keyword.kwlist))
```

36

Variable

- It is used to store the data

Rules to create a variable

- We didn't use keywords as a variable name
- We shouldn't starts with digits and special symbols except _(underscore)
- We didn't use spaces also

```
In [3]: 1 a = 89
        2 print(a)
```

...

```
In [5]: 1 a11 = 77
        2 a11
```

...

```
In [7]: 1 _s = 88
        2 _s
```

Out[7]: 88

```
In [9]: 1 my_name = "vanitha"
        2 my_name
```

Out[9]: 'vanitha'

```
In [10]: 1 True = 88
         2 True
```

...

```
In [12]: 1 # Multiple Variable Assignment
         2 A=B=C=8
         3 print(A)
```

8

```
In [17]: 1 a1,b1,c1=9,11,3
         2 print(a1)
         3 print(b1)
         4 print(c1)
         5 print(a1,b1,c1)
```

...

```
In [19]: 1 s=3;g=5;h=8
         2 print(s,g,h)
```

3 5 8

```
In [ ]: 1 # Datatypes
         2 - int
         3 - float
         4 - str
         5 - bool
         6 - complex
```

```
In [20]: 1 # integer declaration
         2 s1 = 4875845
         3 print(s1)
```

4875845

```
In [21]: 1 # Float Declaration
         2 f = 5.9
         3 print(f)
```

5.9

```
In [22]: 1 # String Declaration
         2 name = 'SRK'
         3 print(name)
```

SRK

```
In [24]: 1 # Dynamic way of taking input
         2 st = input()
         3 st
```

1A7657###^^

Out[24]: '1A7657###^^'

```
In [31]: 1 h1 = int(input())
          2 h1
```

879

Out[31]: 879

```
In [29]: 1 f1 = float(input())
          2 f1
```

...

```
1 ##### Type Conversions
2
3     int -    int(variable_name)
4     float - float(variable_name)
5     str -   str(variable_name)
6
```

```
In [4]: 1 # integer to float
        2 g = 88
        3 print(type(g))
        4 j = float(g)
        5 print(j)
        6 print(type(j))
```

...

```
In [7]: 1 # integer to string
        2 d = 81
        3 print(type(d))
        4 p = str(d)
        5 print(p)
        6 print(type(p))
```

...

```
In [8]: 1 # string to integer
        2 h = "apssdc"
        3 print(type(h))
        4 print(int(h))
```

...

a=int(input()) a

```
In [9]: 1 a=int(input())
          2 a
```

5

Out[9]: 5

```
In [10]: 1 b=str(input())
         2 b
```

SRK

Out[10]: 'SRK'

```
In [11]: 1 input()
         2 a
```

age

Out[11]: 'age'

```
In [12]: 1 age=20
         2 print(age)
```

20

```
In [13]: 1 a= int(input())
         2 print (a)
         3
```

7569902269

7569902269

Operators

- Arithmetic
 - > +,-,*,/,%,//(floor),power(**)
- Assignment
 - > =,+=,-=,*=,/=,/=
- Comparision
 - > ==,!=,>,<,>=,<=
- Logical
 - > and , or , not
- Bitwise
 - > & , | , ^ (xor) , << , >>
- Membership :- in, not in
- Identity:- is, is not

```
In [14]: 1 # Arithmetic
         2 a,b=7,8
         3 print(a+b)
         4 print(a-b)
         5 print(a*b)
         6 print(a/b)
         7 print(a%b)
```

...

```
In [18]: 1 # floor
         2 5//2
```

Out[18]: 2

```
In [22]: 1 5**5
```

Out[22]: 3125

```
In [23]: 1 # Assignment
         2 v = 4
         3 v += 2 # v = v+2= 4+2=6
         4 v
```

Out[23]: 6

```
In [24]: 1 v1 = 5
         2 v1 += v
         3 v1
```

Out[24]: 11

```
In [26]: 1 c1 = 4
         2 c1 -= v1
         3 c1
```

Out[26]: -7

```
In [31]: 1 # Comparision
         2 g1,g2=9,3
         3 print(g1==g2)
         4 print(g1!=g2)
         5 print(g1>g2)
         6 print(g1<g2)
         7 print(g1>=g2)
         8 print(g1<=g2)
```

...

```
In [ ]: 1 # i/p; 7
         2      5
         3
         4 # o/p; 7 and 5 addition is :- 12
         5      7 and 5 substruction is : 2
         6      7 and 5 multiplication is : 35
         7      division,modulus,floor,power..
         8
         9
```

```
In [34]: 1 d,h=6,3
         2 print(d>h and d!=h) # t and t
         3 print(d>h and d==h)
         4 print(d<h and d>h)
```

...

```
In [36]: 1 print(d>h or d!=h) # t and t
          2 print(d>h or d==h)
          3 print(d<h or d>h)
```

True

True

True

```
In [38]: 1 bin(20)
```

Out[38]: '0b10100'

```
In [41]: 1 s = 10
          2 v = 20
          3 print(s&v)
          4 print(s|v)
          5 print(s^v)
```

...

```
In [ ]: 1 # Membership
          2
          3     These operators are used to check whether
          4     a value or variable exists in a sequence
          5     (string,list,tuple,dictionary,set)
          6
```

```
In [45]: 1 s = "apssdc"
          2 print("a" in s)
          3 print("p" in s)
          4 print("c" in s)
          5 print("h" in s)
```

...

```
In [46]: 1 print("j" not in s)
          2 print("aps" not in s)
          3 print("sda" not in s)
```

True

False

True

```
In [ ]: 1 # Identity Operators
          2
          3     -> Used to check the memory locations of
          4     the objects
          5
```

```
In [52]: 1 v,b=8,9
          2 print(id(v),id(b))
          3 print(v is b)
          4 print(v is not b)
          5 v1,v2=4,4.0
          6 print(v1 is v2)
```

...

```
In [ ]: 1 #read 2 values from user and perform
        2 # all the operations
        3 #(boolean,identity,comparisonal)
```

```
In [ ]: 1 # True,False,None
```

```
In [54]: 1 import keyword
          2 keyword.kwlist
```

...

```
In [55]: 1 data=input()
          2 data
```

jksldfjksdjf

Out[55]: 'jksldfjksdjf'

```
In [56]: 1 type(data)
```

Out[56]: str

```
In [57]: 1 num=int(input()) # explicit conversion
```

9

```
In [58]: 1 num
```

Out[58]: 9

```
In [59]: 1 int('8') # background
```

Out[59]: 8

```
In [61]: 1 gpa=float(input())
          2 gpa
```

9

Out[61]: 9.0

```
In [62]: 1 # keywords
```

```
In [65]: 1 True #
```

```
Out[65]: True
```

```
In [64]: 1 num=9
```

```
In [67]: 1 x,y=int(input('first:')),int(input('second:'))
2 print(x,y)
3 # boolean
4 x is True
```

```
first:9
second:45
9 45
```

```
Out[67]: False
```

```
In [69]: 1 x is 9
```

```
<>:1: SyntaxWarning: "is" with a literal. Did you mean "=="?
<>:1: SyntaxWarning: "is" with a literal. Did you mean "=="?
C:\Users\admin\AppData\Local\Temp\ipykernel_4204\2040890635.py:1: SyntaxWarnin
g: "is" with a literal. Did you mean "=="?
x is 9
```

```
Out[69]: True
```

```
In [70]: 1 x is None
```

```
Out[70]: False
```

```
In [71]: 1 st="" # empty string
```

```
In [72]: 1 st is None # chars do not identify--NULL character
```

```
Out[72]: False
```

```
In [73]: 1 first=second=9
```

```
In [74]: 1 first
```

```
Out[74]: 9
```

```
In [75]: 1 second
```

```
Out[75]: 9
```

```
In [76]: 1 id(first)
```

```
Out[76]: 2254600301104
```


In [77]: 1 `id(second)`

Out[77]: 2254600301104

In [78]: 1 `num, num2=9, 10`

In [79]: 1 `id(num)`

Out[79]: 2254600301104

In [80]: 1 `id(num2)`

Out[80]: 2254600301136

In [81]: 1 `num is num2`

Out[81]: False

In []: 1