

```
In [1]: spam=1  
spam
```

```
Out[1]: 1
```

```
In [2]: 2+2
```

```
Out[2]: 4
```

```
In [3]: 50-5*6
```

```
Out[3]: 20
```

```
In [4]: (50-5*6)/4
```

```
Out[4]: 5.0
```

```
In [5]: 8/5
```

```
Out[5]: 1.6
```

```
In [6]: 17/3
```

```
Out[6]: 5.666666666666667
```

```
In [7]: 17//3
```

```
Out[7]: 5
```

```
In [8]: 17%3
```

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

```
In [9]: 5*3+2
```

```
Out[9]: 17
```

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

```
Out[10]: 25
```

```
In [11]: 2**7
```

```
Out[11]: 128
```

```
In [12]: width=20  
height=5*9  
width*height
```

```
Out[12]: 900
```

```
In [13]: n
```

```
-----  
NameError                                Traceback (most recent call last)  
Cell In[13], line 1  
----> 1 n  
  
NameError: name 'n' is not defined
```

```
In [14]: 4*3.75-1
```

```
Out[14]: 14.0
```

```
In [15]: tax=12.5/100  
price=100.50  
price*tax
```

```
Out[15]: 12.5625
```

```
In [22]: price + _
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[22], line 1  
----> 1 price + _  
  
TypeError: unsupported operand type(s) for +: 'float' and 'str'
```

```
In [23]: round(_,2)
```

```
-----  
TypeError                                Traceback (most recent call last)  
Cell In[23], line 1  
----> 1 round(_,2)  
  
TypeError: type str doesn't define __round__ method
```

```
In [24]: 'spam eggs'
```

```
Out[24]: 'spam eggs'
```

```
In [25]: "paris rabbit got your back:!)Yay!"
```

```
Out[25]: 'paris rabbit got your back:!)Yay!'
```

```
In [26]: '1975'
```

```
Out[26]: '1975'
```

```
In [27]: 'doesn\'t'
```

```
Out[27]: "doesn't"
```

```
In [28]: "doesn't"
```

```
Out[28]: "doesn't"
```

```
In [29]: ' "Yes,"they said.'
```

Out[29]: ' "Yes,"they said.'

In [30]: `"\"Yes,\"they said."`

Out[30]: '"Yes,"they said.'

In [31]: `' "Isn\'t,"they said.'`

Out[31]: ' "Isn\'t,"they said.'

In [33]: `s='First line\nSecond line'`
`s`

Out[33]: 'First line\nSecond line'

In [34]: `print(s)`

First line
Second line

In [35]: `print('C:\some\name')`

C:\some
ame

<>:1: SyntaxWarning: invalid escape sequence '\s'
 <>:1: SyntaxWarning: invalid escape sequence '\s'
 C:\Users\DELL\AppData\Local\Temp\ipykernel_8060\604294811.py:1: SyntaxWarning: in
 valid escape sequence '\s'
 print('C:\some\name')

In [36]: `print(r'C:\some\name')`

C:\some\name

In [37]: `print("""\nUsage: thingy[OPTIONS]\n\n-h Display this usage message\n-H hostname Hostname to connect to\n""")`

Usage: thingy[OPTIONS]

-h Display this usage message
 -H hostname Hostname to connect to

In [38]: `3*'un'+ 'ium'`

Out[38]: 'unununium'

In [39]: `'Py' 'thon'`

Out[39]: 'Python'

In [40]: `text=('Put several strings within parentheses '`
`'to have them joined together.')`
`text`

Out[40]: 'Put several strings within parentheses to have them joined together.'

```
In [49]: prefix='Py'
prefix='thon'
File "<stdin>",line 1
prefix 'thon'
```

```
Cell In[49], line 3
    File "<stdin>",line 1
        ^
SyntaxError: invalid syntax
```

```
In [50]: prefix='Py'
prefix'thon'
File "<stdin>",line 1
prefix 'thon'
```

```
Cell In[50], line 2
    prefix'thon'
        ^
SyntaxError: invalid syntax
```

```
In [51]: ('un'*3)'ium'
File "<stdin>",line 1
('un' *3) 'ium'
```

```
Cell In[51], line 1
    ('un'*3)'ium'
        ^
SyntaxError: invalid syntax
```

```
In [52]: prefix+'thon'
```

```
-----
NameError                                Traceback (most recent call last)
Cell In[52], line 1
----> 1 prefix+'thon'

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

```
In [53]: word='Python'
word[0]
```

Out[53]: 'P'

```
In [54]: word[5]
```

Out[54]: 'n'

```
In [55]: word[-1]
```

Out[55]: 'n'

```
In [56]: word[-2]
```

Out[56]: 'o'

```
In [57]: word[-6]
```

Out[57]: 'P'

In [58]: word[0:2]

Out[58]: 'Py'

In [59]: word[2:5]

Out[59]: 'tho'

In [60]: word[:2]

Out[60]: 'Py'

In [61]: word[4:]

Out[61]: 'on'

In [62]: word[-2:]

Out[62]: 'on'

In [63]: word[:2]+word[2:]

Out[63]: 'Python'

In [64]: word[:4]+word[4:]

Out[64]: 'Python'

In [67]: word[42]
 traceback (most recent call last):
 File"<stdin>",line 1, in <module>

Cell In[67], line 2
 traceback (most recent call last):
 ^
SyntaxError: invalid syntax. Perhaps you forgot a comma?

In [68]: word[4:42]

Out[68]: 'on'

In [69]: word[42:]

Out[69]: ''

In [72]: word[0]='J'
 File"<stdin>",line 1, in <module>

Cell In[72], line 2
 File"<stdin>",line 1, in <module>
 ^
SyntaxError: invalid syntax

In [73]: word[2:]='py'
 File"<stdin>",line 1, in <module>

```
Cell In[73], line 2
    File"<stdin>",line 1, in <module>
    ^
SyntaxError: invalid syntax
```

```
In [74]: 'J' +word[1:]
```

```
Out[74]: 'Jython'
```

```
In [75]: word[:2]+ 'py'
```

```
Out[75]: 'Pypy'
```

```
In [76]: s='supercalifragilisticexpialidocious'
        len(s)
```

```
Out[76]: 34
```

```
In [77]: squares=[1, 4, 9, 16, 25]
        squares
```

```
Out[77]: [1, 4, 9, 16, 25]
```

```
In [78]: squares[0]
```

```
Out[78]: 1
```

```
In [79]: squares[-1]
```

```
Out[79]: 25
```

```
In [80]: squares[-3:]
```

```
Out[80]: [9, 16, 25]
```

```
In [81]: squares + [36, 49, 64, 81, 100]
```

```
Out[81]: [1, 4, 9, 16, 25, 36, 49, 64, 81, 100]
```

```
In [82]: cubes=[1, 8, 27, 65, 125]
        4 **3
```

```
Out[82]: 64
```

```
In [83]: cubes[3]=64
        cubes
```

```
Out[83]: [1, 8, 27, 64, 125]
```

```
In [84]: cubes.append(216)
        cubes.append(7 ** 3)
        cubes
```

```
Out[84]: [1, 8, 27, 64, 125, 216, 343]
```

```
In [85]: rgb= ["Red", "Green", "Blue"]
         rgba= rgb
         id(rgb) == id(rgba)
```

Out[85]: True

```
In [87]: rgba.append("Alpha")
         rgb
```

Out[87]: ['Red', 'Green', 'Blue', 'Alpha']

```
In [99]: correct_rgba= rgba[:]
         correct_rgba[-1]= "Alpha"
         correct_rgba
```

Out[99]: ['Red', 'Green', 'Blue', 'Alpha']

```
In [101... rgba
```

Out[101... ['Red', 'Green', 'Blue', 'Alpha']

```
In [102... letters = ['a', 'b', 'c', 'd', 'e', 'f', 'g']
         letters
```

Out[102... ['a', 'b', 'c', 'd', 'e', 'f', 'g']

```
In [103... letters[2:5] = ['C', 'D', 'E']
         letters
```

Out[103... ['a', 'b', 'C', 'D', 'E', 'f', 'g']

```
In [104... letters[2:5]= []
         letters
```

Out[104... ['a', 'b', 'f', 'g']

```
In [105... letters[:]= []
         letters
```

Out[105... []

```
In [106... letters= ['a', 'b', 'c', 'd']
         len(letters)
```

Out[106... 4

```
In [1]: a= ['a', 'b', 'c']
         n= [1, 2, 3]
         x= [a, n]
         x
```

Out[1]: [['a', 'b', 'c'], [1, 2, 3]]

```
In [2]: x[0]
```

Out[2]: ['a', 'b', 'c']

In [3]: `x[0][1]`

Out[3]: `'b'`

In [4]: `a, b = 0, 1`
`while a < 10:`
 `print(a)`
 `a, b = b, a+b`

0
1
1
2
3
5
8

In [5]: `i = 256*256`
`print('The value of i is', i)`

The value of i is 65536

In [7]: `a, b = 0, 1`
`while a < 1000:`
 `print(a, end=',')`
 `a, b = b, a+b`

0,1,1,2,3,5,8,13,21,34,55,89,144,233,377,610,987,

In []: