Using python as a calculator

In [1]:
```
2+2
```

Out[1]: 4

In [2]:
```
45-30
```

Out[2]: 15

In [3]:
```
52*41
```

Out[3]: 2132

In [4]:
```
65/45  #float division
```

Out[4]: 1.4444444444444444

In [6]:
```
65//45  #int division
```

Out[6]: 1

In [7]:
```
50-5*6
```

Out[7]: 20

In [8]:
```
50-5*6/4
```

Out[8]: 42.5

In [9]:
```
50-5*6//4
```

Out[9]: 43

In [10]:
```
17%3 # % give you the remainder of the division
```

Out[10]: 2

In [11]:
```
2**2 # " ** " is used for square
```

Out[11]: 4

In [12]:
```
2**7 # it means 2 to the power of 7
```

Out[12]: 128

In [13]:
```
height = 165
weight=5*10
height*weight
```

Out[13]: 8250

In [14]:
```
n
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[14], line 1
----> 1 n

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

In [15]:
```
4*4.75-1
```

Out[15]: 18.0

In [16]:
```
tax = 12.5/3
price=100.50
price*tax
```

Out[16]: 418.75000000000006

In [17]:
```
price + _
```

Out[17]: 519.25

In [18]:
```
round(_,2)
```

Out[18]: 519.25

In [20]:
```
round(_,1)
```

Out[20]: 519.2

TEXT

In [21]:
```
'spam eggs'
```

Out[21]: 'spam eggs'

In [22]:
```
"paris rabbit got your back"
```

Out[22]: 'paris rabbit got your back'

In [23]:
```
'1975'
```

Out[23]: '1975'

In [24]:
```
'doesn\'t' # use \' to escape the quote
```

Out[24]: "doesn't"

In [25]:
```
"doesn't" # or use double quotes
```

Out[25]:
```
"doesn't"
```

In [26]:
```
'"yes",they said'
```

Out[26]:
```
'"yes",they said'
```

In [27]:
```
"\"yes,\" they said."
```

Out[27]:
```
'"yes," they said.'
```

In [29]:
```
s='first line.\n second line.'
s
```

Out[29]:
```
'first line.\n second line.'
```

In [30]:
```
print(s)
```

```
first line.
 second line.
```

In [31]:
```
print('C:\some\name') #here \n is taken as new line
```

```
C:\some
ame
```

In [32]:
```
print(r'C:\some\name') #note the r before the quote
```

```
C:\some\name
```

In [33]:
```
print("""\
      usage:thingy [OPTIONS]
      -h display this usage message
      -H hostname to connect to
     """)
```

```
usage:thingy [OPTIONS]
-h display this usage message
-H hostname to connect to
```

In [34]:
```
# STRING CAN BE GLUED TOGETHER WITH + OPERATOR AND * TO REPEAT THE ELEMENT
3*'un'+'ium' # 3 times 'un' , followed by 'ium'
```

Out[34]:
```
'unununium'
```

In [35]:
```
'py''thon'
```

Out[35]:
```
'python'
```

In [37]:
```
text =( 'put several strings within parameters'
       'to have them joined together')
text
```

Out[37]: 'put several strings within parametersto have them joined together'

In [38]:
```
prefix = 'py'
prefix + 'thon'
```

Out[38]: 'python'

In [40]:
```
word = 'python'
word[0] # character in position 0
```

Out[40]: 'p'

In [41]:
```
word[2] # character in position 2
```

Out[41]: 't'

In [42]:
```
word[-3]
```

Out[42]: 'h'

In [43]:
```
word[-1] # last charecter
```

Out[43]: 'n'

In [45]:
```
word[0:2] # characters form position 0 to position 2
```

Out[45]: 'py'

In [46]:
```
word[:3] # characters from begining to position 3
```

Out[46]: 'pyt'

In [47]:
```
word[4:] #characters from position 4 to end
```

Out[47]: 'on'

In [48]:
```
word[:2] + word[2:]
```

Out[48]: 'python'

In [49]:
```
word[42]
```

```
---------------------------------------------------------------------------
IndexError                                Traceback (most recent call last)
Cell In[49], line 1
----> 1 word[42]

IndexError: string index out of range
```

In [50]:
```
word[4:42]
```

Out[50]: 'on'

In [51]:
```
word[:42]
```

Out[51]:
```
'python'
```

In [52]:
```
word[42:]
```

Out[52]:
```
''
```

In [53]:
```
s='feryeubeyunest'
len(s)
```

Out[53]:
```
14
```

lists

In [54]:
```
squares=[1,4,9,16,25]
squares
```

Out[54]:
```
[1, 4, 9, 16, 25]
```

In [55]:
```
squares[3]
```

Out[55]:
```
16
```

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

Out[56]:
```
16
```

In [59]:
```
squares[-1]
```

Out[59]:
```
25
```

In [60]:
```
squares+[36,49,64,81]
```

Out[60]:
```
[1, 4, 9, 16, 25, 36, 49, 64, 81]
```

In [65]:
```
cubes=[1,8,27,64,125,216,343]
4**3
```

Out[65]:
```
64
```

In [66]:
```
cubes
```

Out[66]:
```
[1, 8, 27, 64, 125, 216, 343]
```

In [68]:
```
cubes[2]=11
cubes
```

Out[68]:
```
[1, 8, 11, 64, 125, 216, 343]
```

In [74]:
```
cubes.append(216)
```

In [72]:
```
cubes
```

Out[72]:
```
[1, 8, 11, 64, 125, 216, 343, 216, 216, 216]
```

In [73]:
```
cubes
```

Out[73]:
```
[1, 8, 11, 64, 125, 216, 343, 216, 216, 216]
```

In [75]:
```
cubes.remove(216)
```

In [76]:
```
cubes
```

Out[76]:
```
[1, 8, 11, 64, 125, 343, 216, 216, 216, 216]
```

In [77]:
```
len(cubes)
```

Out[77]:
```
10
```

In [78]:
```
cubes.append(32)
```

In [79]:
```
cubes
```

Out[79]:
```
[1, 8, 11, 64, 125, 343, 216, 216, 216, 216, 32]
```

In [80]:
```
rgb=["red","yellow","blue"]
```

In [82]:
```
rgba=rgb
```

In [84]:
```
id(rgba)==id(rgb)
```

Out[84]:
```
True
```

In [85]:
```
rgba.append('alpha')
```

In [86]:
```
id(rgba)==id(rgb)
```

Out[86]:
```
True
```

In [87]:
```
rgba
```

Out[87]:
```
['red', 'yellow', 'blue', 'alpha']
```

In [88]:
```
rgb
```

Out[88]:
```
['red', 'yellow', 'blue', 'alpha']
```

In [90]:
```
letter=['a','b','c','d','e','f','g']
letter
```

Out[90]:
```
['a', 'b', 'c', 'd', 'e', 'f', 'g']
```

In [91]:
```
#replace some values
letter[2:5]=['x','y','z']
letter
```

Out[91]:
```
['a', 'b', 'x', 'y', 'z', 'f', 'g']
```

In [98]:
```
#now remove them
letter[2:5]=[]
```

In [101…
```
a=['a','b','c']
n=[1,2,3]
h=[a,n]
h
```

Out[101…
```
[['a', 'b', 'c'], [1, 2, 3]]
```

In [102…
```
a,b=0,1
while a<10:
    print(a)
    a,b=b,a+b
```

```
0
1
1
2
3
5
8
```

In [ ]:

In [ ]: