datatype variablename = some value variablename = value

In [8]:
```
a = 10
b  = 10.5
c = "pradeepthi"
```

In [11]:
```
type(c)
```

Out[11]:
```
str
```

In [12]:
```
a,b,c = 30,9.8,"jhon"
```

In [13]:
```
a
```

Out[13]:
```
30
```

In [14]:
```
b
```

Out[14]:
```
9.8
```

In [15]:
```
c
```

Out[15]:
```
'jhon'
```

In [16]:
```
import keyword
print(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 [23]:
```
a = 10
b  = 10.5
c = "pradeepthi"
```

In [28]:
```
print(a,end=" ")
print(b,end=" ")
print(c,end=" ")
```

```
10 10.5 pradeepthi
```

In [25]:
```
print(a,b,c)
```

```
10 10.5 pradeepthi
```

In [29]:
```
print("the valueodf a is ",a,"the value of b is ",b ,"the valus of c is", c)
```

```
the valueodf a is  10 the value of b is  10.5 the valus of c is pradeepthi
```

In [37]:
```
print("the val of a is %d , b is %f , c is  %s" % (a,b,c))
```

```
the val of a is 10 , b is 10.500000 , c is  pradeepthi
```

In [41]:
```
print("the value of a is  {1} , value of b is {2}, value of c is {0}".format(a,b,c))
```

```
the value of a is  10.5 , value of b is pradeepthi, value of c is 10
```

In [43]:
```
print("the value as {3},he value as {0},he value as {2},he value as {1}".format("prradeepthi","ram","nikhil","SB"))
```

```
the value as SB,he value as prradeepthi,he value as nikhil,he value as ram
```

In [50]:
```
a = int(input("enter a vaalue"))
b = int(input("enter b value"))

c = a+b
print(c)
```

```
enter a vaalue50
enter b value80
130
```

In [46]:
```
type(a)
```

Out[46]:
```
str
```

In [47]:
```
type(b)
```

Out[47]:
```
str
```

In [52]:
```
p = "100"
```

In [53]:
```
type(p)
```

Out[53]:
```
str
```

In [54]:
```
q = int(p)
```

In [55]:
```
type(q)
```

Out[55]:
```
int
```

In [56]:
```
a = 40
b = float(a)
```

In [57]:
```
type(a)
```

Out[57]:
```
int
```

In [58]:
```
type(b)
```

Out[58]:
```
float
```

```
take 4 user inputs
apply addition and sub on first two user inputs , print the values with help of %d
apply multiplication and divission on secon two user inputs , format
```

In [59]:
```
a=int(input("enter a value"))
b=int(input("enter b value"))
c=int(input("enter c value"))
d=int(input("enter d value"))
summ=a+b
sub=a-b
mul=c*d
div=c/d
print("the sum is %d, the sub is %d"%(summ,sub))
print("the mul is {}, the div is {}".format(mul,div))
```

```
enter a value20
enter b value20
enter c value23
enter d value34
the sum is 40, the sub is 0
the mul is 782, the div is 0.6764705882352942
```

In [76]:
```
string = 'hello welcome to smartbridge 1 2 3 '
#string is made of all similar kind of character datatype
```

In [77]:
```
string[28] = "p"
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-77-7516329f90c4> in <module>
----> 1 string[28] = "p"

TypeError: 'str' object does not support item assignment
```

In [78]:
```
string[10:]
```

Out[78]:
```
'ome to smartbridge 1 2 3 '
```

In [82]:
```
string[:21]
```

Out[82]:
```
'hello welcome to smar'
```

In [80]:
```
string[10:17:2] 166
```

Out[80]:
```
'oet '
```

In [83]:
```
string = "1,2,3,4,5,6,7,8"
```

In [93]:
```
string[-7:-2]
```

Out[93]:
```
'5,6,7'
```

In [94]:
```
dir(string)
```

Out[94]:
```
['__add__',
 '__class__',
 '__contains__',
 '__delattr__',
 '__dir__',
 '__doc__',
 '__eq__',
 '__format__',
 '__ge__',
 '__getattribute__',
 '__getitem__',
 '__getnewargs__',
 '__gt__',
 '__hash__',
 '__init__',
 '__init_subclass__',
 '__iter__',
 '__le__',
 '__len__',
 '__lt__',
 '__mod__',
 '__mul__',
 '__ne__',
 '__new__',
 '__reduce__',
 '__reduce_ex__',
 '__repr__',
 '__rmod__',
 '__rmul__',
 '__setattr__',
 '__sizeof__',
 '__str__',
 '__subclasshook__',
 'capitalize',
 'casefold',
 'center',
 'count',
 'encode',
 'endswith',
 'expandtabs',
 'find',
```

```
'format',
'format_map',
'index',
'isalnum',
'isalpha',
'isascii',
'isdecimal',
'isdigit',
'isidentifier',
'islower',
'isnumeric',
'isprintable',
'isspace',
'istitle',
'isupper',
'join',
'ljust',
'lower',
'lstrip',
'maketrans',
'partition',
'replace',
'rfind',
'rindex',
'rjust',
'rpartition',
'rsplit',
'rstrip',
'split',
'splitlines',
'startswith',
'strip',
'swapcase',
'title',
'translate',
'upper',
'zfill']
```

In [109]:
```
string2 = "hie,how,are,you , how.howhow"
```

In [96]:
```
string2.capitalize()
```

Out[96]:
```
'Hie how are you'
```

In [97]:
```
string2.casefold()
```

Out[97]:
```
'hie how are you'
```

In [100]:
```
string2.split(',')
```

Out[100]:
```
['hie', 'how', 'are', 'you']
```

In [104]:
```
string2.center(40,"*") 11 , 30 12345678910111213141516171819192122232425262782930
```

Out[104]:
```
'************hie,how,are,you*************'
```

In [110]:
```
string2.count("how")
```

Out[110]:
```
4
```

In [124]:
```
list1 = [1 , 20.5,"john","pradeepthi"]
```

In [113]:
```
list1[2]
```

Out[113]:
```
'john'
```

In [114]:
```
list1[1:5]
```

Out[114]:
```
[20.5, 'john', 'pradeepthi']
```

In [115]:
```
list1[2] = "smartbrridge"
```

In [116]:
```
list1
```

Out[116]:
```
[1, 20.5, 'smartbrridge', 'pradeepthi']
```

In [117]:
```
dir(list1)
```

Out[117]:
```
['__add__',
 '__class__',
 '__contains__',
 '__delattr__',
 '__delitem__',
 '__dir__',
 '__doc__',
 '__eq__',
 '__format__',
 '__ge__',
 '__getattribute__',
 '__getitem__',
 '__gt__',
 '__hash__',
 '__iadd__',
 '__imul__',
 '__init__',
 '__init_subclass__',
 '__iter__',
 '__le__',
 '__len__',
 '__lt__',
 '__mul__',
 '__ne__',
 '__new__',
 '__reduce__',
 '__reduce_ex__',
 '__repr__',
 '__reversed__',
 '__rmul__',
 '__setattr__',
 '__setitem__',
 '__sizeof__',
 '__str__',
 '__subclasshook__',
 'append',
 'clear',
 'copy',
 'count',
 'extend',
 'index',
```

```
 'insert',
 'pop',
 'remove',
 'reverse',
 'sort']
```

In [118]:
```
list1
```

Out[118]:
```
[1, 20.5, 'smartbrridge', 'pradeepthi']
```

In [120]:
```
list1.append(1)
```

In [121]:
```
list1
```

Out[121]:
```
[1, 20.5, 'smartbrridge', 'pradeepthi', 1]
```

In [122]:
```
list1.clear()
```

In [123]:
```
list1
```

Out[123]:
```
[]
```

In [125]:
```
list2 = list1.copy()
```

In [126]:
```
list2
```

Out[126]:
```
[1, 20.5, 'john', 'pradeepthi']
```

In [127]:
```
list1
```

Out[127]:
```
[1, 20.5, 'john', 'pradeepthi']
```

In [128]:
```
list1.count(20.5)
```

Out[128]:
```
1
```

In [130]:
```
list1.extend([1,2,3,4])
```

In [131]:
```
list1
```

Out[131]:
```
[1, 20.5, 'john', 'pradeepthi', 1, 2, 3, 4]
```

In [132]:
```
list1.append([1,2,3,4,5,6,7,8])
```

In [133]:
```
list1
```

Out[133]:
```
[1, 20.5, 'john', 'pradeepthi', 1, 2, 3, 4, [1, 2, 3, 4, 5, 6, 7, 8]]
```

In [138]:
```
list1.index([1, 2, 3, 4, 5, 6, 7, 8])
```

Out[138]:
```
8
```

In [146]:
```
list1.insert(2,40)
```

In [147]:
```
list1
```

Out[147]:
```
[1,
 20.5,
 40,
 20,
 5,
 'john',
 'pradeepthi',
 1,
 2,
 3,
 4,
 [1, 2, 3, 4, 5, 6, 7, 8],
 5]
```

In [150]:
```
list1.remove([1, 2, 3, 4, 5, 6, 7, 8])
```

In [151]:
```
list1
```

Out[151]:
```
[1, 20.5, 40, 20, 5, 'john', 'pradeepthi', 1, 2, 3, 4]
```

In [152]:
```
list1.reverse()
```

In [153]:
```
list1
```

Out[153]:
```
[4, 3, 2, 1, 'pradeepthi', 'john', 5, 20, 40, 20.5, 1]
```

In [154]:
```
list1.sort()
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-154-73031ee8c861> in <module>
----> 1 list1.sort()

TypeError: '<' not supported between instances of 'str' and 'int'
```

In [155]:
```
list1 = [1,6,8,5,4,2,1,29]
```

In [156]:
```
list1.sort()
```

In [157]:
```
list1
```

Out[157]:
```
[1, 1, 2, 4, 5, 6, 8, 29]
```

In [161]:
```
list1[5::-1]
```

Out[161]:
```
[8, 6]
```

In [162]:
```
list1 = list1[5:-1]
```

In [163]:
```
list1
```

Out[163]:
```
[]
```

In [168]:
```
list3 = [i for i in range(10) if(i%2==0)]
```

In [169]:
```
list3
```

Out[169]:
```
[0, 2, 4, 6, 8]
```

In [171]:
```
tuple = (1, 2 ,3 , "john", "pradeepthi")
```

In [174]:
```
tuple[2] = "smartbridge"
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-174-aa3e31d5b87d> in <module>
----> 1 tuple[2] = "smartbridge"

TypeError: 'tuple' object does not support item assignment
```

In [175]:
```
dir(tuple)
```

Out[175]:
```
['__add__',
 '__class__',
 '__contains__',
 '__delattr__',
 '__dir__',
 '__doc__',
 '__eq__',
 '__format__',
 '__ge__',
 '__getattribute__',
 '__getitem__',
 '__getnewargs__',
 '__gt__',
 '__hash__',
 '__init__',
 '__init_subclass__',
 '__iter__',
 '__le__',
 '__len__',
 '__lt__',
 '__mul__',
 '__ne__',
 '__new__',
 '__reduce__',
 '__reduce_ex__',
 '__repr__',
 '__rmul__',
 '__setattr__',
 '__sizeof__',
 '__str__',
 '__subclasshook__',
 'count',
 'index']
```

In [176]:
```
tuple.count(1)
```

Out[176]:
```
1
```

In [177]:
```
tuple.index("pradeepthi")
```

Out[177]: 4

In [ ]:
```

```