assignment on basics arithemetic operators,variables,data types

basics of arithemetic operators

In [3]:
```
10+10
```

Out[3]: 20

In [4]:
```
10-5
```

Out[4]: 5

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

Out[5]: 5.0

In [6]:
```
10//2
```

Out[6]: 5

In [7]:
```
10*3
```

Out[7]: 30

In [8]:
```
a=10
b=20
c=a+b
```

In [9]:
```
c
```

Out[9]: 30

bodmas

In [11]:
```
(5+5)*3//2-1
```

Out[11]: 14

In [12]:
```
num1=12
num2=18
add=num1+num2
print('addition of num1 and num2 is',add)
```

```
addition of num1 and num2 is 30
```

In [13]:
```
num1=20
num2=30
print(num1+num2)
print(num2-num1)
print(num1*num2)
print(num2//num2)
```

```
50
10
600
1
```

In [14]:
```
1+2
2+3
3+4
```

Out[14]: 7

In [15]:
```
print(1+2)
print(2+3)
print(3+4)
```

```
3
5
7
```

variables and data types

In [17]:
```
1var=10 #variable never start with digit
```

```
  Cell In[17], line 1
    1var=10 #variable never start with digit
    ^
SyntaxError: invalid decimal literal
```

In [50]:
```
var$=20 #variable should never have an special character
```

```
  Cell In[50], line 1
    var$=20 #variable should never have an special character
       ^
SyntaxError: invalid syntax
```

In [52]:
```
var_=20 #only _ is allowed in special character
print(var_)
```

```
20
```

In [54]:
```
var=30 #variables are case sensitive
VAR
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[54], line 2
      1 var=30 #variables are case sensitive
----> 2 VAR

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

In [56]:
```
a,b,c=10,20 #number of varible should be equal to number of arguments
a,b,c
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
Cell In[56], line 1
----> 1 a,b,c=10,20 #number of varible should be equal to number of arguments
      2 a,b,c

ValueError: not enough values to unpack (expected 3, got 2)
```

In [58]:
```
a=1,2,3,4,5,6,7 #variable doesnt have a length limit
a
```

Out[58]:
```
(1, 2, 3, 4, 5, 6, 7)
```

In [60]:
```
global=19 #no keyword can be used as variable
```

```
  Cell In[60], line 1
    global=19 #no keyword can be used as variable
          ^
SyntaxError: invalid syntax
```

In [62]:
```
import keyword #keywords list
keyword.kwlist
```

Out[62]:
```
['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']
```

data types

In [64]:
```
int=20 #integer
type(int)
```

Out[64]: int

In [66]:
```
v=37.4 #float
v
```

Out[66]: 37.4

In [68]:
```
print(type(v))
```

```
<class 'float'>
```

In [70]:
```
b='nit' #string
b
```

Out[70]: 'nit'

In [72]:
```
type(b)
```

Out[72]: str

In [74]:
```
s=10+20J #complex
s
```

Out[74]: (10+20j)

In [76]:
```
type(s)
```

Out[76]: complex

In [78]:
```
s.real
```

Out[78]: 10.0

In [80]:
```
s.imag
```

Out[80]: 20.0

In [82]:
```
b=True #boolean
b
```

Out[82]: True

In [84]:
```
type(b)
```

Out[84]: bool

In [86]:
```
b+False
```

Out[86]: 1

In [88]:
```
True*False
```

Out[88]: 0

In [90]:
```
a=True
b=False
```

In [92]:
```
a//b #zero division
```

```
---------------------------------------------------------------------------
ZeroDivisionError                         Traceback (most recent call last)
Cell In[92], line 1
----> 1 a//b

ZeroDivisionError: integer division or modulo by zero
```

In [94]:
```
b//a
```

Out[94]: 0

string indexing

In [96]:
```
a='python'
a
```

Out[96]: 'python'

In [98]:
```
a[0] #index of p
```

Out[98]: 'p'

In [100…
```
print(a[5])
print(a[4])
print(a[3])
print(a[2])
print(a[1])
print(a[0])
```

```
n
o
h
t
y
p
```

In [102…
```
a
```

Out[102… 'python'

In [104…
```
for i in a: #for loop
    print(i)
```

p
y
t
h
o
n

slicing

In [106…
```
s='data analytics'
s
```

Out[106… 'data analytics'

In [108…
```
s[:]
```

Out[108… 'data analytics'

In [110…
```
s[::]
```

Out[110… 'data analytics'

In [112…
```
s[0:14]
```

Out[112… 'data analytics'

In [114…
```
s[0:14:2] #slicimg of first element to last element with every 2nd element to pr
```

Out[114… 'dt nltc'

In [116…
```
s[0:14:6]
```

Out[116… 'dnc'

In [118…
```
s[::-1] #inverted slicing
```

Out[118… 'scitylana atad'

In [120…
```
s
```

Out[120… 'data analytics'

In [122…
```
s[::8] #slicing of first (0) elemnt and (7) element
```

Out[122… 'dl'

In [124…
```
s[::-2] #inverted slicing with every second element
```

Out[124… 'siyaaaa'

In [ ]:

In [ ]: