Python Variables

In [1]:
```
value = 25 #Integer
print(value)
```

```
25
```

In [3]:
```
name='Pushpa' #String
name
```

Out[3]:
```
'Pushpa'
```

In [5]:
```
price= 9.99 #float datatype
price
```

Out[5]:
```
9.99
```

In [6]:
```
is_active = True
type(is_active)
```

Out[6]:
```
bool
```

storing and printing value

In [7]:
```
x=10
print(x)
```

```
10
```

In [8]:
```
#using variables in expressions
a=5
b=10
res=a+b
print(res)
```

```
15
```

In [9]:
```
#changing the value of variables
score=35
print(score)
```

```
35
```

In [10]:
```
score=78
score
```

Out[10]:
```
78
```

In [13]:
```
#concatinating strings
first_name="Narendra"
last_name="Modi"
```

```
full_name=first_name+ " "+last_name
print(full_name)
```

```
Narendra Modi
```

In [14]:
```
#using variables in calculations
length=10
breadth = 20
area=length*breadth
print(area)
```

```
200
```

In [15]:
```
#Reassigning the values
x=10
print(x)
x=20
print(x)
```

```
10
20
```

In [16]:
```
v=5 #variable declaration
v
```

Out[16]: 5

In [17]:
```
id(v)
```

Out[17]: 140731226960936

In [18]:
```
5=v
```

```
  Cell In[18], line 1
    5=v
    ^
SyntaxError: cannot assign to literal here. Maybe you meant '==' instead of '='?
```

In [19]:
```
1v = 9
```

```
  Cell In[19], line 1
    1v = 9
    ^
SyntaxError: invalid decimal literal
```

In [20]:
```
v1=9
v1
```

Out[20]: 9

In [21]:
```
a2 = 10
A2
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[21], line 2
      1 a2 = 10
----> 2 A2

NameError: name 'A2' is not defined
```

In [22]:
```
a2
```

Out[22]:
```
10
```

In [23]:
```
v@ =23
v@
```

```
  Cell In[23], line 1
    v@ =23
       ^
SyntaxError: invalid syntax
```

In [24]:
```
v_ = 10
v_
```

Out[24]:
```
10
```

In [25]:
```
if = 90
if
```

```
  Cell In[25], line 1
    if = 90
       ^
SyntaxError: invalid syntax
```

In [26]:
```
for = 89
for
```

```
  Cell In[26], line 1
    for = 89
        ^
SyntaxError: invalid syntax
```

In [3]:
```
FOR = 90
FOR
```

Out[3]:
```
90
```

In [4]:
```
prefix = "Data"
prefix="science"
```

In [5]:
```
prefix
```

Out[5]:
```
'science'
```

In [6]:
```
'Data'+prefix
```

Out[6]: 'Datascience'

In [7]:
```
#variables in python
first_name='Rohit'
last_name='sharma'
country='India'
city='Hyderabad'
age=21
is_married=True
skills=['c','python','java','sql','DataScience']
person_info={'first_name':'virat',
             "last_name":"kohli",
             "country":"India",
             "city":'Delhi'}
```

In [8]:
```
print('First name:',first_name)
print("First name length: ",len(first_name))
print('Last Name: ',last_name)
print('last name length: ',len(last_name))
print('Country: ',country)
print('city: ',city)
print('Age: ',age)
print('Married: ',is_married)
print('Skills: ',skills)
print('person information:',person_info)
```

```
First name: Rohit
First name length:  5
Last Name:  sharma
last name length:  6
Country:  India
city:  Hyderabad
Age:  21
Married:  True
Skills:  ['c', 'python', 'java', 'sql', 'DataScience']
person information: {'first_name': 'virat', 'last_name': 'kohli', 'country': 'Indi
a', 'city': 'Delhi'}
```

Data types

In [32]:
```
i=30
i
```

Out[32]: 30

In [33]:
```
type(i)
```

Out[33]: int

In [34]:
```
f=23.6
print(f)
type(f)
```

```
23.6
```

Out[34]:
```
float
```

In [35]:
```
f1=1e0
f1
```

Out[35]:
```
1.0
```

In [38]:
```
f2=1e1
f2
```

Out[38]:
```
10.0
```

In [40]:
```
f3 = 1e2
f3
```

Out[40]:
```
100.0
```

In [41]:
```
f4=1E3
f4
```

Out[41]:
```
1000.0
```

In [42]:
```
a=10
b=20
a+b
a-b
```

Out[42]:
```
-10
```

In [43]:
```
print(a+b)
print(a-b)
```

```
30
-10
```

In [44]:
```
num1 = 20
num2 = 30
add = num1+num2
print("The addition of",num1,'and',num2,"is",add)
```

```
The addition of 20 and 30 is 50
```

In [45]:
```
num1 = 90
num2 = 60
add = num1+num2
print("the addition of {} and {} is {}".format(num1,num2,add))
```

```
the addition of 90 and 60 is 150
```

In [46]:
```
#complex data type
c=1+2j
c
```

Out[46]: (1+2j)

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

Out[47]: complex

In [48]:
```
c.real
```

Out[48]: 1.0

In [49]:
```
c.imag
```

Out[49]: 2.0

In [51]:
```
c=5+10j
d=1+8j
print(c+d)
print(c-d)
```

```
(6+18j)
(4+2j)
```

In [52]:
```
b = true
b
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[52], line 1
----> 1 b = true
      2 b

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

In [53]:
```
#boolean
b= True
b
```

Out[53]: True

In [54]:
```
type(b)
```

Out[54]: bool

In [55]:
```
int(True)
```

Out[55]: 1

In [56]:
```
int(False)
```

Out[56]: 0

In [57]:
```
True + False
```

Out[57]: 1

In [58]:
```
True+True
```

Out[58]: 2