variables in python

In [1]:
```
# variables dosent start with digit
# no special characters are used only underscore "_"
# specified keywords are not used
```

In [2]:
```
first_name="Akshitha"
last_name="Perumandla"
Qualification="graduate"
country="India"
skills=["python","sql","powerbi"]
Age=21
```

In [5]:
```
first_name
last_name
skills
```

Out[5]:
```
['python', 'sql', 'powerbi']
```

In [10]:
```
# to print all the statements we use print function
print(first_name)
print(last_name)
print(skills)
```

```
Akshitha
Perumandla
['python', 'sql', 'powerbi']
```

printing the values stored in the variables

In [9]:
```
print("First_name:",first_name)
```

```
First_name: Akshitha
```

In [11]:
```
print("first_name_length:",len(first_name))
```

```
first_name_length: 8
```

In [14]:
```
print("first_name_index:",first_name[0])
```

```
first_name_index: A
```

In [15]:
```
print("Last_name:",last_name)
```

```
Last_name: Perumandla
```

In [17]:
```
print("Country:",country)
```

```
Country: India
```

Declaring the multiple variables in one line

In [20]:
```
print(first_name,last_name,country)
```

```
Akshitha Perumandla India
```

In [23]:
```
print("Total_name:",first_name+" "+last_name)
```

```
Total_name: Akshitha Perumandla
```

operators

In [24]:
```
x=3
y=5
x+y
```

Out[24]: 8

In [25]:
```
x*y
```

Out[25]: 15

In [26]:
```
x/y
```

Out[26]: 0.6

In [27]:
```
x//y
```

Out[27]: 0

In [29]:
```
x^5
```

Out[29]: 6

In [30]:
```
x**y
```

Out[30]: 243

In [50]:
```
x="Akshitha"
y="peumandla"
age=19
study=12
```

In [45]:
```
print(x+" "+ y)
```

```
Akshitha peumandla
```

In [46]:
```
print(x+age)        # we cannot add string and integer
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-46-e21dfd76f6b0> in <module>
----> 1 print(x+age)

TypeError: can only concatenate str (not "int") to str
```

In [51]:
```
print(x*y)          # we cannot multiply strings
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-51-fa88d19b8e29> in <module>
----> 1 print(x*y)

TypeError: can't multiply sequence by non-int of type 'str'
```

In [54]:
```
print(study+age)
```

```
31
```

In [55]:
```
print(study*age)
```

```
228
```

checking data types

In [56]:
```
type(age)
```

Out[56]:
```
int
```

In [57]:
```
print(type(10))
```

```
<class 'int'>
```

In [58]:
```
print(type(3.14))
```

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

In [59]:
```
print(type(1+3j))
```

```
<class 'complex'>
```

In [66]:
```
print(type("Akshitha"))
```

```
<class 'str'>
```

In [63]:
```
print(type([1,2,3]))
```

```
<class 'list'>
```

In [71]:
```
print(type({'name':'Akshitha','age':19}))
```

```
<class 'dict'>
```

In [72]:
```
print(type({'akshitha',19,'indian'}))
```

```
<class 'set'>
```

In [73]:
```
print(type(('akshitha',19,"indian")))
```

```
<class 'tuple'>
```

In [74]:
```
print(type(3!=3))
```

```
<class 'bool'>
```

Arithmetic operators in python

In [77]:
```
print('Addition:',1+2)
print('subtraction',2-1)
print('multiplication',3*1)
print('division',3/1)
```

```
Addition: 3
subtraction 1
multiplication 3
division 3.0
```

In [79]:
```
print('division without remainder:', 7//2)
```

```
division without remainder: 3
```

In [80]:
```
print("exponential:",3**2)
```

```
exponential: 9
```

Floating numbers

In [81]:
```
print("Floating number,PI",3.14)
```

```
Floating number,PI 3.14
```

In [84]:
```
print('Floating number,gravity',9.81)
```

```
Floating number,gravity 9.81
```

complex numbers

In [86]:
```
print('complex number:',1+3j)
```

```
complex number: (1+3j)
```

In [90]:
```
(1+3j).real
```

Out[90]:
```
1.0
```

In [91]:
```
print('multiplying complex number:',(1+1j)*(1-1j))
```

```
multiplying complex number: (2+0j)
```

In [98]:
```
a=5
b=8
total=a+b
diff=a-b
product=a*b
remainder=a%b
floor_division=a//b
exponential=a**b

print('a+b=',total)
print('a-b=',diff)
print('a*b=',product)
print('a%b=',remainder)
print('a//b=',floor_division)
print('a**b=',exponential)
```

```
a+b= 13
a-b= -3
a*b= 40
a%b= 5
a//b= 0
a**b= 390625
```

declaring values and oraganizing them together

In [99]:
```
num_one=3
num_two=4

total=num_one+num_two
print('total:',total)
```

```
total: 7
```

In [100]:
```
diff=num_one-num_two
print('total:',diff)
```

```
total: -1
```

In [101]:
```
product=num_one*num_two
print('product:',product)
```

```
product: 12
```

In [102]:
```
division=num_one/num_two
print('division:',division)
```

```
division: 0.75
```

calculating area of circle

In [103]:
```
radius=10
area_of_circle=3.14*radius**2
print('area of circle:',area_of_circle)
```

```
area of circle: 314.0
```

calculating area of rectangle

In [104]:
```
length=10
breadth=20
area_of_rectangle=length*breadth
print('Area of rectangle:',area_of_rectangle)
```

```
Area of rectangle: 200
```

calculating the weigth of an object

In [106]:
```
mass=75
gravity=9.81
weight=mass*gravity
print(weight,"N")
```

```
735.75 N
```

In [107]:
```
print(3>2)
```

```
True
```

In [109]:
```
print(len("avacado")==len("mango"))
```

```
False
```

In [ ]:
```

```