Python Lecture 1

Airthmetic operation

In [4]:

```
2 + 2
```

Out[4]:

```
4
```

In [ ]:

```
2 * 3
```

In [6]:

```
3 / 2
```

Out[6]:

```
1.5
```

In [7]:

```
3 // 2
```

Out[7]:

```
1
```

Conditional Operation

In [8]:

```
3 > 5
```

Out[8]:

```
False
```

In [9]:

```
3 == 3
```

Out[9]:

```
True
```

In [10]:

```
3 < 5
```

Out[10]:

```
True
```

In [11]:

```
3 < 3
```

Out[11]:

```
False
```

In [12]:

```
3 <= 3
```

Out[12]:

```
True
```

In [13]:

```
2 != 3
```

Out[13]:

```
True
```

In [14]:

```
2 != 2
```

Out[14]:

```
False
```

Logical Operators

In [15]:

```
2 and 3
```

Out[15]:

```
3
```

In [16]:

```
(1 < 2) and (2 > 3)
```

Out[16]:

```
False
```

In [17]:

```
(1 > 2) and (2 > 3)
```

Out[17]:

```
False
```

In [18]:

```
2 or 3
```

Out[18]:

```
2
```

In [19]:

```
True or True
```

Out[19]:

```
True
```

In [20]:

```
not 0
```

Out[20]:

```
True
```

In [21]:

```
not 1
```

Out[21]:

```
False
```

In [22]:

```
3 // 2
```

Out[22]:

```
1
```

In [23]:

```
3 / 2
```

Out[23]:

```
1.5
```

In [24]:

```
2 / 2
```

Out[24]:

```
1.0
```

In [25]:

```
2 // 2
```

Out[25]:

```
1
```

In [28]:

```
# Remainder
2 % 2
```

Out[28]:

```
0
```

In [31]:

```
# Remainder
# two
```

In [32]:

```
# 2 / 3
```

Variable and Data Types

In [34]:

```
age = 35
```

In [36]:

```
age
```

Out[36]:

```
35
```

In [38]:

```
name = "pankaj"
```

In [39]:

```
print(name)
```

```
pankaj
```

In [40]:

```
myname = name
```

In [41]:

```
print(myname)
```

```
pankaj
```

In [43]:

```
hobby = "chess"
```

In [45]:

```
alphanumeric = "123pankaj"
```

In [46]:

```
#### Variable example
```

In [47]:

```
i = 5
```

In [48]:

```
j = i # using the value of i
```

In [52]:

```
# J need be be re-initalize :
j = 3
```

In [51]:

```
print(j)
```

```
3
```

In [53]:

```
name= 'pankaj'
```

In [54]:

```
NAME = 'suresh'
```

In [55]:

```
print(name)
```

```
pankaj
```

In [57]:

```
print(NAME)
```

```
suresh
```

In [58]:

```
@name = 'pankaj'
```

```
  File "<ipython-input-58-a017766e4128>", line 1
    @name = 'pankaj'
          ^
SyntaxError: invalid syntax
```

In [59]:

```
_name = 'pankaj'
```

In [60]:

```
print(_name)
```

```
pankaj
```

In [61]:

```
7name = 'p'
```

```
  File "<ipython-input-61-1b18c9afe7d9>", line 1
    7name = 'p'
     ^
SyntaxError: invalid syntax
```

In [62]:

```
name1 ='p'
```

In [63]:

```
print(name1)
```

```
p
```

In [67]:

```
sam@ = 'king' # Special characters are not allowed in Python
```

```
  File "<ipython-input-67-20caf9fdadf3>", line 1
    sam@ = 'king' # Special characters are not allowed in Python
       ^
SyntaxError: invalid syntax
```

In [68]:

```
sam_ = 'king'
```

In [70]:

```
print(sam_)
```

```
king
```

Data Types

In [71]:

```
# Numeric Data
```

In [72]:

```
# int
a = 5
b = -5
```

In [73]:

```
print(a)
```

```
5
```

In [74]:

```
print(b)
```

```
-5
```

In [75]:

```
# float - Decimal number
```

In [76]:

```
x = 5.5
y = -5.9
```

In [77]:

```
print(x)
```

```
5.5
```

In [78]:

```
print(y)
```

```
-5.9
```

In [79]:

```
# Complex number
z = 1j
```

In [80]:

```
print(z)
```

```
1j
```

In [86]:

```
# Check what is the data type of variable - function : type()
```

In [82]:

```
type(a)
```

Out[82]:

```
int
```

In [83]:

```
type(y)
```

Out[83]:

```
float
```

In [84]:

```
type(z)
```

Out[84]:

```
complex
```

In [85]:

```
type(name)
```

Out[85]:

```
str
```

In [87]:

```
#I can convert  from 1 datatype to 2nd datatype
```

In [89]:

```
x = 1 # int
y = 2.8 # float
z = 1j # complex
```

In [90]:

```
# convert int to float - Type Coversion
a = float(x)
print(a)
```

```
1.0
```

In [91]:

```
type(x)
```

Out[91]:

```
int
```

In [92]:

```
type(a)
```

Out[92]:

```
float
```

In [93]:

```
print(y)
```

```
2.8
```

In [94]:

```
type(y)
```

Out[94]:

```
float
```

In [95]:

```
b = int(y)
print(b)
```

```
2
```

In [ ]:

```
c = complex()
```