In [2]:
```
age = 25

print(age)
```

```
25
```

In [ ]:
```

```

In [3]:
```
stringName = "Welcome to Machine Learning Fundamentals"
```

In [4]:
```
# split :

#          stringName.split(" special charachter")
```

In [5]:
```
res1 = stringName.split(" ")
print(res1)
```

```
['Welcome', 'to', 'Machine', 'Learning', 'Fundamentals']
```

In [6]:
```
type(stringName)
```

Out[6]:
```
str
```

In [7]:
```
type(res1)
```

Out[7]:
```
list
```

In [8]:
```
res2 = stringName.split("e")
print(res2)
```

```
['W', 'lcom', ' to Machin', ' L', 'arning Fundam', 'ntals']
```

In [ ]:
```

```

In [12]:
```
listName = [85, 45, 45.459, True, "ICt", 'python']

listName2 = ["45", 'ICT']
```

In [10]:
```
# join :

# "special character".join(listName)
```

In [14]:
```
res4 = " ".join(listName2)
print(res4)
```

```
45 ICT
```

In [15]:
```
res4 = "--".join(listName2)
print(res4)
```

```
45--ICT
```

In [ ]:
```

```

List

In [17]:
```
listName = [85, 45, 45.459, True, "ICt", 'python']
```

In [ ]:
```
# slicing

#listName[start : end : stepSize]
```

In [19]:
```
print(listName[1 : 4])
print(listName[1 : : 2])
```

```
[45, 45.459, True]
[45, True, 'python']
```

In [ ]:
```

```

In [21]:
```
print(listName[4])
print(listName[-2])
```

```
ICt
ICt
```

In [22]:
```
listName = [85, 45, 45.459, True, "ICt", 'python', [1, 2, 3, 4, 5]]
```

In [25]:
```
print(listName[6][2])
print(listName[-1][-3])
```

```
3
3
```

In [ ]:
```

```

In [29]:
```
print(True in listName)
print(True not in listName)
print(5 in listName[-1])
```

```
True
False
True
```

In [ ]:
```

```

In [30]:
```
# mutable : modified
```

In [36]:
```
listName = [85, 45, 45.459, True, "ICt", 'python', [1, 2, 3, 4, 5]]
```

In [37]:
```
listName.append(99)
print(listName)
```

```
[85, 45, 45.459, True, 'ICt', 'python', [1, 2, 3, 4, 5], 99]
```

In [38]:
```
# insert

listName.insert(5, "Academy")
print(listName)
```

```
[85, 45, 45.459, True, 'ICt', 'Academy', 'python', [1, 2, 3, 4, 5], 99]
```

In [39]:
```
# update

listName[2] = 100
print(listName)
```

```
[85, 45, 100, True, 'ICt', 'Academy', 'python', [1, 2, 3, 4, 5], 99]
```

In [40]:
```
# update

listName[-2][2] = "ML"
print(listName)
```

```
[85, 45, 100, True, 'ICt', 'Academy', 'python', [1, 2, 'ML', 4, 5], 99]
```

In [ ]:

In [41]:
```
# with respect to value

listName.remove("python")
print(listName)
```

```
[85, 45, 100, True, 'ICt', 'Academy', [1, 2, 'ML', 4, 5], 99]
```

In [42]:
```
# with respect position

del listName[3]
print(listName)
```

```
[85, 45, 100, 'ICt', 'Academy', [1, 2, 'ML', 4, 5], 99]
```

In [ ]:

Tuple

In [60]:
```
tupleName = (85, 45, True, "ICt", 'python')
```

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

Out[46]:
```
tuple
```

In [47]:
```
tupleName.index(True)
```

Out[47]:
```
3
```

In [48]:
```
# insert
# update
# remove
```

In [66]:
```
word = (100, 99, "Nitish")
type(word)
```

Out[66]:
```
tuple
```

In [ ]:

In [67]:
```
result = tupleName[0 : 2] + word + tupleName[2 : len(tupleName)]

# result = tupleName[ : 2] + word + tupleName[2 : ]
```

In [68]:
```
result
```

Out[68]:
```
(85, 45, 100, 99, 'Nitish', True, 'ICt', 'python')
```

In [ ]:

In [ ]:

In [ ]:

conditional statements

In [ ]:
```
if (expression) :
    statement....
else :
    statement
```

In [69]:
```
num = 20

if (num > 20) :
    print(greater)
else :
    print("num is equal")
```

```
num is equal
```

In [70]:
```
num = 20

if (num > 20) :
    print(greater)
elif (num < 20) :
    print("num is smaller")
else :
    print("num is equal")
```

```
num is equal
```

In [ ]:

In [ ]:
```
for (int i = 0 ; i < n; i ++)
```

In [ ]:
```
for i in range(0, n) :
    statements...
    task
```

In [ ]:

In [81]:
```
listName = [85, 45, 45.459, 100, "ICT", 'python', [1, 2, 3, 4, 5]]
length = len(listName)
```

In [75]:
```
# range(start, end, stepSize)
for nitish in range(0, length, 2)  :
    print(listName[nitish])
```

```
85
45.459
ICt
[1, 2, 3, 4, 5]
```

In [76]:
```
for nitish in range(1, length, 2)  :
    print(listName[nitish])
```

```
45
True
python
```

In [ ]:

In [86]:
```
for nitish in listName  :
    if nitish == "ICT" :
        print("Hurray")
        break
    elif nitish == 100 :
        print("Corona")
    else :
        print("Good Bye")
```

```
Good Bye
Good Bye
Good Bye
Corona
Hurray
```

In [89]:
```
for nitish in listName  :
    if nitish == "ICT" :
        continue
        print("Hurray")
    elif nitish == 100 :
        print("Corona")
    else :
        print("Good Bye")
```

```
Good Bye
Good Bye
Good Bye
Corona
Good Bye
Good Bye
```

In [ ]:

In [90]:
```
for i in "string" :
    if i == "i" :
        break
    else :
        print(i)
```

```
s
t
r
```

In [91]:
```
for i in "string" :
    if i == "i" :
        continue
    else :
        print(i)
```

```
s
t
r
n
g
```

In [ ]:

In [ ]:

function

In [ ]:

In [ ]:
```
def funtionName(a, b) :
    task
    return

functionName(a, b)
```

In [ ]:
```
```

In [92]:
```
def concat(a, b) :
    return a + b
```

In [94]:
```
print(concat("Hello ", "World"))
```

```
Hello World
```

In [95]:
```
print(concat(58, 45))
```

```
103
```

In [96]:
```
print(concat([4, 5], ["a", "b"]))
```

```
[4, 5, 'a', 'b']
```

In [ ]:
```
```

In [ ]:
```
```

In [ ]:
```
# import librarires

libraryName :
numpy
pandas
matpplotlib
seaborn
sklearn

pip3 install libraryName
```

In [ ]:
```
```