In [1]:
```
# if statement
```

In [8]:
```
age =14

if age >=18:
    print("you are an adult!!")
elif age>=13:
    print("you are a teenager !")
else:
    print("you are a Kid !!")
```
```
you are a teenager !
```

In [9]:
```
# for Loop
```

In [11]:
```
countries=["London","India","Lagos","United State","New York"]
countries
```
Out[11]:
```
['London', 'India', 'Lagos', 'United State', 'New York']
```

In [13]:
```
for country in countries:
        print(country)
```
```
London
India
Lagos
United State
New York
```

In [14]:
```
for i, country in enumerate (countries):
    print(i)
    print(country)
```
```
0
London
1
India
2
Lagos
3
United State
4
New York
```

def function():

```
    return(data)
```

In [16]:
```
def sum(a,b):
    x=a+b
    return(x)
```

In [17]:
```
sum(3,4)
```
Out[17]:
```
7
```

In [18]:
```
def subtract(e,r):
    x= e-r
    return(x)
```

In [19]:
```
subtract(45,10)
```
Out[19]:
```
35
```

In [27]:
```
subtract(10,2)
```
Out[27]:
```
8
```

In [ ]:
```
countries=[10,2,2,5,8,13]
```

In [26]:
```
len(countries)
```
Out[26]:
```
5
```

In [22]:
```
type(countries)
```
Out[22]:
```
list
```

In [29]:
```
max([10,2,2,5,8,13])
```
Out[29]:
```
13
```

In [30]:
```
min([10,2,2,5,8,13])
```
Out[30]:
```
2
```

In [37]:
```
for i in range(0, 10, 2):
    print(i)
```
```
0
2
4
6
8
```

In [38]:
```
# os Module
```

In [39]:
```
import os
```

In [40]:
```
os.getcwd()
```
Out[40]:
```
'C:\\Users\\TSADO VICTOR'
```

In [41]:
```
os.listdir()
```
Out[41]:
```
['.conda',
 '.condarc',
 '.continuum',
 '.ipynb_checkpoints',
 '.ipython',
 '.jupyter',
 '.matplotlib',
 '.openjfx',
 '.sambox.cache',
 '.spyder-py3',
 '3D Objects',
 'AppData',
 'Application Data',
 'conditional statement.ipynb',
 'Contacts',
 'Cookies',
 'Desktop',
 'Documents',
 'Downloads',
 'Dropbox',
 'dwhelper',
 'Favorites',
 'IntelGraphicsProfiles',
 'Links',
 'Local Settings',
 'Music',
 'My Documents',
 'NetHood',
 'NTUSER.DAT',
 'ntuser.dat.LOG1',
 'ntuser.dat.LOG2',
 'NTUSER.DAT{53b39e88-18c4-11ea-a811-000d3aa4692b}.TM.blf',
 'NTUSER.DAT{53b39e88-18c4-11ea-a811-000d3aa4692b}.TMContainer00000000000000000001.regtrans-ms',
 'NTUSER.DAT{53b39e88-18c4-11ea-a811-000d3aa4692b}.TMContainer00000000000000000002.regtrans-ms',
 'ntuser.ini',
 'OneDrive',
 'Pictures',
 'PrintHood',
 'PycharmProjects',
 'Recent',
 'Saved Games',
 'Searches',
 'SendTo',
 'Start Menu',
 'Templates',
 'TeraBox_1.0.0.10.exe',
 'Untitled.ipynb',
 'Untitled1.ipynb',
 'Untitled2.ipynb',
 'Untitled3.ipynb',
 'Videos']
```

In [44]:
```
os.makedirs("new folder")
```

In [45]:
```
os.listdir()
```
Out[45]:
```
['.conda',
 '.condarc',
 '.continuum',
 '.ipynb_checkpoints',
 '.ipython',
 '.jupyter',
 '.matplotlib',
 '.openjfx',
 '.sambox.cache',
 '.spyder-py3',
 '3D Objects',
 'AppData',
 'Application Data',
 'conditional statement.ipynb',
 'Contacts',
 'Cookies',
 'Desktop',
 'Documents',
 'Downloads',
 'Dropbox',
 'dwhelper',
 'Favorites',
 'IntelGraphicsProfiles',
 'Links',
 'Local Settings',
 'Music',
 'My Documents',
 'NetHood',
 'new folder',
 'NTUSER.DAT',
 'ntuser.dat.LOG1',
 'ntuser.dat.LOG2',
 'NTUSER.DAT{53b39e88-18c4-11ea-a811-000d3aa4692b}.TM.blf',
 'NTUSER.DAT{53b39e88-18c4-11ea-a811-000d3aa4692b}.TMContainer00000000000000000001.regtrans-ms',
 'NTUSER.DAT{53b39e88-18c4-11ea-a811-000d3aa4692b}.TMContainer00000000000000000002.regtrans-ms',
 'ntuser.ini',
 'OneDrive',
 'Pictures',
 'PrintHood',
 'PycharmProjects',
 'Recent',
 'Saved Games',
 'Searches',
 'SendTo',
 'Start Menu',
 'Templates',
 'TeraBox_1.0.0.10.exe',
 'Untitled.ipynb',
 'Untitled1.ipynb',
 'Untitled2.ipynb',
 'Untitled3.ipynb',
 'Videos']
```

In [46]:
```
# Read data set
```

In [ ]:
```
df = pd.read_csv(" .csv")
```

In [48]:
```
# to see all the display of dataframe
```

In [ ]:
```
df=pd.set_option("display.max_rows", size of row)
```

In [ ]:
```
# geting access to shape attributes
df.shape
```

In [ ]:
```
# pands attributes methods and functions
#To get to columns we have to use:
df.columns
# built in functions in python:
max()
min()
len()
```

In [ ]:
```
# methods is a functions that is define inside a class body:
df.head()
note that method is with parantesis e.g df.head(), df.tail(),df.info(),df.describe() while attributes are without parantesis
e.g df.shape, df.columns, df.index, df.dtypes,
```

In [ ]:
```
# using Function in dataframe
len(df) --- (# show the number of rows).
 max(df)  --(# will not get anything ) but if:
 max(df.index)  --- (# to get maximum index).
     min(df.index) --(# to get the mininmum index).
 round(df, 2) ----(# if the datas are in float  you will see something,
     but if the data is in integers you will not see anything)
```

In [ ]:
```
# -how to selecte one (1) column [] in dataframe
df[" "] --- at the parantesis put in [ "argument" = column] ------ series

OR

df.column  --- (# how to select one clouמn [ ] in datafrane with (dot) . ,
    without putting ["argument"])

with . (dot) (# have a pitfall where the argumnets column have two variable e.g [mark score])
```

In [ ]:
```
# how to selecte two (2) or more columns [] in dataframe will need 2 squre bracket
e.g df[["gender","mark score"]]

# to check the data type
type(df[["gender","mark score"]])   ------- dataframe

if check type
NOTE: one [ ] use will give series but
    if two [[]] use will give dataframe

Also if
  df[["gender","mark score","reading score","writing score"]]    ---- # to get other columns
```

In [49]:
```
# how to add column into dataframe

import numpy as np
language score = np.arange(0 ,1000)
df["language score"]= language_score
df  ----enter

OR

# create random integers number between 1 and 100
int_language_score = np.random.randint(1 ,100. size=1000)
```
```
  File "C:\Users\TSADOV~1\AppData\Local\Temp/ipykernel_13024/18413499.py", line 4
    language score = np.arange(0 ,1000)
             ^
SyntaxError: invalid syntax
```

In [ ]: