FILES CONCEPT IN PYTHON

what is files ..? they are collection of data that is kept in one extiontion

operations

- ! open
- ! write/append
- ! read
- ! close

In [1]:
```
##### opening a file

#   open(filename, mode,encryption_type)

## MODES
# r = read mode
# w = write mode
# a = append mode
```

In [2]:
```
# creation of a file in write mode
f = open("name.txt", "w")
f.write("FIRST file is very intresting , py workshop is just goin fine")
f.close()
```

In [3]:
```
import os

print(os.getcwd())
os.chdir(r"C:\Users\STUDENT\Desktop\python workshop")
print(os.getcwd())
```

```
C:\Users\STUDENT\chaitanya
C:\Users\STUDENT\Desktop\python workshop
```

In [4]:
```
#### reading a file
```

In [5]:
```
# creation of a file in write mode
f = open("NAameqwerty.txt", "w")
f.write("FIRST file is very intresting , py workshop is just goin fine")
f.close()
```

In [6]:
```
# reading a file in python program

f = open("NAameqwerty.txt","r")
print(f.read())
```

```
FIRST file is very intresting , py workshop is just goin fine
```

In [7]:
```
# errors that may occour when writing / or reading files
try:
    f= open("qwer.txt","r")
finally:
    print(f.read())
```

```
---------------------------------------------------------------------------
FileNotFoundError                         Traceback (most recent call last)
<ipython-input-7-af104781d9ea> in <module>
      1 # errors that may occour when writing / or reading files
      2 try:
----> 3     f= open("qwer.txt","r")
      4 finally:
      5     print(f.read())

FileNotFoundError: [Errno 2] No such file or directory: 'qwer.txt'
```

In [ ]:
```
with open("student.txt","w") as f:
    f.write("1. python basics \n")
    f.write("2. Advanced python \n")
    f.write("3. python machine learning \n")
    f.write("4. Pythin Everybody Cirtification \n")
    f.writelines("INfo done \n")
    f.writelines("INfo done qwertyuiop \n \n\n\n ")
f= open("student.txt", "r")
print(f.read()) #reads the entire file
f.close()
f= open("student.txt", "r")
print(f.read(5)) #reads the no of chars
f.close()
f= open("student.txt", "r")
print(f.readline()) #reads the first line
f.close()
f= open("student.txt", "r")
print(f.readlines()) #reads the entire file to make it a list of lines
f.close()
```

In [ ]:
```
f = open("NAameqwerty.txt", "w")
f.write("FIRST file is very intresting..\n ")
f.close()
f= open("NAameqwerty.txt","a")
f.write("Oh  ..HEll NO....!")
f.close()
f = open("NAameqwerty.txt","r")
print(f.read())
```

In [ ]:
```
def readfile(k):
    with open(k,"r") as f:
        print(f.read())
readfile("student.txt")
```

In [ ]:
```
def writef(fn):
    with open(fn , "w") as f:
        data1 =input("Enter DATA 1 : ")
        data2 =input("Enter DATA 2 : ")
        f.write(data1)
        f.write("\n")
        f.write(data2)
    with open(fn , "r") as f:
        print(f.read())
writef("Writing_with_func.txt")
```

In [ ]:
```
f = open("student.txt","r")
a= f.readlines()
count =0
for i in a:
    count+=1
print(count)
f.close()
```

In [ ]:
```
f = open("student.txt","r")
a= f.readlines()
print(len(a))
f.close()
```

In [ ]:
```
f = open("student.txt")
print(f.tell())
print(f.read())
print(f.tell())
print(f.seek(14))
print(f.tell())
print(f.read())
print(f.tell())
```

In [ ]:
```
f = open("newfile_r+_.txt","a+")
f.write("qwertyui wertyu sghj nqwjhiue")
f.seek(0)
print(f.read())
f.close()
```

In [ ]:
```
def writef():
   try:
    k=input("Enter file name : ")
    f = open(k)
    except IOError:
        print("File not accessible \n Creating new file ... ")
        createf(k)
    finally:
        f.close()
def createf(k):
    f = open(k,"w")
    print("File created and ready to use ...")
    f.write(input("text : \n\n"))
    f.close()
def createf():
    k=input("Enter file name : ")
    f = open(k,"w")
    print("File created and ready to use ...")
    f.write(input("text : \n\n"))
    f.close()
def readf():
    k=input("Enter file name : ")
    f = open(k)
    print(f.read())
    except IOError:
        print("File not accessible \n Creating new file ... ")
        createf(k)
    finally:
        f.close()
while True:
    a = int(input())
    if(a==1):
        writef()
    elif(a==2):
        createf()
    elif(a==3):
        readf()
```

In [ ]:
```
i = input()
i=i.lower()
k =i.split()
t =""
for i in range(0,len(k)):
    if(i<len(k)-1):
        t = t + k[i]
    else:
        t=t+k[i].upper()
print(t)
```

In [8]:
```
i = input()
i=i.lower()
k =i.split()
t =""
s = t.join(k)
print(s)
```

```
as asd wsef
asasdwsef
```

In [ ]:

```
i = input()
i=i.lower()
k =i.split()
t =""
k[-1 ] = k[-1].upper()
s = t.join(k)
print(s)
```

In [13]:

```
from pathlib import Path


def writef():
    k = input("Enter file name : ")
    if Path(k).is_file():
        print("File exist")
        f = open(k, "a")
        f.write(input("enter your text : "))
        f.write("\n")
    else:
        print("File not exist")
        createf()
    print("\n file Editor has closed according to programmer... \n ", "\n" * 20)



def createf():
    k = input("Enter New file name : ")
    f = open(k, "w")
    print("File created and ready to use ...")
    a= input("Select data entry mode [single {1} /group {2}] : ")

    if a == '1':
        for i in range(0, int(input("enter the no of lines of data needed:"))):
            f.write(input("text : \n"))
            f.write("\n")

    elif a == '2':
        for j in range(0, int(input("Enter no of data entry required : "))):
            for i in range(0, int(input("enter the no of lines of data needed for this
                f.write(input("text : \n"))
                f.write("\n")
            f.write("\n\n")
    else:
        print("Unexpected response... \n restarting program ...")
    f.close()
    print("\n file Editor has closed according to programmer... \n ", "\n" * 20)


def readf():
    k = input("Enter file name : ")
    if Path(k).is_file():
        f = open(k)
        print("\n" * 30)
        print(f.read(),"\n\n")

        ##########################################################################
        ######################### line counting ######################
        f.seek(0)
        l=f.readlines()
        print("The no of lines in this file is : ", len(l))
        ###################### line counting ended ##################
        ######################### word counting ######################
        f.seek(0)
        l = f.read()
        l = l.split()
        print("The no of words in this file is : ", len(l))
        ###################### word counting ended ##################
        ######################### letter counting ######################
        f.seek(0)
        l = f.read()
        print("The no of letters in this file is : ", len(l))
        ###################### letter counting ended ##################
        ##########################################################################
```

```
        f.close()
        print("\n file Editor has closed according to programmer... \n ")
    else:
        print("File not accessible \n Creating new file ... ")
        createf()



while True:
    print("""Enter your choice :
    1 . write/ append to a file
    2. create a file / replace a file
    3. read a file
    4. exit program

    choice :""", end="")
    a = int(input())

    if a == 1:
        writef()
    elif a == 2:
        createf()
    elif a == 3:
        readf()
    elif a == 4:
        break
    else:
        print("invalid input try again ")

print("\n \t\t.....Exiting program.....")
```

```
Enter your choice :
    1 . write/ append to a file
    2. create a file / replace a file
    3. read a file
    4. exit program

    choice :3
Enter file name : q.txt
```

```
debasish
18nu1a0514


ayyappa
81nu1a0515




The no of lines in this file is :  8
The no of words in this file is :  4
The no of letters in this file is :  43

 file Editor has closed according to programmer...

Enter your choice :
    1 . write/ append to a file
    2. create a file / replace a file
    3. read a file
    4. exit program

    choice :4

                .....Exiting program.....
```

In [22]:
```
a ="wkjfcbeqwkuebfcqrlKSNBDVKJBSADVCBW 983274%&^$^&*%&^%*&87512376428    "
lc=0
uc= 0
num =0
spe = 0
space = 0
alnum = 0
for i in a:
    if(i.isupper()):
        uc+=1
        alnum+=1
    elif(i.islower()):
        lc+=1
        alnum+=1
    elif(i.isnumeric()):
        num+=1
        alnum+=1
    elif(i.isspace()):
        space+=1

    else:
        spe+=1

print("uppercase = ",uc)
print("lowercase = ",lc)
print("numeric = ",num)
print("special = ",spe)
print("spaces = ",space)
print("alpha_numeric = ",alnum)
print("length of all = ",len(a))
```

```
uppercase =  16
lowercase =  18
numeric =  17
special =  13
spaces =  4
alpha_numeric =  51
length of all =  68
```

In [25]:
```
f =open("numsum.txt")
s= f.read()
s = s.split()
a = []
for i in s:
    a.append(int(i))
print(sum(a))
```

```
2344
```

In [41]:
```
import random

def randsum(k):
    f = open(k,"w")
    f.close()
    f= open(k ,"a+")
    for i in range(0, 13):
        f.write(str(random.randrange(1,100)))
        f.write("\n")
    f.close()
    f = open(k)
    s= f.read()
    s = s.split()
    a = []
    for i in s:
        a.append(int(i))
    print(sum(a))
randsum("randsum.txt")
```

```
667
```

In [51]:
```
f=open("numsum.txt")
l = f.read()
l = l.split()
a =[]
for i in l:
    inn=""
    for j in i:
        if(j.isnumeric()):
            inn=inn+j
    a.append(int(inn))
print(sum(a))
```

```
2344
```

list comprihension

In [ ]:
```

```

In [ ]:
```

```

In [56]:
```
lis = [i for i in range(0,10)]
lis
```

Out[56]:
```
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
```

In [64]:
```
def factori(k):
    if(k<1):
        return 1
    return k*factorial(k-1)
factorial(5)
```

Out[64]:
```
120
```

In [67]:
```
def factori(k):
    if(k<1):
        return 1
    return k*factorial(k-1)
li = [factori(i) for i in range(1,6)]
li
```

Out[67]:
```
[1, 2, 6, 24, 120]
```

In [75]:
```
s ="this is one string"

l2 = [i for i in s.split() ]
l2
```

Out[75]:
```
['this', 'is', 'one', 'string']
```

In [79]:
```
s ="this is one string"
l3 = [i for i in s]
print(l3)
```

```
['t', 'h', 'i', 's', ' ', 'i', 's', ' ', 'o', 'n', 'e', ' ', 's', 't', 'r', 'i', 'n',
'g']
```

In [83]:
```
def cumsum(k):
    sum = 0
    for i in range(0,k+1):
        sum+=q[i]
    return sum
q=[1,3,5,3,65,6,5,32]
la=[cumsum(i) for i in range(0,len(q))]
la
```

Out[83]:
```
[1, 4, 9, 12, 77, 83, 88, 120]
```

In [ ]: