File Handling

- What is File?
- Why we use Files.?
- Types of Files.?
- Operation of Files.?
  - 1.Open/Create
  - 2.Read
  - 3.Write/Append
  - 4.Close

In [ ]:
```
#How to Create/Open a file

open(filename,mode,encryptiontype)
modes:
    r- readmode
    w- writemode
    a- appendmode
```

In [37]:
```
#Create a file using write mode
f =open("names.txt","w")
f.write("Welcome to Advanced Python Workshop")
f.close()
```

In [13]:
```
import os
os.getcwd()
```

Out[13]:
```
'C:\\Users\\STUDENT\\Desktop\\python files'
```

In [10]:
```
f=open("cse.txt","r")
fh=f.read()
print(fh)
f.close()
```

```
hello world
```

In [10]:
```
with open("Studentdata.txt","w") as f:
    f.write("1.Python Basics\n")
    f.write("2.Advanced Python\n")
    f.write("3.Web Development with Python\n")
    f.write("4.Python Machine Learning\n")
    f.write("5.Python Everybody Certifications")
    f.write("Information about APSSDC")
with open("Studentdata.txt","r") as f:
    print(f.read())
```

```
1.Python Basics
2.Advanced Python
3.Web Development with Python
4.Python Machine Learning
5.Python Everybody CertificationsInformation about APSSDC
```

In [11]:
```
with open("Studentdata.txt","a") as f:
    f.write("\nHere we append a new data at last")
with open("Studentdata.txt","r") as f:
    print(f.read())
```

```
1.Python Basics
2.Advanced Python
3.Web Development with Python
4.Python Machine Learning
5.Python Everybody CertificationsInformation about APSSDC
Here we append a new data at last
```

read and write modes

read mode

- read()
- read(size)
- readline()
- readlines()

Write mode

- write()
- writelines()

#how to deal files with functions

In [12]:
```
#read a file
def readfile(filename):
    with open(filename,"r") as f:
        data=f.read()
        print(data)
readfile("Studentdata.txt")
```

```
1.Python Basics
2.Advanced Python
3.Web Development with Python
4.Python Machine Learning
5.Python Everybody CertificationsInformation about APSSDC
Here we append a new data at last
```

In [14]:
```
#write a file
def writefile(filename):
    with open(filename,"w") as f:
        data1= input("Enter the data to be insert in file: ")
        data2= input("Enter the data to be insert in file: ")
        f.write(data1)
        f.write(data2)
    with open(filename,"r") as f:
        return f.read()
writefile("info.txt")
```

```
Enter the data to be insert in file:
Good Morning NSRIT
Enter the data to be insert in file:
Welcome to CSE
```

Out[14]:
```
'Good Morning NSRITWelcome to CSE'
```

In [24]:
```
f= open("info.txt")
print(f.tell())
print(f.read())
f.seek(9)
print(f.read())
print(f.tell())
f.seek(18)
print(f.read())
f.close()
```

```
0
Good Morning NSRITWelcome to CSE
ing NSRITWelcome to CSE
32
Welcome to CSE
```

In [32]:
```
with open("sample.txt","w") as f:
    f.write("line1\n,line2\n,line3\n,line4\n,line5\n,line6\n")
with open("sample.txt","r") as f:
     print(len(f.readline()))
```

```
6
```

In [89]:
```
def space(x):
    y=x
    b=y[-1::]
    a=y[0:-1:2].lower()
    return(a+b)
space("N S R I T C S E S T U D E N T S")
```

Out[89]:
```
'nsritcsestudentS'
```

In [15]:
```
#write a userdefined file
def addstudentdetails(filename1,num_of_records):
    with open(filename1,"w") as f:
        for student in range(num_of_records):
            data1= input("Name       : ")
            data2= input("Roll No.   : ")
            data3= input("Department : ")
            data4= input("Ph. No.    : ")
            f.write(data1+"\n")
            f.write(data2+"\n")
            f.write(data3+"\n")
            f.write(data4+"\n")
    with open(filename1,"r") as f:
        print(f.read())
addstudentdetails("studentdetails.txt",int(input("Enter the no. of required re
cords: ")))
```

```
Enter the no. of required records: 2
Name       : DILEEP
Roll No.   : 18NU1A0522
Department : CSE
Ph. No.    : 9676742518
Name       : BHANU
Roll No.   : 18NU1A0527
Department : CSE
Ph. No.    : 7680949079
DILEEP
18NU1A0522
CSE
9676742518
BHANU
18NU1A0527
CSE
7680949079
```

In [18]:
```
def countlines(filename):
    count=open(filename,"r")
    data=count.read()
    print(data)
    lines=data.strip().split("\n")
    return ("No. of Lines: "+str(len(lines)))
countlines("studentdetails.txt")
```

```
DILEEP
18NU1A0522
CSE
9676742518
BHANU
18NU1A0527
CSE
7680949079
```

Out[18]: 'No. of Lines: 8'

In [29]:
```
a="    Dileep"
b="                Dhrona          "
print(a.strip())
x=a+b
print(x.split())
```

```
Dileep
['Dileep', 'Dhrona']
```

In [26]:
```
def wordcount(filename):
    with open(filename,"r") as f:
        data=f.read()
        return ("No. of words: "+str(len(data.split())))
wordcount("studentdetails.txt")
```

Out[26]: 'No. of words: 8'

In [2]:
```
data="nhsonkjsdiu14489654351SNLIKAWFDSKNxvkj456kjbjVJHY"
upper=0
lower=0
digit=0
length=0
for i in data:
    if i.islower():
         lower+=1
    elif i.isupper():
         upper+=1
    elif i.isdigit():
         num+=1
print(lower)
print(upper)
print(num)
print(len(data))
```

```
19
16
14
49
```

In [ ]:
```
def summation(filename,add)
   with open (filename,"w") is f:
    for i in range (1,n)
```

In [2]:
```
def sumdigit(x,no.of,y):

    sum=0
    for i in x:
        if i.isdigit():
            sum=sum+i
            print(sum)
        else:
            print("exit")
    return sum
sumdigit(x=input(),3,y=x++)
```

```
  File "<ipython-input-2-6de3656e0abc>", line 1
    def sumdigit(x,no.of,y):
                        ^
SyntaxError: invalid syntax
```

In [8]:
```
def addnumbers(filename):
    sum=0
    with open(filename,"r") as f:
        data=f.read()
        numbers=data.split()
        for number in numbers:
            if(number.isdigit()):
                sum=int(number)
        return sum
addnumbers("names.txt")
```

Out[8]:
```
0
```

List Comprehension

In [10]:
```
n=10
li=[]
for i in range(1,n+1):
    li.append(i)
print(li)
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

In [9]:
```
list=[i for i in range(1,11)]   #by using list comprehension
list
```

Out[9]:
```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

In [36]:
```
    def factorial(n):
        if n==0 or n==1:
             return 1
        return n*factorial(n-1)
    factorial(5)
```

Out[36]:
```
120
```

In [18]:
```
n=10
list=[factorial(i) for i in range(1,n+1)]
list
```

Out[18]:
```
[1, 2, 6, 24, 120, 720, 5040, 40320, 362880, 3628800]
```

In [37]:
```
s=["Hai Good Evening"]
li=[]
for i in s:
    for w in i.split():
        li.append(w)
print(li)
```

```
['Hai', 'Good', 'Evening']
```

In [45]:
```
s=["Hai Good Evening"]
list=[w for i in s for w in i.split()]
list
```

Out[45]:
```
['Hai', 'Good', 'Evening']
```

In [46]:
```
def cumulativesum(n):
    s=0
    for i in range(1,n+1):
        s=s+i
    return s
cumulativesum(5)
```

Out[46]:
```
15
```

In [55]:
```
def cumulativesum()
n=0
sum=[s in s+i for i in range(1,n+1)]
cumulativesum(5)
```

```
  File "<ipython-input-55-d3e156678892>", line 1
    def cumulativesum()
                       ^
SyntaxError: invalid syntax
```

In [ ]:
```

```