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In [ ]: #What is File Handling?
It is just a concept by which we can manage and perform different operations on Files
Operations are like --> read , write , close , open
#Benefit of file handling is to store data in temporary format.
When database is not there?
In form files --> .txt , .csv ,

Suppose that we are having 10 Records of Data. Now tell me in this case case which storing mechanism
is perfect. --> files

#If we want to store minimum amount of data then we should always use files.
#If we want to store millions of data then always prefer database like Mysql ,Oracle ,
#sqlite , Mongodb
```

## Types of Files

There are 2 Types of Files : 1.Text File --> .txt --> usually used when we use text files to store character data

2. Binary File --> Usually uses to store binary data like images , videos ,audio , files....

```
In [ ]: #Opening a File
#Before performing any operation on the file (like read , write ,append) we need to open the file
#But at the time of opening the file in python we need to give the mode
Syntax--> f=open("File_name","Mode")
```

Modes of Text file Handling(Operations of File Handling) r -->open the existing file for read operation w --->open the existing file for write operation (it will start from first pointer) a -->open the existing file for performing append operations (write at the end) r+ --> to read and write data into the file w+ --> to write and read data from the file a+ -->to append and read data from the file x --> to open a file in exclusive creation for write operation . if already the file is exist then you will get an error --> File Exists Error

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In [ ]: #Closing of File
f.close()
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In [ ]: #Writing data in txt File
1.write(str)
2.writelines(list of lines)
```

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In [4]: #Example
f=open("abcd.txt","w")
f.write("Edyoda\n")
f.write("Digital\n")
f.write("University\n")
print("Writing operation is Completed")
f.close()

Writing operation is Completed
```

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In [3]: f=open("abcd.txt","w")
f.write("Sonal\n")
f.write("Anil\n")
f.write("Virangana\n")
print("Writing operation is Completed")
f.close()

Writing operation is Completed
```

```
In [28]: f=open("abc.txt","w")
list=["Vaishali\n","Mohammad\n","Priyanka\n","Om\n","Pratik\n","Vaibhav\n","Anil\n","Aniket\n","Pawan\n","Parthmesh\n"]
f.writelines(list)
print("List data is updated on your file")
f.close()

List data is updated on your file
```

```
In [21]: #Read Operations of Files
read()-->read all data from the text file
read(n)--> to read n characters from the file
readline()--> To read a single line
readlines()-->read all lines into a list
```

```
Input In [21]
read()-->read all data from the text file
^
SyntaxError: invalid syntax
```

```
In [22]: f=open("abc.txt","r")

data=f.read()
print(data)
f.close()

Vaishali
Mohammad
Priyanka
Om
Pratik
Vaibhav
Anil
Aniket
Pawan
Parthmesh
```

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In [23]: f=open("abc.txt","r")
data=f.read(5)
print(data)
f.close()

Vaish
```

```
In [24]: f=open("abc.txt","r")
data=f.readline()
print(data)
f.close()

Vaishali
```

```
In [25]: f=open("abc.txt","r")
data=f.readlines()
print(data)
f.close()

['Vaishali\n', 'Mohammad\n', 'Priyanka\n', 'Om\n', 'Pratik\n', 'Vaibhav\n', 'Anil\n', 'Aniket\n', 'Pawan\n', 'Parthmesh\n']
```

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In [26]: f=open("abc.txt","r")
data=f.readlines()
for line in data:
    print(line,end="")
f.close()

Vaishali
Mohammad
Priyanka
Om
Pratik
Vaibhav
Anil
Aniket
Pawan
Parthmesh
```

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In [27]: #Append Operation
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In [30]: f=open("abc.txt","a")
f.write("Sonal\n")
f.write("Anil\n")
f.write("Virangana\n")

print("Writing operation is Completed")
print(f.closed)    #False
f.close()
print(f.closed)    #True

Writing operation is Completed
False
True
```

```
In [31]: #The With Statement
with open("abc.txt","r") as f:
    data=f.read()
    print(data)
    print("Is my file is closed or not",f.closed)    #False

print("Check is my file closed or not",f.closed)    #True

Vaishali
Mohammad
Priyanka
Om
Pratik
Vaibhav
Anil
Aniket
Pawan
Parthmesh
Sonal
Sonal
Anil
Virangana
Sonal
Anil
Virangana

Is my file is closed or not False
Check is my file closed or not True
```

```
In [34]: f=open("abc.txt","a")
f.write("Pratyush\n")
f.write("Mohit\n")
f.write("Sahana\n")

print("Writing operation is Completed")
print(f.closed)    #False
f.close()
print(f.closed)    #True

Writing operation is Completed
False
True
```

```
In [33]: f=open("abc.txt","w")
f.write("Pratyush\n")
f.write("Mohit\n")
f.write("Sahana\n")

print("Writing operation is Completed")
print(f.closed)    #False
f.close()
print(f.closed)    #True

Writing operation is Completed
False
True
```

```
In [38]: with open("abc.txt","a+") as f:
    print("Current data is ",f.read())
    f.write("qwertyuiopasdfghjklzxcvbnm\n")
    f.write("Anil\n")

    print("Is my file is closed or not",f.closed)    #False

print("Check is my file closed or not",f.closed)    #True

Current data is ,
Is my file is closed or not False
Check is my file closed or not True
```

```
In [41]: with open("abcdef.txt","a") as f:
    print("Is my file is closed or not",f.closed)    #False

print("Check is my file closed or not",f.closed)    #True

Is my file is closed or not False
Check is my file closed or not True
```

```
In [ ]: #Note--> read mode will give you an error if the file is not present
#append and write --> In append and write mode if the file is not present
#then append and write mode will create a new file with the given
```

```
In [ ]: Which of the following stataments are correct with respect to read mode?
read()-->read n character data from the text file
read(n)--> to read all characters from the file
readline()--> To n lines of of the file
readlines()-->read all lines into a list

Which of the following is correct?
1. Read mode will give you an eror if the given file is not present?
2.Write mode will give error if the given file is not present?
3.Append mode will give error if the given file is not present?
4. all of the above

What is the difference between write and append?
write function will add data from the first pointer if the data is already present in the given file then
it will replace that data with the new one

append will add the datat from the last pointer

Which of the following modes are correct?
```

- a. a+  
b. r+  
c. d+  
d. w+

```
In [ ]: 1.if the file is binary -->
Modes of binary files:
rb --> read binary
wb --> write binary
ab --> append binary
r+b --> read and write binary
w+b --> write and read binary
a+b --> append and read
x+b --> to open a binary file in exclusive creation for write operation . if already the file is exist then
you will get an error --> File Exists Error
```