

What is File Handling?

In [] : File handling --> It **is** just a concept by which we can manage **and** perform differnent operations on file.

Operations on File --> Read,write,append

File Handling **is** used **for** storing the data.

If you want to store minimum **or** less amount of data then files are good.
if the data **is in** millions trillions then database **is** suitable.

Files --> .txt ,.csv

Note

In [] : Database **is** already there why we are using file handling?

Suppose that we are having data have 50 students now tell me which storing mechanism **is** good>

Database --> Amount/sql queries/ consistency/normalization/atomicity 1 lakh --> trillions

Files -->> Minimum data

Types of Files:

In [] : Types of Files:
1.Text Files --> Data **is in** the form of Text(.txt)
2.Binary files --> Data **is in** the form of videos, audio,images etc

Opening a File

In [] : --> Before doing any operation on file the first step **is** to open the file.

Syntax **for** opening a File:
f=open("file_name","mode")

Types of Mode:

In [] : Types of Modes **in** Python-->
1. r --> open existing file **for** read operation.
2 w --> open the file **for** write operation
3. a --> open the file **for** append operation.
4. r+ --> To read **and** write on the file
5. w+ --> To write **and** read the file

Closing of a File

In [] : Closing the file: After Completing the Operations its our duty to close the file.

Syntax **for** Closing a File:

f.close()

Write Mode(Operation)

In [] : --> For writing the data **in** text files we are having two function:

1.write(str) --> It will take data **in** form of Strings.

2.writelines(list of lines) --> It will take data **in** form of Lists.

Note --> **if** the file **is not** exist then w **and** a mode will create a new file **with** the same Name.
--> If the file **is** already exist then w mode will replace the old content **with** the new content **in** existing file.

Example of write(str)

In [13]: f=open("www.txt","w")
f.write("Arnav \n")
f.write("Prasad \n")
f.write("Shashank \n")
f.write("Abhishek \n")
print("Data written in www.txt file please check that file")
f.close()

Data written in www.txt file please check that file

Example of writelines(list)

In [14]: f=open("write.txt","w")
list = ["Sreenija \n" , "Nair \n" , "Abhishek \n","Vijay"]
f.writelines(list)
print("Data saved successfully please check write.txt file")
f.close()

Data saved successfully please check write.txt file

In [18]: f=open("list.txt","w")
list=[]
for i **in** range(100):
list.append(str(i)+"\n")
f.writelines(list)
print("Data saved successfully please check write.txt file")
f.close()

Data saved successfully please check write.txt file

Read Mode (Read Operation)

In [] : **for** reading the data **from** the text file we are having following functions:
read() -->read whole data **from** file
read(n) --> read n character **from** a file
readline() --> read a single line(first_line)
readlines() --> read all data **from** a file into a list

Note --> If the file **is not** present(Exist) then you will get file **not** found error **in** read Mode.

Example of read() Function

In [20]: f=open("www.txt","r")
print(f.read())
f.close()

999
Arnav
Prasad
deepali

Example of read(n) Function

In [23]: f=open("www.txt","r")
print(f.read(10))
f.close()

999
Arnav

Example of readline() Function

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

999

Example of readlines() Function

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

['999\n', ' Arnav \n', ' Prasad \n', ' deepali']

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

999
Arnav
Prasad
deepali

Few Examples of read mode

In [33]: f=open("www.txt","r")
print(f.read(3)) #999
print(f.readline()) #\n
print(f.read(4)) #999\n
print("remaining data")
print(f.read()) #whole data
print(f.readline())
f.close()

999

Arn
remaining data
av
Prasad
deepali

Append Mode

In [] : --> For Appending the data **in** text files we are having two function:

1.write(str) --> It will take data **in** form of Strings.

2.writelines(list of lines) --> It will take data **in** form of Lists.

Note --> **if** the file **is not** exist then w **and** a mode will create a new file **with** the same Name.
--> If the file **is** already exist then a mode will add the new content at the last.

Example

In [34]: f=open("www.txt","a")
f.write("Arnav \n")
f.write("Prasad \n")
f.write("Shashank \n")
f.write("Abhishek \n")
print("Data written in www.txt file please check that file")
f.close()

Data written in www.txt file please check that file

Example of r+ Mode

In [39]: f=open("abc.txt","r+")
f.write("A \n")
f.write("P \n")
f.write("S \n")
f.write("A \n")
f.write("A \n")
f.write("P \n")
f.write("S \n")
f.write("A \n")
print("Data written in abc.txt file please check that file")
f.close()

Data written in abc.txt file please check that file

Example of w+ Mode

In [38]: f=open("abcd.txt","w+")
f.write("Arnav \n")
f.write("Prasad \n")
f.write("Shashank \n")
f.write("Abhishek \n")
f.write("Arnav \n")
f.write("Prasad \n")
f.write("Shashank \n")
f.write("Abhishek \n")
print("Data written in abc.txt file please check that file")
f.close()

Data written in abc.txt file please check that file

In [45]: f=open("abc.txt","w+")
f.write("A \n")
f.write("P \n")
f.write("S \n")
f.write("A \n")
f.write("A \n")
f.write("P \n")
f.write("S \n")
f.write("A \n")
print("Is file closed",f.closed) #True
print("Data written in abc.txt file please check that file")
f.close()
print("Is file closed",f.closed)#False

Is file closed False
Data written in abc.txt file please check that file
Is file closed True

With Keyword

In [] : --> If you dont want to close your file again **and** again **for** that we are having **with** statement

With --> automatically close your close

for checking weather a given file **is** closed of **not** we have f.close() function.

f.closed() --> will **return True** **if** file **is** closed **else True** **if** file **is** opened

Example

In [44]: **with** open("abc.txt", "r") **as** f:
print(f.read())
print("Is file closed",f.closed)

print("Is file closed",f.closed)

A
P
S
A
A
P
S
A

Is file closed False
Is file closed True

Example of a+ Mode

In [46]: f=open("abc.txt","a+")
f.write("Arnav \n")
f.write("Prasad \n")
f.write("Shashank \n")
f.write("Abhishek \n")
f.write("Arnav \n")
f.write("Prasad \n")
f.write("Shashank \n")
f.write("Abhishek \n")
print("Data written in abc.txt file please check that file")
f.close()

Data written in abc.txt file please check that file