**File Handling**

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As the part of programming requirement, we have to store our data permanently for future purpose. For this requirement we should go for files.

Files are very common permanent storage areas to store our data.

Types of Files:

There are 2 types of files

1. Text Files:

Usually we can use text files to store character data eg: abc.txt

2. Binary Files:

Usually we can use binary files to store binary data like images,video files, audio files etc...

Opening a File:

Before performing any operation (like read or write) on the file,first we have to open that file.For this we should use Python's inbuilt function open()

But at the time of open, we have to specify mode,which represents the purpose of opening file.

f = open(filename, mode)

The allowed modes in Python are

1. r -> open an existing file for read operation. The file pointer is positioned at the beginning of the file.If the specified file does not exist then we will get FileNotFoundError.This is default mode.
2. w -> open an existing file for write operation. If the file already contains some data then it will be overridden. If the specified file is not already avaialble then this mode will create that file.
3. A -> open an existing file for append operation. It won't override existing data.If the specified file is not already avaialble then this mode will create a new file.
4. r+ -> To read and write data into the file. The previous data in the file will not be deleted.The file pointer is placed at the beginning of the file.
5. w+ -> To write and read data. It will override existing data.
6. a+ -> To append and read data from the file.It wont override existing data.
7. x -> To open a file in exclusive creation mode for write operation. If the file already exists then we will get FileExistsError.

Note: All the above modes are applicable for text files. If the above modes suffixed with 'b' then these represents for binary files.

Eg: rb,wb,ab,r+b,w+b,a+b,xb

f = open("abc.txt","w")

We are opening abc.txt file for writing data.

Closing a File:

After completing our operations on the file,it is highly recommended to close the file. For this we have to use close() function.

f.close()

Various properties of File Object:

Once we opend a file and we got file object,we can get various details related to that file by using its properties.

name -> Name of opened file

mode -> Mode in which the file is opened

closed -> Returns boolean value indicates that file is closed or not

readable() -> Retruns boolean value indicates that whether file is readable or not

writable() -> Returns boolean value indicates that whether file is writable or not.