

Modes of Opening a File

- The modes in which a file can be opened are `r` , `w` , `a` , `r+` , `w+` , `a+` , `x`

mode	Description
<code>r</code>	To read data from file
<code>w</code>	To write data from file
<code>a</code>	To append data to the file
<code>r+</code>	To read and write data of a file
<code>w+</code>	To write and read data into a file
<code>a+</code>	To append and read data of a file
<code>x</code>	To open the file in exclusive creation mode

- In `r` i.e, read mode the file should exist only then it can be read if the file doesn't exist then `FileNotFoundError` occurs
- `'w'` write mode , in this mode when we open the file it may exist (or) It may not in both cases it works , If file doesn't exist, it creates new file if file exist , it will clear the previous contents of file.

```
file = open('ModeDemo.txt','w')
file.write('Hello!\n')
file.write('How are you\n')
file.write('Do you know python\n')

file.close()
```

```
Hello!How are youDo you know python(venv) (base) MacBook-Pro-2:FileHandling abdulbari$ cat ModeDemo.txt
Hello!
How are you
Do you know python
```

- 'a' append mode , its same as write but the file must already exist and when open it will not clear the previous contents of the file , it writes data at the end of existing file

```
file = open('ModeDemo.txt', 'a')
file.write('I am learning Python\n')
file.write('It is very easy language\n')
file.write('I am practising everythin.\n')

file.close()
```

Output:

```
Terminal: Local + v
Hello!
How are you
Do you know python
I am learning Python
It is very easy language
I am practising everythin.
```

- r+ we can open a file in reading mode and as well as for writing
- w+ we can open a file in writing mode and as well as for reading
- a+ Means append and read
- X File should not exist already , it will create and write in a file

```
ModeTypes.py ModeDemo.txt
1
2 file = open('ModeDemo.txt', 'r+')
3 str1=file.read(10)
4 print(str1)
5
6 file.write('Good Bye')
7 file.close()
```

```
ModeTypes.py ModeDemo.txt
1 Hello!
2 How are you
3 Do you know python
4 I am learning Python
5 It is very easy language
6 I am practising everythin.
7 Good Bye
```

Output:

```
Hello! |
How
```