Files

It is a collection of data or group of records.

open() : It is used for to create new files or to open existing files or to append data to the existings files.

Syntax : fileobject=open("filename","mode")

1. fileobject is an user defined name.
2. filename is your own filename.
3. There are 3 types of modes.

   read(r) (Default mode)
   write(w)
   append(a)

4. File formats are 2 types.
   1. Text format files (Default)
   2. Binary format files.

r (or) rt -→ Read in Text format
w (or) wt -→ Write in Text format
a (or) at -→ Append in Text format

rb -> Read in binary format
wb -> Write in binary format
ab -> Append in binry format.

r+ (or) rt+ -→ Read and Write in Text format
w+ (or) wt+ -→ Write and Read in Text format
a+ (or) at+ -→ Append and Read in Text format

rb+ -> Read and Write in binary format
wb+ -> Write and Read in binary format
ab+ -> Append and Read in binry format.

Read mode :

```
x=open("test.txt","r")
```

In read mode,If the given file exist then it opens a file and places file pointer at beginning of the file.

If the given file doesn't exist then it fails to open a file and returns IOError Exception.

Write mode :

```
x=open("test.txt","w")
```

In write mode, If the given file exist then it opens a file and deletes all file contents and places pointer at beginning of the file.

If the given file doesn't exist then it creates as a new file and places pointer at beginning of the file.

Append mode :

```
x=open("test.txt","a")
```

In append mode, If the given file exist then it opens a file and places pointer at end of the file.

If the given file doesn't exist then it creates as a new file and places pointer at beginning of the file.

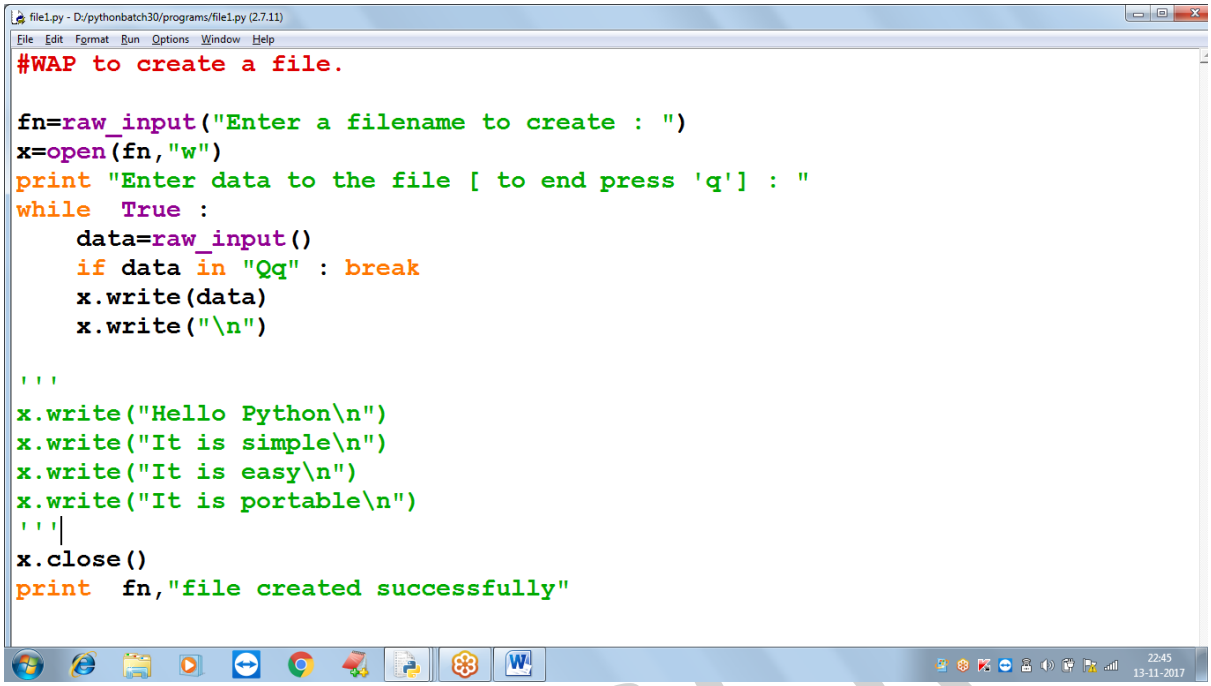
close() :

It is used for to close the file which is already opened.

syntax : fileobject.close()

write(str) : It is used to write data to the file in string format.

Syntax : fileobject.write(string)



read() : It reads whole file and returns in string format.

```
x=open("test.txt","r")
data=x.read()
print  data
print  type(data)
```

read(n) : It reads 'n' bytes from a file.

readline() : It reads current line from a file.

readlines() : It reads all lines and returns in list format.

tell() : It returns current position of the file pointer.

Syntax : fileobject.tell()

seek() : To place pointer at required position in the file.

Syntax : fileobject.seek(no.of bytes,offset)

offset
0(beginning)
1(current)
2(ending)

with ... open("filename","mode") as fileobject :

Example :

```
with open(“a1.txt”,”r”) as x :
    data=x.read()
    print data
```

Notice, that we didn't have to write "x.close()". That will automatically be called.

Attributes:

- **closed**: It returns true if the file is closed and false when the file is open.
- **mode**: Returns access mode with which file was opened.
- **name**: It returns name of the file.

Example :

```
f = open(“a1.txt”,”r”)
print f.closed # False
print f.mode # read
print f.name # a1.txt
```