

Programming and Problem Solving through Python Language O Level / A Level

Chapter - 7: File Processing

Close with try-except block

Any opened file needs to be closed with `close()` method, after performing the file operation. But if an exception occurs, while performing some operation with the file, the code exits without closing the file. In such scenario, it is better to use the **try- finally block**, which can handle any exception.

Example

```
try:
    f = open('app.txt', 'r', encoding = 'utf-8')
    # do file operations.

except:    # if File not exist for reading
    print('File Not Exist')

else:    # if File exist for reading
    print('File Exist')

finally:
    f.close( )
```

The Python file object attributes

The `open()` function returns an filehandle object. With the help of filehandle, we can use the file handling attributes.

- **File.closed** It returns True if the file closed, else False
- **File.mode** It returns the access mode of opened file.
- **File.name** It returns the name of file

Example

```
f=open("abc.txt", "r")
print("File Name :", f.name)
print("File Mode :", f.mode)
print("File State :", f.closed)
f.close( )
print("File Mode :",f.mode)
print("File State :",f.closed)
```

Output

File Name : abc.txt

File Mode : r

File State : False

File Mode : r

File State : True

With Statement with Open()

The advantage of With Statement is that files opened will be closed automatically.

Syntax

```
with open("filename" as file :
```

Example -1

```
with open("abc.txt","r") as f :  
    for line in f:  
        print(line)
```

Output

This is 1st Line

This is 2nd Line

This is 3rd Line

Example -2

```
with open("abc1.txt","w") as f :  
    f.write("Gorakhpur\n")  
    f.write("Lucknow\n")  
    f.write("Kanpur\n")
```

```
with open("abc1.txt","r") as f :  
    for line in f:  
        print(line)
```

Output

Gorakhpur

Lucknow

Kanpur

Check if File exist:

During file handling operation, it is always required to check the existence of file before opening in any mode. This helps to reduce the problem of exceptional errors.

Example

```
import os
if os.path.exists("abc.txt"):
    print("File Exist")
else:
    print("File not Exist")
```

Output

```
File Exist
```

Delete File

To delete a file , we can use the `remove()` method.

Example

```
import os
os.remove("abc.txt")
```

Delete Folder

To delete the complete folder, we can use the `rmdir()` method.

Example

```
import os
os.rmdir("abc")
```

Rename File

To rename a file, we can use the `rename(old_file , new_file)` method.

Example

```
import os
os.rename("abc" , "xyz")
```