

File Handling

FILE OPERATIONS

1. **OPEN()** the file.
2. **READ ()** from the file or **WRITE()** to the file.
3. **CLOSE()** the file.

Steps to **READING** from or **WRITING** to Files

- **TIP:** When a file is opened, don't forget to close it.
- **GOOD PRACTICE:** Immediately after opening a file, write the close statement.

```
f = open("filename", "access mode")
```

```
.....
```

```
f.close()
```

Access Mode – specifies what you will do with the file after you open it.

Access mode		Action
r	read	If file exists, opens the file for reading . If file doesn't exist, error message displayed.
w	write	Creates file if it doesn't exist. Otherwise, erases contents of existing file and pointer is positioned at the beginning of the file.
a	append	Creates file if it doesn't exist. Otherwise, pointer positions to end of file and data is appended to the existing file content.
r+		Open for reading and writing.
w+		Open for reading and writing.
a+		Open for reading and writing.

Create a demofile.txt

Hello! Welcome to demofile.txt
This file is for testing purposes
Good Luck!

Line 1

Line 2

Line 3

Each line contains a EOL
(end of line) character

Text File and Python File

demofile.txt

Hello! Welcome to demofile.txt
This file is for testing purposes
Good Luck!

fileHandling.py

READING from a File

open() a file so data can be **read** from the file



```
f = open("demofile.txt", "r")
```

IF FILE DOES NOT exist:

1) Error Message

IF FILE EXISTS:

1) File is **open** ONLY to read data from.

2) Cannot write or modify the file in any way.

read() - function to **read the entire contents** from the file

f = open("demofile.txt", "r")

print(f.read())

← Open the file for reading.

OUTPUT:

Outputs the contents of the **entire file**.

read(#) - function to **read characters** from a file

f = open("demofile.txt", "r")

print(f.read(5))

Open the file for reading.

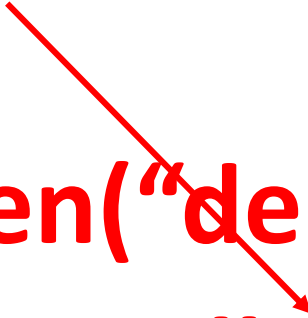
read(5) reads **first 5 characters** of the file.

OUTPUT:

Hello

readline() - function to **read one line** from a file

```
f = open("demofile.txt", "r") ← Open the file for reading.  
print(f.readline())
```



OUTPUT:

Hello! Welcome to demofile.txt

readline() - function to **read two lines** from a file

f = open("demofile.txt", "r") ← Open the file for reading.

print(f.readline())

print(f.readline())

OUTPUT:

Hello! Welcome to demofile.txt
This file is for testing purposes.

Use a **For Loop** to read data from a file

```
f = open("demofile.txt", "r")
```



Open the file for reading.

```
for line in f:  
    print(line)
```



Use a **For Loop** to loop through the file line by line.

OUTPUT:

Hello! Welcome to demofile.txt
This file is for testing purposes.
Good Luck!

WRITING to a File

open() a file so data can be **written** to the file

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



IF FILE DOES NOT
EXIST:

1) demofile.txt file will
be **created**.

IF FILE EXISTS:

- 1) demofile.txt file is
opened
- 2) any information in
the existing file will
be **erased**.

open() a file so data can be **appended** to the file

f = open("demofile.txt", "a")



IF FILE DOES NOT
EXIST:

1) demofile.txt file
will be **created**.

IF FILE EXISTS:

- 1) demofile.txt file
is **opened**
- 2) any **new**
information will
be **added** to the
end of the
existing file.

write() - data appended to the end file



f = open("demofile.txt","a")

f.write("\n Now the file has one more line")

write() - write data using newline character **\n**

```
f = open("demofile.txt","a")
```

```
f.write('Hi there!\n')
```

```
f.write('How are you?')
```

OUTPUT:

Hi there!

How are
you?

write() - data written to file

File is opened.

CAUTION: Existing data is erased.

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

f.write("New data")

New data is written to the file.

CLOSE the File

close() the File after use

f.close()