File Handling

FILE OPERATIONS

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

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.

REVIEW: open( ) and close() file

myFile = open(“demofile.txt”, “r”)

-OR

myFile = open(“demofile.txt”, “w”)

-OR

myFile = open(“demofile.txt”, “a”)

-OR

myFile.close()

Open for reading from.

Open for reading and writing.

Open for reading and appending.

Close the file.

demofile.txt

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

REVIEW: Loop Iteration to read data from a file

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

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

Loops through the file line by line.

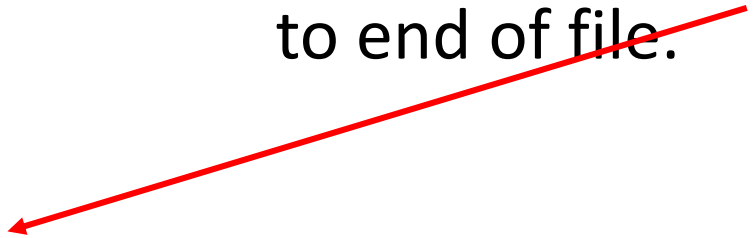
OUTPUT:

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

write() - data written to file

File is opened.

New data is appended to end of file.



```
myFile = open("demofile.txt","a")
myFile.write("Now the file has one more line")
```

write() - write data using newline character \n

```
myFile = open("demofile.txt","a")
myFile.write('Hi there!\n")
myFile.write('How are you?')
```

OUTPUT:

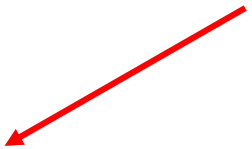
Hi there!

How are you?

write() - data written to file

myFile = open(“demofile.txt”,**”w”**)

myFile.**write**(“New data”)



File is opened.

CAUTION: Existing data is erased.

New data is written to the file.

Tips for File Handling

myFile = open(“demofile.txt”,**”r”**)

myFile.**close( )**

REMINDER: When a file is opened, make sure to close it.

Safe way for File Handling – Exception Handling

```
try:
        myFile = open("demofile.txt","r")

finally:
        myFile.close( )
```

1. **finally** is executed no matter what.

Another safe way File Handling – with Statement

```
with open("demofile.txt", "r") as myFile:
    #block of code
    #block of code
```

myFile.close() will be done automatically when the block inside with is exited.

Best Way for File Handling – with Statement

```
with open("demofile.txt", "w") as myFile:
    myFile.write("my first file\n")
    myFile.write("This file\n\n")
    myFile.write("contains three lines\n")
```

1. If file does not exist, file is created.
2. If file exists, file is erased.