

## Experiment – 3.1

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<b>Branch:</b>	<b>ME – CSE - AIML</b>	<b>Section/Group:</b>	<b>MAI – 1 (A)</b>
<b>Semester:</b>	<b>1<sup>st</sup></b>	<b>Date of Performance:</b>	
<b>Subject Name:</b>	<b>Python Programming</b>	<b>Subject Code:</b>	<b>23 CSH 623</b>

### 1. Aim of the Experiment :

- Write a python program to read and write the contents into a file.
- Write a python program to demonstrate different inbuilt functions related to file handling.
- Write a python program to count the number of lines in a file.
- Write a python program to demonstrate exception handling.

### 2. Objective of the Experiment :

- To demonstrate program to read and write the contents into a file.
- To demonstrate different inbuilt functions related to file handling.
- To program to count the number of lines in a file.
- To demonstrate exception handling.

### 3. Algorithm/ Steps for Experiment

**Step 1:** Create a python file to perform the python programs.

**Step 2:** Use file handling in python.

**Step 3:** Discover different in built functions of file handling.

**Step 4:** Perform exception handling

## Code for Experiment (Read and write the contents into a file) :

### Reading -

```
file1 = open("C:/Users/ystan/OneDrive/Desktop/python/3.1lab.txt","r+") """reading"""  
  
print("Output of Read function is ")  
  
print(file1.read())  
  
file1.close()
```

### Writing -

```
file1 = open("C:/Users/ystan/OneDrive/Desktop/python/3.1lab.txt","w")  
  
L = ["New entry"]  
  
file1.writelines(L)  
  
file1 = open("C:/Users/ystan/OneDrive/Desktop/python/3.1lab.txt","r+")  
  
print("Output of Read function is ")  
  
print(file1.read())  
  
file1.close()
```

## Result/Output :

```
Output of the read function is  
23MAI10003  
Milan Sharma  
  
Hello
```

```
In [30]: runfile('C:/Users/ystan/.spyder-py3/temp.py', wdir='C:/Users/  
ystan/.spyder-py3')  
Output of Read function is  
New entry
```

**Code for Experiment (To demonstrate different inbuilt functions related to file handling.):**

- **close(),read()**

```
file1 = open("C:/Users/ystan/OneDrive/Desktop/python/3.1lab.txt","r+")  
  
print("Output of Read function is ")  
  
print(file1.read())  
  
file1.close()
```

- **readline()**

```
file1 = open("C:/Users/ystan/OneDrive/Desktop/python/3.1lab.txt","r+")  
  
print("Output of Read function is ")  
  
print(file1.readline())  
  
file1.close()
```

- **write()**

```
file1 = open("C:/Users/ystan/OneDrive/Desktop/python/3.1lab.txt","w")  
  
L = ["New entry"]  
  
file1.write (L)  
  
file1 = open("C:/Users/ystan/OneDrive/Desktop/python/3.1lab.txt","r+")  
  
print("Output of Read function is ")  
  
print(file1.read())  
  
file1.close()
```

- **writelines()**

```
file1 = open("C:/Users/ystan/OneDrive/Desktop/python/3.1lab.txt","w")  
  
L = ["New entry\n","2ndNew enter"]  
  
file1.writelines(L)  
  
file1 = open("C:/Users/ystan/OneDrive/Desktop/python/3.1lab.txt","r+")
```

```
print("Output of Read function is ")
```

```
print(file1.read())
```

```
file1.close()
```

- **tell()**

```
print(file1.tell())
```

- **seek()**

```
file1.seek(0)
```

```
file1.tell()
```

## Result/Output :

```
In [30]: runfile('C:/Users/ystan/.spyder-py3/temp.py', wdir='C:/Users/ystan/.spyder-py3')
Output of Read function is
New entry
```

```
Output of Read function is
New entry
2ndNew enter
```

```
In [34]: runfile('C:/Users/ystan/.spyder-py3/temp.py', wdir='C:/Users/ystan/.spyder-py3')
Output of Read function is
New entry
2ndNew enter
23
```

```
In [35]: runfile('C:/Users/ystan/.spyder-py3/temp.py', wdir='C:/Users/ystan/.spyder-py3')
Output of Read function is
New entry
2ndNew enter
0
```

## Code for Experiment (To count the number of lines in a file):

```
file1 = open("C:/Users/ystan/OneDrive/Desktop/python/3.1lab.txt", "r")
Counter = 0
Content = file1.read()
CoList = Content.split("\n")

for i in CoList:
    if i:
        Counter += 1

print("This is the number of lines in the file")
print(Counter)
```

## Result/Output :

Name	Type	Size	Value
CoList	list	2	['New entry', '2ndNew enter']
Content	str	22	New entry 2ndNew enter
Counter	int	1	2
file1	TextIOWrapper	1	TextIOWrapper object of _io module
i	str	12	2ndNew enter

Help Variable Explorer Plots Files

Console 1/A X

Python 3.11.4 | packaged by Anaconda, Inc. | (main, Jul 5 2023  
1916 64 bit (AMD64))  
Type "copyright", "credits" or "license" for more information.  
  
IPython 8.12.0 -- An enhanced Interactive Python.  
  
In [1]: runfile('C:/Users/ystan/.spyder-py3/temp.py', wdir='C:/  
py3')  
This is the number of lines in the file  
2

**Code for Experiment (Demonstrate exception handling) :**

```
def fun(a):  
    if a < 4:  
  
        # throws ZeroDivisionError for a = 3  
        b = a/(a-3)  
  
    # throws NameError if a >= 4  
    print("Value of b = ", b)  
  
try:  
    fun(3)  
    fun(5)  
  
# note that braces () are necessary here for  
# multiple exceptions  
except ZeroDivisionError:  
    print("ZeroDivisionError Occurred and Handled")  
except NameError:  
    print("NameError Occurred and Handled")
```

**Result/Output :**

```
In [4]: runfile('C:/Users/ystan/.spyder-py3/temp.py', wdir='C:/Users/ystan/.spyder-py3')  
ZeroDivisionError Occurred and Handled  
  
In [5]:
```

**Learning outcomes (What I have learnt):**

1. I learnt read and write the contents into a file.
2. I learnt about inbuilt functions related to file handling.
3. Learned to count the number of lines in a file.
4. I learnt about exception handling.

**Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):**

Sr. No.	Parameters	Maximum Marks	Marks Obtained
1.	Student Performance (Conduct of experiment) Objectives/Outcomes.	12	
2.	Viva Voce	10	
3.	Submission of Work Sheet (Record)	8	