Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

AY: 2024-25

Class:	SE	Semester:	IV
Course Code:	CSL405	Course Name:	Skills Based Python Programming Lab

Name of Student:	Shravani Sandeep Raut
Roll No. :	48
Experiment No.:	3
Title of the Experiment:	To implement a Python program to count the number of lines, words and characters in a file.
Date of Performance:	28/01/2025
Date of Submission:	04/02/2025

Evaluation

Performance Indicator	Max. Marks	Marks Obtained
Performance	5	
Understanding	5	
Journal work and timely submission	10	
Total	20	

Performance Indicator	Exceed Expectations (EE)	Meet Expectations (ME)	Below Expectations (BE)
Performance	4-5	2-3	1
Understanding	4-5	2-3	1
Journal work and timely submission	8-10	5-8	1-4

Checked by

Name of Faculty : Mr. Raunak Joshi

Signature :

Date:

Aim: To implement a Python program to count the number of lines, words and characters in a file.

Theory:

Python too supports file handling and allows users to handle files i.e., to read and

write files, along with many other file handling options, to operate on files.

Where the following mode is supported:

1. r: open an existing file for a read operation.
2. w: open an existing file for a write operation. If the file already contains some data then it will be overridden but if the file is not present then it creates the file as well.
3. a: open an existing file for append operation. It won't override existing data.
4. r+: To read and write data into the file. The previous data in the file will be overridden.
5. w+: To write and read data. It will override existing data.
6. a+: To append and read data from the file. It won't override existing data. # Python code to illustrate read() mode

```
file = open("file.txt", "r")

print (file.read())
```

Directories are a way of storing, organizing, and separating the files on a computer.

The directory that does not have a parent is called a root directory. The way to

reach the file is called the path. The path contains a combination of directory

names, folder names separated by slashes and colon and this gives the route to a

file in the system.

Implementation:

file.txt

This is a sample file.

It contains multiple lines.

Each line has words and characters.

Python is great for text processing!

In [1]:

```python
if __name__ == '__main__':
    path = r'./file.txt'
    with open (path,'r')as file:
        lines = file.readlines ()
        numberOfLines = len (lines)
        numberOfWords = sum (len (line.split()) for line in lines)
        numberOfCharacters = sum(len(line)for line in lines)
        file.close()

    print(f"Lines: {numberOfLines}")
    print(f"Words: {numberOfWords}")
    print(f"Characters: {numberOfCharacters}")
```

```
Lines: 4
Words: 21
Characters: 123
```

Conclusion:

File handling in Python is a powerful feature that allows developers to perform operations such as reading, writing, and appending data in files. By using different modes like 'r', 'w', 'a', 'r+', 'w+', and 'a+', one can manipulate file content as needed. The task of counting lines, words, and characters in a file is a practical application of these concepts. It demonstrates how to open and read a file, process its content, and perform simple text analysis. Understanding file paths and directories also helps in efficiently accessing and managing files across different locations in a system.