*Agnel Charities'*

# Fr. C. RODRIGUES INSTITUTE OF TECHNOLOGY

**DEPARTMENT: COMPUTER ENGINEERING**

**LABORATORY CONTINUOUS ASSESSMENT FORMAT**

**Second Half of 2020**

| | |
|---|---|
| **Course Name:** Skill Based Lab | |
| **Name of the Teacher:** Prof. Suvarna Bhatsangave | |
| **Name of the Student:** Aakash Vikas Yadav | |
| **Roll No:** 1019167 | **Semester:** IV |
| **Batch:** 2 | **Practical No:** 3 |
| **Date of Practical:** 17/03/2021 | **Date of Report Submission:** 22/03/2021 |

**Title:**
Implement Python Program to demonstrate File handling.

**Course Outcome:**

To explore contents of files, directories and text processing with python.

## ASSESSMENT

| Sr. No. | Parameter for Assessment | Marks | Rubrics | | |
|---|---|---|---|---|---|
| 1. | **Practical Performance / Active Participation (03Marks)** | | Above Average (03) | Average (02) | Below Average (01) |
| 2. | **Report Presentation (02 Marks)** | | Above Average (02) | Average (01) | Below Average (00) |
| 3. | **Understanding (03 Marks)** | | Above Average (03) | Average (02) | Below Average (01) |
| 4. | **Regularity in Submission (02 Marks)** | | Timely (02) | Late (01) (≤ 2 Weeks from the date of Practical) | Very Late (00) (> 2 Weeks from the date of Practical) |

**Total Marks (10):**

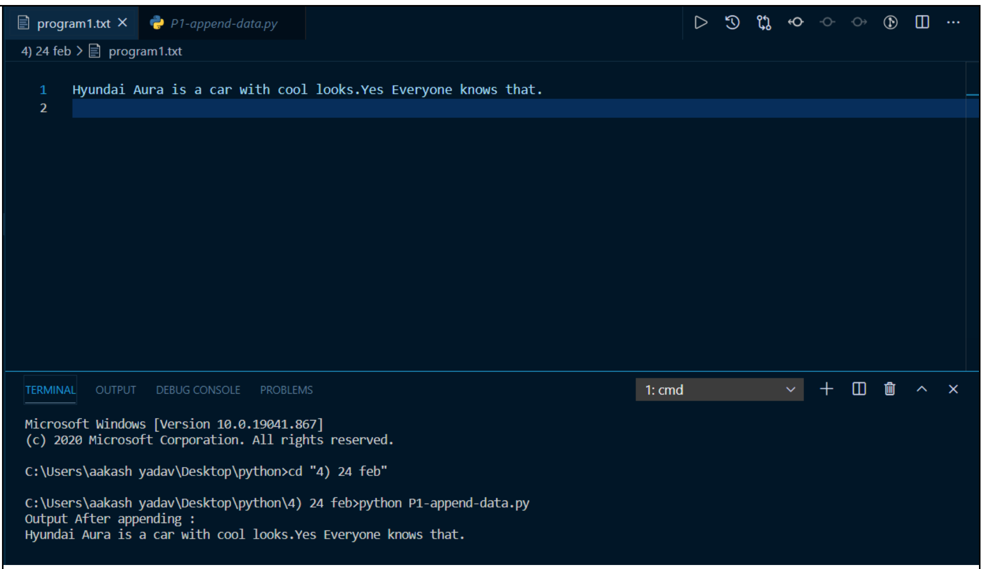
**Teacher's Signature:** **Date:**

| **Experiment-2** | Implement Python Program to demonstrate File handling. |
|---|---|
| **CO** | To explore contents of files, directories and text processing with python. |
| **Title** | Python program to append data to existing file and then display the entire file. |
| **Theory** | While reading or writing to a file, access mode governs the type of operations possible in the opened file. It refers to how the file will be used once it's opened. These modes also define the location of the File Handle in the file. File handle is like a cursor, which defines from where the data has to be read or written in the file.<br><br>In order to append a new line to the existing file, open the file in append mode, by using either 'a' or 'a+' as the access mode. The definition of these access modes are as follows:<br><br>Append Only ('a'): Open the file for writing. The file is created if it does not exist. The handle is positioned at the end of the file. The data being written will be inserted at the end, after the existing data.<br>Append and Read ('a+'): Open the file for reading and writing. The file is created if it does not exist. The handle is positioned at the end of the file. The data being written will be inserted at the end, after the existing data.<br>When the file is opened in append mode, the handle is positioned at the end of the file. The data being written will be inserted at the end, after the existing data. |

**Program**

```python
import os

# Append-adds at last
file1 = open("program1.txt", "a")  # append mode
file1.write("Yes Everyone knows that.\n")
file1.close()


file1 = open("program1.txt", "r")
print("Output After appending :")
print(file1.read())
print()
file1.close()
```

**OUTPUT**

| | |
|---|---|
| |  |
| **Conclusion** | The program to append in a file gives the required output. |

```
Hyundai Aura is a car with cool looks.Yes Everyone knows that.

```

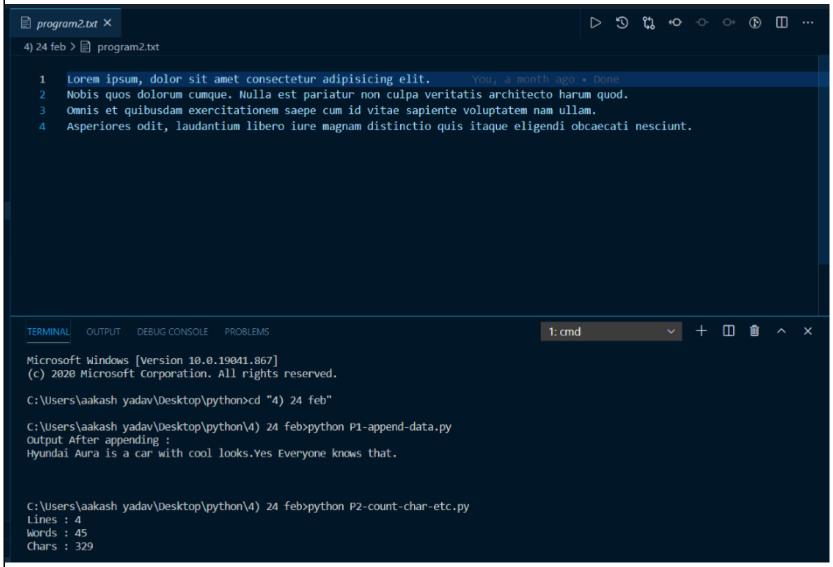
```
Microsoft Windows [Version 10.0.19041.867]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\aakash yadav\Desktop\python>cd "4) 24 feb"

C:\Users\aakash yadav\Desktop\python\4) 24 feb>python P1-append-data.py
Output After appending :
Hyundai Aura is a car with cool looks.Yes Everyone knows that.
```

| **Experiment-2** | Implement Python Program to demonstrate File handling. |
|---|---|
| **CO** | To explore contents of files, directories and text processing with python. |
| **Title** | Python program to count number of lines, words and characters in a file.. |
| **Theory** | Given a text file fname, the task is to count the total number of characters, words, spaces and lines in the file.<br>As we know, Python provides multiple in-built features and modules for handling files. Let's discuss different ways to calculate total number of characters, words, spaces and lines in a file using Python.<br>In this approach, the idea is to use the os.linesep() method of OS module to separate the lines on the current platform. When the interpreter's scanner encounter os.linesep it replaces it with \n character. After that strip() and split() functions will be used to carry out the task.<br><br>Below is the implementation of the above approach. |

**Program**

```python
import os
fname = "program2.txt"

num_lines = 0
num_words = 0
num_chars = 0

with open(fname, 'r') as f:
    for line in f:
        words = line.split()

        num_lines += 1
        num_words += len(words)
        num_chars += len(line)

print("Lines :", num_lines)
print("Words :", num_words)
print("Chars :", num_chars)
```

**OUTPUT**



```
Lorem ipsum, dolor sit amet consectetur adipisicing elit.        You, a month ago • Done
Nobis quos dolorum cumque. Nulla est pariatur non culpa veritatis architecto harum quod.
Omnis et quibusdam exercitationem saepe cum id vitae sapiente voluptatem nam ullam.
Asperiores odit, laudantium libero iure magnam distinctio quis itaque eligendi obcaecati nesciunt.
```

```
Microsoft Windows [Version 10.0.19041.867]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\aakash yadav\Desktop\python>cd "4) 24 feb"

C:\Users\aakash yadav\Desktop\python\4) 24 feb>python P1-append-data.py
Output After appending :
Hyundai Aura is a car with cool looks.Yes Everyone knows that.


C:\Users\aakash yadav\Desktop\python\4) 24 feb>python P2-count-char-etc.py
Lines : 4
Words : 45
Chars : 329
```

**Conclusion**

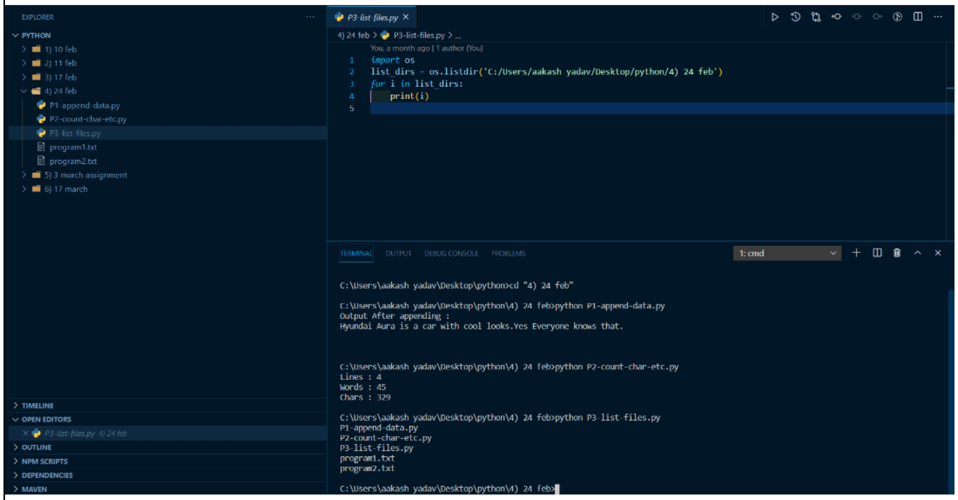
The program to count number of lines, words and characters in a file gives the required output.

| | |
|---|---|
| **Experiment-2** | Implement Python Program to demonstrate File handling. |
| **CO** | To explore contents of files, directories and text processing with python. |
| **Title** | Python program to display file available in current directory. |
| **Theory** | Python’s os module provides a function that gets a list of files or folders in a directory. The ., which is passed as an argument to os.listdir(), signifies the current folder.<br><br>To list files at a specific path, we can simply give the path as a string to the function.<br><br>This path will have to be relative to where your Python file is placed or, if you’re not working with files, the path will be relative to where your Python Shell has been launched: |

**Program**

```python
import os
list_dirs = os.listdir('C:/Users/aakash yadav/Desktop/python/4) 24 feb')
for i in list_dirs:
    print(i)
```

**OUTPUT**



```python
import os
list_dirs = os.listdir('C:/Users/aakash yadav/Desktop/python/4) 24 feb')
for i in list_dirs:
    print(i)
```

```
C:\Users\aakash yadav\Desktop\python>cd "4) 24 feb"

C:\Users\aakash yadav\Desktop\python\4) 24 feb>python P1-append-data.py
Output After appending :
Hyundai Aura is a car with cool looks.Yes Everyone knows that.



C:\Users\aakash yadav\Desktop\python\4) 24 feb>python P2-count-char-etc.py
Lines : 4
Words : 45
Chars : 329

C:\Users\aakash yadav\Desktop\python\4) 24 feb>python P3-list-files.py
P1-append-data.py
P2-count-char-etc.py
P3-list-files.py
program1.txt
program2.txt

C:\Users\aakash yadav\Desktop\python\4) 24 feb>
```

| | |
|---|---|
| **Conclusion** | The program to display file available in current directory gives the required output. |

| | |
|---|---|
| **Experiment-2** | Implement Python Program to demonstrate File handling. |
| **CO** | To explore contents of files, directories and text processing with python. |
| **Title** | Python program for regex expression. |
| **Theory** | A RegEx, or Regular Expression, is a sequence of characters that forms a search pattern. RegEx can be used to check if a string contains the specified search pattern. |

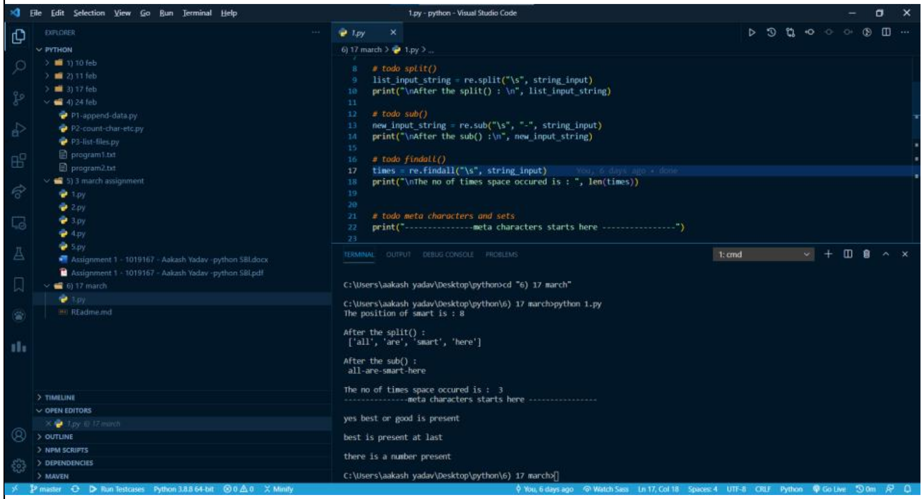
| Function | Description |
|---|---|
| findall | Returns a list containing all matches |
| search | Returns a Match object if there is a match anywhere in the string |
| split | Returns a list where the string has been split at each match |
| sub | Replaces one or many matches with a string |

**Program**

```
import re

# todo search()
string_input = "all are smart here"
ans = re.search("smart", string_input)
print("The position of smart is :", ans.start())

# todo split()
list_input_string = re.split("\s", string_input)
print("\nAfter the split() : \n", list_input_string)

# todo sub()
new_input_string = re.sub("\s", "-", string_input)
print("\nAfter the sub() :\n", new_input_string)

# todo findall()
times = re.findall("\s", string_input)
print("\nThe no of times space occured is : ", len(times))


# todo meta characters and sets
print("---------------meta characters starts here ----------------")

check = "cheese is the best"
reg = re.findall("best|good", check)
if len(reg) > 0:
    print("\nyes best or good is present")

reg=re.findall("best$",check)
if len(reg)>0:
    print("\nbest is present at last")

check="cheese is the no 1"
```

```python
reg = re.findall("[0-9]",check)
if len(reg)>0:
    print("\nthere is a number present ")
```

## OUTPUT



```python
# todo split()
list_input_string = re.split("\s", string_input)
print("\nAfter the split() : \n", list_input_string)

# todo sub()
new_input_string = re.sub("\s", "-", string_input)
print("\nAfter the sub() :\n", new_input_string)

# todo findall()
times = re.findall("\s", string_input)
print("\nThe no of times space occured is : ", len(times))


# todo meta characters and sets
print("---------------meta characters starts here ----------------")
```

```
C:\Users\aakash yadav\Desktop\python>cd "6) 17 march"

C:\Users\aakash yadav\Desktop\python\6) 17 march>python 1.py
The position of smart is : 8

After the split() :
 ['all', 'are', 'smart', 'here']

After the sub() :
 all-are-smart-here

The no of times space occured is :  3
---------------meta characters starts here ----------------

yes best or good is present

best is present at last

there is a number present

C:\Users\aakash yadav\Desktop\python\6) 17 march>
```

| | |
|---|---|
| **Conclusion** | The program on regex expression gives the required output. |