

# VASAVI COLLEGE OF ENGINEERING

(AUTONOMOUS)  
(Affiliated to Osmania University)  
Hyderabad - 500 031.

DEPARTMENT OF

: CSE

NAME OF THE LABORATORY : PP LAB

Name K. Agni Indira Sivani Roll No. 1602-21-733-052 Page No. 109.

## PRELAB QUESTIONS: 9

- 1) How to open a file in python? What are the different modes in which a file can be opened? Give the syntax for open() function in python:
- \* To open a file in python; we used "open" method in which we specify the file name and the mode in which we want to open.

SYNTAX: `f = open("filename", "mode")`

→ Different modes a file can be opened are:

- ~~open~~ • read (r)  
• write (w)  
• append (a)  
• read and write (r+)  
• write and read (w+)  
• read and append (a+)

- 2) How to read and write into a file in python? What are the different methods in python for reading & writing into a file?

\* We can read the content from the file using 3 methods

- read()
- readline()
- readlines()

SYNTAX: `x = f.read()`

\* We can write the content to the file using 2 methods :

- write()
- writelines()

SYNTAX: `f.write(x)`

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Name K. Sree Indira Sivani Roll No. 1602-21-733-052 Page No. 110

## PRELAB PROGRAMS: 9

- 1) Write a python program to count the number of tabs, spaces and newline characters in a file.

n = input("Enter the file name: ")

O/P:

→ File contents:

Vasavi College of Engineering  
Department of CSE  
CSE-a

Spaces = 7 Newline characters = 2

Tabs = 3.

```
f = open(n, "r")
x = f.read()
f.close()
s = 0; t = 0; n = 0
for i in x:
    if i == '\n':
        n += 1
    elif i == '\t':
        t += 1
    elif i == ' ':
        s += 1
    else:
        pass
```

print("Spaces =", s, "Newline Characters =", n, "Tabs =", t)

- 2) Write a program to check whether a given directory exists on your computer.

import os.

s = input("Enter the path to be checked:")

if os.path.exists(s):

print("Directory found")

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NAME OF THE LABORATORY : PP LAB

Name K. Sri India Sivani Roll No. 1602-21-733-052 Page No. 111

else:

print ("Directory ~~is~~ not found.")

O/P:

- 1) Enter the ~~directory~~ path to be checked: D:/VCE/VCE 2<sup>nd</sup> sem/PP9  
Directory found.
- 2) Enter the path to be checked: D:/VCE/VCE 2<sup>nd</sup> sem/ PP10.  
Directory not found.
- 3) Write a program that copies first 10 bytes of a binary file into another.

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DEPARTMENT OF : CSE

NAME OF THE LABORATORY : PP LAB

Name K. Sree Indira Divani Roll No. 1602-21-733-D52 Page No. 112

- 4) Write a python program that reads a file line by line & store it into a list.

```
s = input("Enter the file name: ")
f = open(s, "r")
x = f.readlines()
f.close()
print(x)
```

O/P : Enter the file name:  
1.txt

[ 'Vasavi College of Engineering\n',  
'Department of CSE\n', 'cse-a' ]

- 5) Write a python program that reads data from a file and calculates the percentage of vowels and consonants in the file.

```
s = input("Enter the file name: ")
vowels = ['a', 'e', 'i', 'o', 'u']
f = open(s, "r")
x = f.read()
f.close()
c = [] ; v = []
for i in x:
    if i >= 'a' and i <= 'z':
        if i in vowels:
            v.append(i)
        else:
            c.append(i)
```

O/P:  
Enter the file name : 1.txt  
Percentage of vowels = 80.0  
Percentage of consonants =

57.14285

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DEPARTMENT OF

: CSE

NAME OF THE LABORATORY : PP LAB

Name K. Sree Indira Sivani

Roll No. 1602-21-733-052

Page No. 113

```
a = set('v') ; b = set('c')
x = len(a) ; y = len(b)
p = (x * 100) / 5 ; q = (y * 100) / 21
print("Percentage of vowels =", p)
print("Percentage of consonants =", q)
```

6. Write a python program to remove newline characters from a file:

```
s = input("Enter the file name:")
f = open(s)
x = f.read()
f.close()
s = ""
print(x)
for i in x:
    if i != '\n':
        s += i
print("Modified:", s)
```

O/P:

Enter the file name: 4.txt  
vasavi college of engineering  
department of cse  
cse-a:

Modified: vasavi college of  
engineering department  
of cse cse-a.

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DEPARTMENT OF : CSE

NAME OF THE LABORATORY : PPLAB

Name K. Sree Indira Sivani Roll No. 1602-21-733-052 Page No. 114

## LAB PROGRAMS - 9:

- 1) Write a python program to count the frequency of words in a file:

```
* f=open("sample.txt")
x=f.read()
print(x)
w=1
for i in x:
    if j==' ' or j=='\n':
        w+=1
print("No. of words:",w)
```

O/P:

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DEPARTMENT OF CSE  
CSE-A.  
No. of words: 8

- 2) Write a python program that accepts filename as an input from the user. Open the file and count the number of times a character appears in the file:

```
s=input("Enter the file name:")
f=open(s,"w")
r=input("Enter the contents:")
f.write(r)
f.close()
f=open(s)
x=f.read()
print(x)
```

O/P:

Enter the file name:  
count.txt  
Enter the content:  
sivani \$ \$ \$ @123456# \$ 0

Enter the character to be searched: \$

Count of the given character:

4

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DEPARTMENT OF : CSE

NAME OF THE LABORATORY : PP LAB

Name K. Sree Indira Sivani Roll No. 1602-21-733-052 Page No. 115

```
f.close()
n=input("Enter the character to be searched:")
c=0
for i in x:
    if i==n:
        c+=1
print("Count of the given character:",c)
```

3) Write a python program to copy the contents of a file to another file:

\* s = input("Enter the file name:").
p = input("Enter the file name to copy the content:")
with open(s, "r") as f1, open(p, "w") as f2:
 x = f1.read()
 f2.write(x).

O/P:

Enter the file name: count.txt  
Enter the file name to copy the content: copy.txt

File: copy.txt:

sivani \$ \$ \$ 123456 # \$ .

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Hyderabad - 500 031.

DEPARTMENT OF : CSE

NAME OF THE LABORATORY : PP LAB

Name K. Sree Indira Sivani Roll No. 1602-21-733-052 Page No. 116

- 4) Program to create a text file and input a line of text to it.  
Display the line of text with all the punctuation marks removed.
- \* n = input("Enter the file name:")  
f = open(n, "w")  
s = input("Enter a text line:")  
f.write(s)  
f.close()  
f = open(n, "r")  
x = f.read()  
f.close()  
r = list(x)  
p = [',', '.', '!', '?', ';']  
s = ""  
for i in r:  
 if i not in p:  
 s += i  
print("Modified:", s)
- O/P:
- Enter the file name:line.txt  
Enter a text line:sivani..!?  
Modified:sivani

- 5) Python program that reads a file and write out into a newfile with lines in the reverse order.
- s = input("Enter the filename:")  
p = input("Enter the new file name:")  
f = open(s)  
x = f.readlines()  
f.close()

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Hyderabad - 500 031.

DEPARTMENT OF : CSE

NAME OF THE LABORATORY : PPLAB

Name K. Sree Indira Sivani Roll No. 1602-21-733-052 Page No. 117

```
f=open( p, "w" )  
y=xe[ : : -1 ]  
y[0] = y[0] + "\n"  
print  
f.writelines(y)  
f.close()
```

O/P:  
Enter the file name: sample.txt  
Enter the new file name: new.txt  
File:  
CSE-A  
DEPARTMENT OF CSE  
VASAVI COLLEGE OF ENGINEERING

- 6) Write a python program that generates a quiz and uses 2 files - questions.txt and answers.txt. The program should read the questions with options on the screen. The program should open the answers.txt and display the correct answers.