SRI RAMACHANDRA
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Category - I Deemed to be University) Porur, Chennai
SRI RAMACHANDRA FACULTY OF ENGINEERING AND TECHNOLOGY

Python - File Handling

~M.ARJUN

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Files

Files are named locations on disk to store related information. They are used to permanently store data in a non-volatile memory (e.g. hard disk).
Since Random Access Memory (RAM) is volatile (which loses its data when the computer is turned off), we use files for future use of the data by permanently storing them.

Operations on File Handling

"r" - Read - Default value. Opens a file for reading, error if the file does not exist

"a" - Append - Opens a file for appending, creates the file if it does not exist

"w" - Write - Opens a file for writing, creates the file if it does not exist

Editing a File

1. Open a File
2. Read , Write , Append
3. Close the File

You should always close your files, in some cases, due to buffering, changes made to a file may not show until you close the file.

Read

```
1  with open("first.txt","r") as r:
2      temp = r.read()
3      print(temp)
```

Append

```
1  with open ("first.txt","a")as f:
2      f.write("Appending a line, Done.")
3  f.close()
```

Write

```
with open ("first.txt","w")as f:
    f.write("Hello\nTesting To Write a file\nThank You\n
f.close()
```

Sample Program 1

3. Write a Program that reads the data from a file and calculate the percentage of vowels and consonants in the file.

```
name = input("Enter File Name: ")
with open(name,"r") as f1:
    txt=f1.read()
    vow_read = 0
    cons_read = 0
    for char in txt:
        if char in "aeiouAEIOU":
            vow_read+=1
        else:
            cons_read += 1
print("Length of text is:",len(txt))
print("Vowels:",vow_read)
print("Consonants:",cons_read)
perc_vow = (vow_read*100)//len(txt)
perc_cons = 100 - perc_vow
print("Vowels Percentage:",perc_vow)
print("Consonants Percentage:",perc_cons)

```

```
Enter File Name: second.txt
Length of text is: 50
Vowels: 16
Consonants: 34
Vowels Percentage: 32
Consonants Percentage: 68
```

Sample Program 2

Write a program that counts the number of tabs,spaces and new line character in a file

```
name = input("Enter File Name: ")
with open(name,"r") as f1:
    txt=f1.read()
    tab_cnt = 0
    space_cnt = 0
    newline_cnt = 0
    for char in txt:
        if char =='\t':
            tab_cnt+=1
        elif char ==' ':
            space_cnt+=1
        elif char =='\n':
            newline_cnt+=1
        else:
            pass
print("Tab:", tab_cnt)
print("Spaces:", space_cnt)
print("New Lines:", newline_cnt)
```

```
Enter File Name: second.txt
Tab: 0
Spaces: 6
New Lines: 3
```


thank
you