Python Programming - Lab - 9

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Python Programming - 2301CS404

Lab - 9

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1 File I/O

1.0.1 01) WAP to read and display the contents of a text file. (also try to open the file in some other directory)

- in the form of a string

- line by line

- in the form of a list

[2]:
```
fp1 = open("hello.txt")
data = fp1.read()
print(data)
fp1.close()
```

```
hello world
```

[18]:
```
fp1 = open("hello.txt")
for i in fp1:
    print(i)
fp1.close()
```

```
hello world

hello world

hello world

hello world

hello world

hello world
```

[17]:
```
fp1 = open("hello.txt")
data = fp1.readlines()
print(data)
fp1.close()
```

```
['hello world\n', 'hello world\n', 'hello world\n', 'hello world\n', 'hello
world\n', 'hello world']
```

1.0.2 02) WAP to create file named “new.txt” only if it doesn’t exist.

[1]:
```
fp1 = open("new.txt","x")
fp1.close()
```

1.0.3 03) WAP to read first 5 lines from the text file.

[6]:
```
fp1 = open("new.txt")
for i in range(0,5):
    data = fp1.readline()
    print(data)
fp1.close()
```

```
hello 1

hello 2

hello 3

hello 4

hello 5
```

1.0.4 04) WAP to find the longest word(s) in a file

[14]:
```
fp1 = open("new.txt")
s1 = fp1.read().split()
l1 = [len(i) for i in s1]
maxLength = max(l1)
ans = filter(lambda x: len(x)==maxLength,s1)
print(list(ans))
fp1.close()
```

```
['hello', 'hello', 'hello', 'hello', 'hello']
```

1.0.5 05) WAP to count the no. of lines, words and characters in a given text file.

[28]:
```
with open("new.txt","r") as fp1:
    countWords = 0
    countCharacters = 0
```

```
    countLines = 0
    data = fp1.read().split()
    l1 = [len(i) for i in data]
    countWords = len(l1)
    countCharacters = sum(l1)
    fp1.seek(0)
    countLines = len(fp1.readlines())


    print(countWords,countCharacters,countLines,sep=" ")
```

```
10 30 5
```

1.0.6 06) WAP to copy the content of a file to the another file.

[29]:
```
with open("new.txt","r") as fp1,open("new2.txt","w") as fp2:
    fp2.write(fp1.read())
```

1.0.7 07) WAP to find the size of the text file.

[30]:
```
import os
print(os.path.getsize("new.txt"))
```

```
43
```

1.0.8 08) WAP to create an UDF named frequency to count occurances of the specific word in a given text file.

[34]:
```
def frequencyOfWord(wordToFind:str,fileName:str):
    with open(fileName,"r") as fp1:
        data = fp1.read().split()
    return data.count(wordToFind)
frequencyOfWord("hello","new.txt")
```

[34]:
```
5
```

1.0.9 09) WAP to get the score of five subjects from the user, store them in a file. Fetch those marks and find the highest score.

[44]:
```
marks = ["25","45","78","35","45"]
# for i in range(0,5):
#     mark = input(f"enter marks for {i+1}")
with open("marks.txt","w") as fp1:
    fp1.write(" ".join(marks))
with open("marks.txt","r") as fp2:
    data = fp2.read().split()
    l1 = [int(i) for i in data]
```

```
    print(max(l1))
```

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1.0.10 10) WAP to write first 100 prime numbers to a file named primenumbers.txt

(Note: each number should be in new line)

[49]:
```
def firstHundredPrime():
    l1 = []
    for i in range(0,100):
        check = True
        for j in range(2,i//2):
            if i%j==0:
                check=False
        if(check):
            l1.append(str(i))
    return l1
with open("primenumbers.txt","w") as fp1:
    l1 = firstHundredPrime()
    fp1.write("\n".join(l1))
```

1.0.11 11) WAP to merge two files and write it in a new file.

[51]:
```
with open("new.txt","r") as fp1,open("marks.txt","r") as fp2, open("mergeAns.
 ↪txt","w") as fp3:
    data1 = fp1.read()
    data2 = fp2.read()
    ans = data1+"\n"+data2
    fp3.write(ans)
```

1.0.12 12) WAP to replace word1 by word2 of a text file. Write the updated data to new file.

[58]:
```
data = ""
with open("mergeAns.txt","r") as fp1:
    data = fp1.read().replace("hello","helloBye")
with open("new4.txt","w") as fp1:
    fp1.write(data)
```

1.0.13 13) Demonstrate tell() and seek() for all the cases(seek from beginning-end-current position) taking a suitable example of your choice.

[ ]:
```

```