



Python Programming - 2301CS404

Lab - 9

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File I/O

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

```
In [24]: fp1 = open("1.txt", 'r')
print(fp1.read())

print('\n')

fp2 = open("1.txt", 'r')
for i in fp2:
    print(i, end="")

print('\n')

fp3 = open("1.txt", 'r')
print(fp3.readlines())
```

Jeet bhalodi.
Darshan University.
Rajkot,Gujarat 360004.

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```
['Jeet bhalodi.\n', 'Darshan University.\n', 'Rajkot,Gujarat 360004.']
```

02) WAP to create file named "new.txt" only if it doesn't exist.

```
In [26]: fp = open('new.txt','w')
```

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

```
In [34]: fp=open("1.txt",'r')
for i in range(5):
    print(fp.readline(),end="")
```

Jeet bhalodi.
Anida Bhalodi.
Computer Engineering.
Darshan University.
Rajkot,Gujarat 360004.

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

```
In [58]: fp = open('1.txt','r')
word = fp.read().split()
print(word)

longest=max(word,key=len)
print(longest)

longest_words = [i for i in word if len(i)==len(longest)]
print(longest_words)
```

```
['Jeet', 'bhalodi.', 'Anida', 'Bhalodi.', 'Computer', 'Engineering.', 'Darshan', 'Un
iversity.', 'Rajkot,', 'Gujarat', '360004.']
Engineering.
['Engineering.']
```

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

```
In [70]: fp = open('1.txt','r')
lines = fp.readlines()
print("Lines : ",len(lines))

word = sum(len(i.split()) for i in lines)
print("Words : ",word)
```

```
characters = sum(len(i) for i in lines)
print("characters : ",characters)
```

```
Lines : 5
Words : 11
characters : 95
```

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

```
In [115... fp = open('1.txt','r')
content = fp.read()

copy = open("copy_1.txt",'w')
copy.write(content)
copy.close()
```

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

```
In [151... import os
size = os.path.getsize('1.txt')
print(size)
```

```
95
```

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

```
In [86]: def frequency(filename, word):
fp = open(filename,'r')
text = fp.read()
word_count = text.split().count(word)
return word_count

print("Frequency : ",frequency('1.txt','Bhalodi.'))
```

```
Frequency : 2
```

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.

```
In [105... fp = open('score.txt','w')
for i in range(5):
    score = input(f"Enter the score for subject {i + 1}: ")
    fp.write(f"{score}\n")
fp.close()

fs = open('score.txt','r')
scores = [int(i.strip()) for i in fs.readlines()]
highest_score = max(scores)
print(f"The highest score is: {highest_score}")
```

```
The highest score is: 98
```

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

(Note: each number should be in new line)

```
In [149... def first_n_primes(n):
    primes = []
    num = 2

    for i in range(0,n,1):
        flag=1
        for j in range(2,i,1):
            if i%j==0:
                flag=0
        if flag==1:
            primes.append(i)
    return primes

primes = first_n_primes(100)

fp = open('primenumbers.txt', 'w')
for i in primes:
    fp.write(f"{i}\n")
fp.close()
```

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

```
In [113... f1 = open('1.txt', 'r')
f2 = open('score.txt', 'r')

content1 = f1.read()
content2 = f2.read()

mr = open('new_merge.txt', 'w')
mr.write(content1)
mr.write('\n')
mr.write(content2)
mr.close()
```

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

```
In [121... input_file = '1.txt'
output_file = 'new_12.txt'
word1 = 'Jeet'
word2 = 'Bhavy'

content = open(input_file).read()
updated_content = content.replace(word1, word2)
open(output_file, 'w').write(updated_content)
```

Out[121... 96

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

```
In [155... with open('1.txt','br') as fp:
    print('Before reading pointer is at:',fp.tell())
    fp.read(2)
    print('After reading pointer is at:',fp.tell())
    fp.seek(0,0)
    print('After seeking pointer to beginning of the file',fp.tell())
    fp.seek(0,2)
    print('After seeking pointer to the of the file:',fp.tell())
    fp.seek(2,2)
    print('After seeking 3 characters, the file pointer is at',fp.tell())
```

```
Before reading pointer is at: 0
After reading pointer is at: 2
After seeking pointer to beginning of the file 0
After seeking pointer to the of the file: 95
After seeking 3 characters, the file pointer is at 97
```