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

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

```
# same directory
fp = open("demo.txt","r")
data = fp.read()
print("File Data is:",data)
fp.close()
```

```
File Data is: dadhaniya Parth
```

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

```
# different directory
fp = open("D:\\B-Tech\\Semester-4\\PP\\demo1.txt")
print("Data is:",fp.read())
fp.close()
```

```
Data is: Dadhaniya Parth
```

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

```
# line by line
fp = open("demo.txt","r")
line1 = fp.readline()
print(line1, end="")
line2 = fp.readline()
print(line2, end="")
line3 = fp.readline()
print(line3, end="")
fp.close()
```

```
Dadhaniya Parth
Student of Darshan University
Full Stack Developer
```

```
# in the form of a list
fp = open("demo.txt","r")
li = fp.readlines()
print(li)
fp.close()
```

```
['Dadhaniya Parth\n', 'Student of Darshan University\n', 'Full Stack
Developer']
```

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

```
file = open("demo.txt", 'r')

num_lines = 0
num_words = 0
num_chars = 0

for line in file:
    num_lines += 1
    num_words += len(line.split())
    num_chars += len(line)

file.close()

print(num_lines)
print(num_words)
print(num_chars)
```

```
3
9
66
```

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

```
sf = open('demo.txt', 'r')
df = open('demo2.txt', 'w')

df.write(sf.read())

sf.close()
df.close()
```

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

```
fp = open('demo.txt', 'r')
fp.seek(0, 2)
size = fp.tell()
fp.close()
print("File size is:",size,"bytes")
```

```
File size is: 66 bytes
```

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

```
def frequency(fp, word):
    count = 0
    with open(fp, 'r') as file:
        for line in file:
            count += line.lower().split().count(word.lower())
    return count

word = input("Enter the word to count: ")

word_count = frequency("demo.txt", word)
print("Count Of Words:",word_count)
```

```
Enter the word to count:  Parth

Count Of Words: 1
```

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.

```
f = open("marks.txt", "w")
for i in range(5):
    f.write(input("Enter marks: ") + "\n")
f.close()

f = open("marks.txt", "r")
marks = [int(line.strip()) for line in f]
f.close()
print("Highest score:", max(marks))
```

```
Enter marks:  99
Enter marks:  867
Enter marks:  54
Enter marks:  67
Enter marks:  89

Highest score: 867
```

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

(Note: each number should be in new line)

```
fp = open("primenumbers.txt", "w")
n, count = 2, 0
```

```
while count < 100:
    for i in range(2, int(n**0.5) + 1):
        if n % i == 0:
            break
    else:
        fp.write(str(n) + "\n")
        count += 1
    n += 1
fp.close()
```

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

```
f1 = open("file1.txt", "r")
f2 = open("file2.txt", "r")
f3 = open("mergedfile.txt", "w")

f3.write(f1.read())
f3.write("\n")
f3.write(f2.read())

f1.close()
f2.close()
f3.close()
```

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

```
f1 = open("demo.txt", "r")
f2 = open("updatedfile.txt", "w")

word1 = "Parth"
word2 = "Patel"

data = f1.read().replace(word1, word2)
f2.write(data)

f1.close()
f2.close()
```

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

```
f = open("example.txt", "w+")
f.write("Hello, this is an example file.")
f.seek(0)
print("Current position:", f.tell())
f.seek(7)
print("Position after seeking to 7:", f.tell())
```

```
print("Reading from position 7:", f.read(4))
f.close()
```

```
Current position: 0
Position after seeking to 7: 7
Reading from position 7: this
```