Python Practical (208) – Assignment-4

'''

Q.1. Write a Python program to create a file of numbers by taking input from the user and then display the content of the file. You can take input of non-zero numbers, with an appropriate prompt, from the user until the user enters a zero to create the file assuming that the numbers are non-zero.

'''

```
f = open("file1.txt","w")
print("enter 0 (zero) to STOP...")
print("Enter non-zero Numnbers : ")
while True:
    num = input("Enter Number : ")
    try:
        num = int(num)
        if int(num) == 0:
            break
        f.write(str(num)+"\n")
    except:
        print("Please enter numbers only..")
f.close()
print("Printing Output from file1.txt : ")
f = open("file1.txt")
print(f.read())
f.close()
```

'''

Q.2. Write a Python program to create a text file of multiple lines. Display the following:

1. Entire text file

2. 1st n lines of the text file.

3. m lines starting from the nth line

4. number of words in each line

'''

```
design = 50*"="
f = open("file2.txt","w")
print("Enter END to Stop : \n")
print("Enter Input: \n")

while True:
    txt = input()
    if txt.upper() == 'END':
        break
    f.write(txt+'\n')
f.close()
print(design)

f = open("file2.txt")

print("1. Entire text file : \n\n")

print(f.read().strip())

print(design)

print("2. 1st N lines of the text file. : ")

n = int(input("Enter N : "))
f.seek(0,0)
for i in range(n):
```

```
    print(f.readline().strip())

print(design)

print("3. M lines starting from the Nth line : ")

m = int(input("Enter M : "))
for i in range(m):
    print(f.readline().strip())

print(design)
f.close()

print("4. number of words in each line : ")

f = open("file2.txt")
for i in f.readlines():
    count = i.count(" ")
    print(count+1,"words")

print(design)
f.close()
```

'''

Q.3. Write a Python program to create a file of numbers by taking input from the user. Split this file into two files where one file contains odd numbers, and the other file contains even numbers from the file. You can take input of non-zero numbers, with an appropriate prompt, from the user until the user enters a zero to create the file assuming that the numbers are non-zero.

'''

```
design = 50*"="
f = open("file3.txt","w")
print("enter 0 (zero) to STOP...")
print("Enter non-zero Numnbers : ")
while True:
    num = input("Enter Number : ")
    try:
        num = int(num)
        if int(num) == 0:
            break
        f.write(str(num)+"\n")
    except:
        print("Please enter numbers only..")
f.close()

f = open("file3.txt")
fEven = open("fileEven.txt","w")
fOdd= open("fileOdd.txt","w")
for i in f.readlines():
    ans = int(i)
    if(ans % 2 == 0):
        fEven.write(str(ans)+"\n")
    else:
        fOdd.write(str(ans)+"\n")

fEven.close()
fOdd.close()
f.close()
```

```
print(design)
print("Printing Output from fileOdd.txt : ")
f = open("fileOdd.txt")
print(f.read())
f.close()
print(design)

print("Printing Output from fileEven.txt : ")
f = open("fileEven.txt")
print(f.read())
f.close()
print(design)
```

'''

Q.4. Write a Python program to create a file of elements of any data type (mixed data type, i.e. some elements maybe of type int, some elements of type float and some elements of type string). Split this file into three file containing elements of same data type (i.e. 1st file of integers only, 2nd file of float only and 3rd file of strings only). Take input from the user to create the file.

'''

```
design = 50*"="
f = open("file4.txt","w")
print("enter END to STOP...")
print("Enter Any Input : ")
while True:
    txt = input()
    if txt.upper() == 'END':
        break
    f.write(txt+'\n')
f.close()

f = open("file4.txt")
fInt = open("fileInt.txt","w")
fFloat= open("fileFloat.txt","w")
fStr= open("fileStr.txt","w")
for i in f.readlines():
    for j in i.strip().split(" "):
        try:
            num = int(j)
            fInt.write(j+"\n")
        except:
            try:
                num = float(j)
                fFloat.write(j+"\n")
            except:
                num = str(j)
                fStr.write(j+"\n")
```

```
fInt.close()
fFloat.close()
fStr.close()
f.close()

print(design)
print("Printing Output from fileInt.txt : ")
f = open("fileInt.txt")
print(f.read())
f.close()
print(design)

print("Printing Output from fileFloat.txt : ")
f = open("fileFloat.txt")
print(f.read())
f.close()
print(design)

print("Printing Output from fileStr.txt : ")
f = open("fileStr.txt")
print(f.read())
f.close()
print(design)
```

'''

Q.5. Write a Python program to create a file containing student records where each record contain rollno and marks in 3 subjects separated by a comma (marks to be considered as list of 3 values). e.g. records of students: 1, [45, 40, 35], 2, [41, 38, 39], 3, [35, 30, 37] (each line of the file containing record of only 1 student). Prepare mark list in the following format:

Roll No. Mark-1 Mark-2 Mark-3 Total

1 45 40 35 120

'''

```
design = 50*"="
f = open("file5.txt","w")
print("enter END to STOP...")
print("Enter input per line like : rollno [m1,m2,m3]")
print("Enter Any Input : ")
while True:
    txt = input()
    if txt.upper() == 'END':
        break
    f.write(txt+'\n')
f.close()

f = open("file5.txt")
print("Roll No. Mark-1 Mark-2 Mark-3 Total")
for i in f.readlines():
    record = i.split(" ")
    print(record[0],end="\t")
    ans = str(record[1])
    ans = ans[1:len(ans)-2]
    marks = ans.strip().split(",");
    sum = 0
    for m in marks:
        print(m,end = "\t")
        sum += int(m)
    print(sum)
f.close()
```

'''

Q.6. Write a Python program to create a file of strings by taking input from the user and then create a dictionary containing each string along with their frequencies. (e.g. if the file contains ‘apple’, ‘banana’, ‘fig’, ‘apple’, ‘fig’, ‘banana’, ‘grapes’, ‘fig’, ‘grapes’, ‘apple’ then the output should be {'apple': 3, 'banana': 2, 'fig': 3, 'grapes': 2}.

'''

```
design = 50*"="
f = open("file6.txt","w")
print("enter END to STOP...")
print("Enter Any Input : ")
while True:
    txt = input()
    if txt.upper() == 'END':
        break
    f.write(txt+"\n")
f.close()

list1 = []
f = open("file6.txt")
for i in f.readlines():
    ans = i.strip().split(" ")
    list1.extend(ans)

f.close()

dict1 = {}
n = (len(list1))
i = 0
while i<n:
    count = list1.count(list1[i])
    dict1[list1[i]] = count
    i += 1

print("Output : ",dict1)
```

'''

Q.7. Write a Python program to create a text file of multiple lines. Take input of a word from the user and then display all the lines from the file containing this word along with the frequency of the word in that line.

'''

```
design = 50*"="
print("Enter Lines : ")
f = open("file7.txt","w")
while True:
    txt = input()
    if txt.upper() == "END":
        break
    f.write(txt+"\n")

f.close()

print(design)
word = input("Enter word to find : ")
print(design)

print("count   Line")
print(design)
with open("file7.txt") as f:
    for line in f:
        count = 0
        count = line.count(word)
        if count > 0:
            print(count,end='\t')
            print(line.strip())
```