Name : Makwana Vishal Raghavbhai

Class : FYMCA (SAM-2)   **Div :** B

Roll No: 113

Paper Number : 204

Subject : Python Programming Language

Assignment Number : 4

Dept. of Computer Science,
Veer Narmad South Gujarat University, Surat.
M.C.A. 2nd Semester (2020-2021)
Paper 204: Python Programming Language
Practical Sheet - 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.

```python
numbers = open('Q1.txt','w')
print("WRITE OPERATION ON THE FILE")
print("--------------------------")
while True:
 value = input('Enter Number :-')
 if value == '0':
     break
 else:
     numbers.write(value)
     numbers.write('\n')
     con = input("Do You Want To Continue To Enter
                 The More Data ? (y/n) :- ")
 if con == 'n' or con == 'N':
     break
     numbers.close()
numbers = open('Q1.txt','r')
print("READ OPERATION FROM THE FILE")
print("--------------------------")
str = numbers.readline()
while str:
 print(str)
 str = numbers.readline()
numbers.close()
```

```
WRITE OPERATION ON THE FILE

---------------------------

Enter Number :->? 10

Do You Want To Continue To Enter The More Data ? (y/n) :- >? y

Enter Number :->? 20

Do You Want To Continue To Enter The More Data ? (y/n) :- >? y

Enter Number :->? 30

Do You Want To Continue To Enter The More Data ? (y/n) :- >? n

READ OPERATION FROM THE FILE

---------------------------

10

20

30
```

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 tile.

3. m lines starting from the nth line

4. number of words in each line

```python
ch=1
f=open("Q2.txt","w")
f.write('This is a line 1 \n')
f.write('This is a line 2\n')
f.write('This is a line 3\n')
f.write('This is a line 4\n')
f.write('This is a line 5\n')
f.write('This is a line 6\n')
f.close()
while ch!=0:
    print('\n1. Entire text file')
    print('2. 1st n lines of the text file')
    print('3. M lines starting from the nth lin')
    print('4. Number of words in each line')
    print('0. Exit')
    ch=int(input('Enter valid choice = '))
    if ch==0:
        break
    elif ch==1:
        f = open("Q2.txt", "r")
        print(f.read())
        f.close()
    elif ch==2:
        f = open("Q2.txt", "r")
        n=int(input("Enter no of lines do you want to
                    print in file ="))
        for i in range(n):
            line=f.readline()
            print(line, end='')
        f.close()
    elif ch==3:
        f = open("Q2.txt", "r")
        m=int(input("starting position line that you
```

```python
                      want to start display from
                      file:"))
        n=int(input("last line you want to display
                      from file ="))
        m=m-1
        for line in (f.readlines() [m:n]):
            print(line, end='')
        f.close()
    elif ch==4:
        f = open("Q2.txt", "r")
        print('word text')
        for i in f:

            l=len(i)
            print(l , ': ',i,end='')

        f.close()


    else:
        print('Invalid choice')
```

OUTPUT

```
1. Entire text file

2. 1st n lines of the text file

3. M lines starting from the nth lin

4. Number of words in each line

0. Exit

Enter valid choice = >? 1

This is a line 1

This is a line 2

This is a line 3

This is a line 4

This is a line 5

This is a line 6
```

```
Enter valid choice = >? 2
Enter no of lines do you want to print in file =>? 3
This is a line 1
This is a line 2
This is a line 3


Enter valid choice = >? 3
starting position line that you want to start display
from file:>? 2
last line you want to display from file =>? 3
This is a line 2
This is a line 3


Enter valid choice = >? 4
word text
18 :  This is a line 1
17 :  This is a line 2
17 :  This is a line 3
17 :  This is a line 4
17 :  This is a line 5
17 :  This is a line 6


Enter valid choice = >? 0
```

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.

```python
print("Write Data Into The FIle")
print("--------------------------")
feven = open('even_num.txt', 'w')
fodd = open('odd_num.txt', 'w')
while True:
    value = input('Enter Number for stop press(0):-')
    if value == '0':
        break
    elif int(value) % 2 == 0:
        feven.write(value+'\n')
    elif int(value) % 2 != 0:
        fodd.write(value+'\n')
feven.close()
fodd.close()
print("--------------------------")
print("READING DATA FROM THE FILE")
print("--------------------------")
feven = open('even_num.txt', 'r')
print("EVEN NUMBERS :")
print("--------------")
str = feven.readline()
while str:
    print(str)
    str = feven.readline()
feven.close()
fodd = open('odd_num.txt', 'r')
print("ODD NUMBERS :")
print("--------------")
str = fodd.readline()
while str:
    print(str)
    str = fodd.readline()
fodd.close()
```

<u>OUTPUT</u>

```
Write Data Into The FIle
------------------------
Enter Number for stop press(0):->? 10
Enter Number for stop press(0):->? 15
Enter Number for stop press(0):->? 20
Enter Number for stop press(0):->? 25
Enter Number for stop press(0):->? 0
-------------------------
READING DATA FROM THE FILE
--------------------------
EVEN NUMBERS :
-------------
10
20
ODD NUMBERS :
-------------
15
25
```

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.

```python
fname = input("Enter File Name :-")
try:
    fhandle = open(fname,'r')
except:
    fhandle = open(fname,'w')
else:
    fhandle.close()
    fhandle = open(fname,'a+')
print("WRITING DATA IN THE FILE")
print("----------------------")
while True:
    all = input("Enter any Value for exit enter (end):")
    if all.upper() == 'END': break;
    fhandle.write(all + '\n')

fhandle.close()
fhandle = open(fname,'r')
while True:
    line = fhandle.readline()
    line = line.split()
    if not line:
        break
    else:
        for i in line:
            if i.isalpha():
                with open('String.txt','a') as fstring:
                    i = str(i)
                    fstring.write(i + '\n')
            elif i.isdigit:
                try:
                    with open('Int.txt','a') as fint:
                        i = int(i)
                        i = str(i)
                        fint.write(i + '\n')
                except:
                    with open('Float.txt','a') as ffloat:
```

```python
                            i = float(i)
                            i = str(i)
                            ffloat.write(i + '\n')
print("-------------------------")
print("READING DATA FROM THE FILE")
print("-------------------------")
fint = open('Int.txt','r')
print("INTIGER VALUES :- ")
print("-----------------")
str = fint.readline()
while str:
    print(str)
    str = fint.readline()
fint.close()
ffloat = open('Float.txt','r')
print("FLOAT VALUES :- ")
print("---------------")
str = ffloat.readline()
while str:
    print(str)
    str = ffloat.readline()
ffloat.close()
fstring = open('String.txt','r')
print("STRING VALUES :- ")
print("---------------")
str = fstring.readline()
while str:
    print(str)
    str = fstring.readline()
fstring.close()
fhandle.close()
```

OUTPUT

```
Enter File Name :->? Q4.txt

WRITING DATA IN THE FILE

------------------------

Enter any Value for exit enter (end) :- >? 10

Enter any Value for exit enter (end) :- >? vishal

Enter any Value for exit enter (end) :- >? 5.50

Enter any Value for exit enter (end) :- >? makwana
```

```
Enter any Value for exit enter (end) :- >? end

--------------------------

READING DATA FROM THE FILE

--------------------------

INTIGER VALUES :-

-----------------

10

FLOAT VALUES :-

---------------

5.5

STRING VALUES :-

----------------

vishal

makwana
```

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

```python
Stud_file = open('Sinfo.Txt', 'w+')
Fdict = dict()

Stud_file.write("\n RollNo   Mark1   Mark2   Mark3
                 Total \n")
while True:
    Mark = list()
    n = str(input("Press Enter For Insert Record for
                   exit press(end) :- "))
    if n.lower() == 'end':
        break
    else:
        try:
            rno = int(input("Enter Roll No :"))
            m1 = int(input("Enter The Marks 1 :"))
            m2 = int(input("Enter The Marks 2 :"))
            m3 = int(input("Enter The Marks 3 :"))
        except:
            print("Please Enter The Numeric
                   Value......")
            continue
        rollno = rno
        Mark.extend([m1, m2, m3])
        Fdict[rollno] = Mark
        for rollno in Fdict:
            total = Fdict[rollno][0] +
            Fdict[rollno][1] + Fdict[rollno][2];
            Stud_file.write("\t%d\t %d\t\t %d\t\t %d\t\t
                            %d\t\t\n" % (rollno,
                            Fdict[rollno][0],
                            Fdict[rollno][1],
```

```python
                              Fdict[rollno][2], total))
Stud_file.close()
Stud_file = open('Sinfo.Txt', 'r')
if Stud_file.mode == 'r':
    sen = Stud_file.read()
    print(sen)
Stud_file.close()
```

OUTPUT

```
Press Enter For Insert Record for exit press(end) :-
>?
Enter Roll No :>? 1
Enter The Marks 1 :>? 89
Enter The Marks 2 :>? 87
Enter The Marks 3 :>? 86
Press Enter For Insert Record for exit press(end) :-
>?
Enter Roll No :>? 2
Enter The Marks 1 :>? 99
Enter The Marks 2 :>? 95
Enter The Marks 3 :>? 92
Press Enter For Insert Record for exit press(end) :-
>? end
 RollNo  Mark1  Mark2  Mark3  Total
     1      89      87      86    262
     2      99      95      92    286
```

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.

```python
file = open('Q6.txt','w+')
flist = list()
fdict = dict()
while True:
    n = input("Enter The Values for Exit Press(end) :")
    if n.lower() == "end":
        break
    else:
        flist.append(n)
x = len(flist)
for i in range(x):
    cnt = 0
    for j in range(x):
        if flist[i] == flist[j]:
            cnt = cnt + 1
            fdict[flist[i]] = cnt
for i in fdict:
    file.write("[%s :- %d]" %(i,fdict[i]))
file.close()
file = open('Q6.txt','r')
for i in file:
    i = i.strip()
print(i)
file.close()
```

OUTPUT

```
Enter The  Values for Exit Press(end) :->? apple

Enter The  Values for Exit Press(end) :->? banana

Enter The  Values for Exit Press(end) :->? apple

Enter The  Values for Exit Press(end) :->? grapes

Enter The  Values for Exit Press(end) :->? end

[apple :- 2][banana :- 1][grapes :- 1]
```

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.

```python
print("Enter a  data For Exit press (END)  ")
while True:
    try:
        string=input("")
        if string.lower()=='end':
            break;
        else:
            fhandle=open("Q7.txt",'a')
            fhandle.write(string)
            fhandle.write("\n")
            fhandle.close()
    except:
        print("PLEASE ENTER PROPER DATA....")

word=input("ENTER WORD FOR YOU WANT TO SEARCH :- ")
print("-------------------------")
print("READ DATA FROM THE FILE :")
print("-------------------------")
fhandle=open("Q7.txt","r")
for i in fhandle:
    string=i.strip("\n")
    my_name=string.split(" ")
    count=0
    for j in my_name:
        if j.lower()==word:
            count=count+1;
    if count!=0:
        print(f"'{string}' line contain '{word}' word
            frequency is {count} ")
        print("--"*30)
fhandle.close()
```

OUTPUT

```
Enter a  data For Exit press (END)

my name is vishal

vishal is my name

he is a student

end

ENTER WORD FOR YOU WANT TO SEARCH :- >? vishal

-------------------------

READ DATA FROM THE FILE :

-------------------------

'my name is vishal' line contain 'vishal' word frequency is 1

-------------------------------------------------------------

'vishal is my name' line contain 'vishal' word frequency is 1

-------------------------------------------------------------


                    **************
```