Experiment No. 10

**Programming Exercise**

1. Write a function stats() that takes one input argument: the name of a text file. The

;function should print, on the screen, the number of lines, words, and characters in the file

.your function should open the file only once

stats('example.txt') >>>

line count: 3 word count: 20 character count: 98

**INPUT:**

import os  
def stats():  
 char\_count=0  
 word\_count=0  
 line\_count=0  
 f=open("F:/BIODATA.TXT","r")  
 for i in f:  
 line\_count=line\_count+1  
 char\_count=char\_count+len(i)  
 word\_count=word\_count+len(i.split(' '))  
 print("stats('BIODATA.TXT')")  
 print("line\_count:",line\_count,"lines")  
 print("count:",char\_count,"characters")  
 print("count:",word\_count,"words")  
stats()

**Output:**

stats('BIODATA.TXT')

line\_count: 3 lines

count: 37 characters

count: 6 words

2. Implement function distribution() that takes as input the name of a file (as a string). This one-line file will contain letter grades separated by blanks.Your function should print the distribution of grades

**INPUT:**

import os  
def distribution(grades):  
 f=open("f:\grades.txt","r")  
 grades=f.read()  
 acount=grades.count('A\n')  
 aminuscount=grades.count('A-\n')  
 bCount = grades.count('B\n')  
 bMinusCount = grades.count('B-\n')  
 cCount = grades.count('C\n')  
 cMinusCount = grades.count('C-\n')  
 fCount = grades.count('F\n')  
 print('students got A:',acount)  
 print('students got A-:',aminuscount)  
 print('students got B:',bCount)  
 print('students got B-:',bMinusCount)  
 print('students got C:',cCount)  
 print('students got C-:',cMinusCount)  
 print('student got F:',fCount)  
distribution('grades')

**Output:**

students got A: 8

students got A-: 2

students got B: 5

students got B-: 3

students got C: 9

students got C-: 4

student got F: 1

3. Implement function duplicate() that takes as input the name (a string) of a file in the

.current directory and returns True if the file contains duplicate words and False otherwise

duplicate('Duplicates.txt') >>> True

duplicate('noDuplicates.txt') >>>

False

**INPUT:**

import os

def has\_duplicate\_words(filename):

with open("f:\hello.txt", 'r') as f:

words = set()

for line in f.readlines():

lineWords = line.split()

for word in lineWords:

if word in words:

print("duplicate('duplicate.txt')\ntrue")

words.add(word)

print("duplicate('noduplicate.txt')\nfalse")

has\_duplicate\_words('filenmae')

**Output:**

duplicate('noduplicate.txt')

false

4.The function abc() takes the name of a file (a string) as input. The function should .4 open the file, read it, and then write it into file abc.txt with this modification: Every

.'occurrence of a four-letter word in the file should be replaced with string 'xxxx abc('example.txt') >>>

Note that this function produces no output, but it does create file abc.txt in the current folder

**INPUT:**

def abc(readfile,writefile,mode='r+'):

infile = open(readfile,mode)

outfile = open(writefile,mode)

new\_list=[]

for line in infile:

mylist = line.split()

for word in mylist:

if string\_count(word):

word ="XXXX "

else:

pass

new\_list.append(word)

for word in new\_list:

outfile.write("{} \n".format(word))

infile.close()

outfile.close()

def string\_count(mystring):

if len(mystring)==4:

return True

else:

return False

abc("f:\home.txt","f:\home.txt")