Computer Science (083)

Session -

PRACTICAL FILE

SUBMITTED TO :-

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not starting with alphabet ‘A’

12. To merge alternative lines of two file

13. To print those words to file1 which don't start with "A,E,I,O,U"

14. To print those words of file1 which don't start with "a,e,i,o,u"

15. To write a file which have all lowercase letters , except the 1st word

16. To find word length of file

17. To count "the" word in file

18. Function to convert octal no. to other base

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33. Matrix / 2D list program

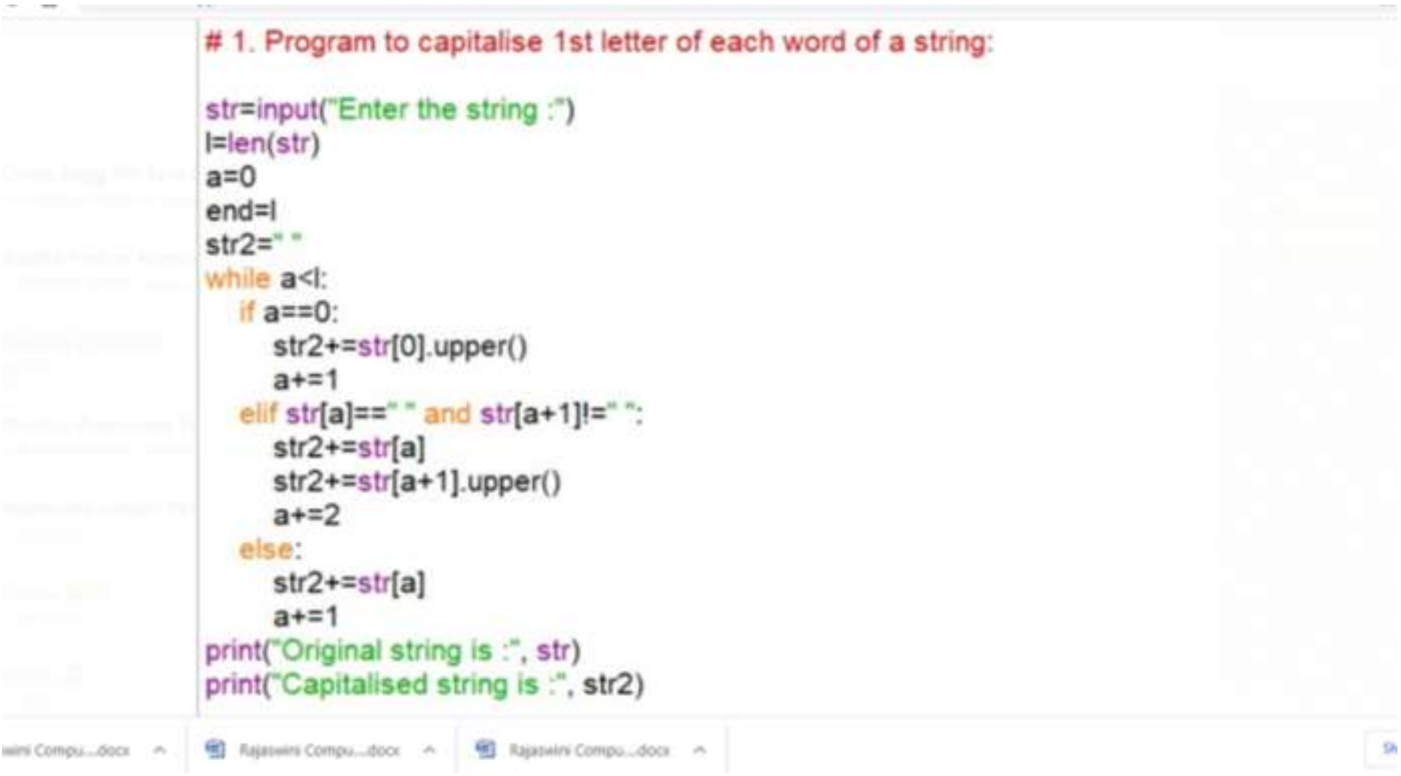
34. Program of circular queue implementation

35. Check prsence of value in Dictionary

36. Entry of values in Dictonary

1.TO CAPITALISE 1 LETTER OF EACH WORD

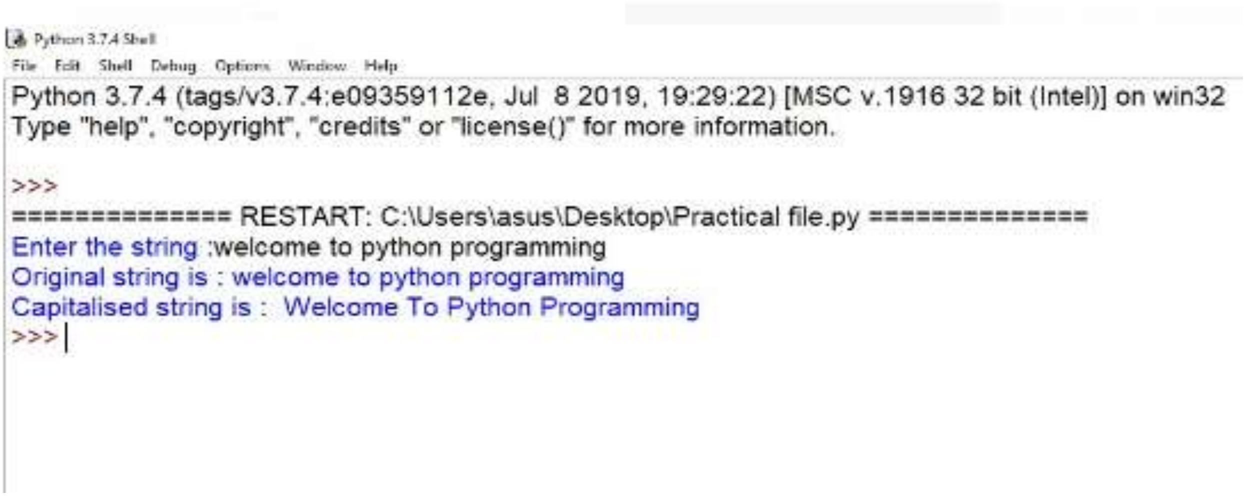
Code:



```
# 1. Program to capitalise 1st letter of each word of a string:

str=input("Enter the string :")
l=len(str)
a=0
end=l
str2=" "
while a<l:
    if a==0:
        str2+=str[0].upper()
        a+=1
    elif str[a]==" " and str[a+1]!=" ":
        str2+=str[a]
        str2+=str[a+1].upper()
        a+=2
    else:
        str2+=str[a]
        a+=1
print("Original string is :", str)
print("Capitalised string is :", str2)
```

OUTPUT:

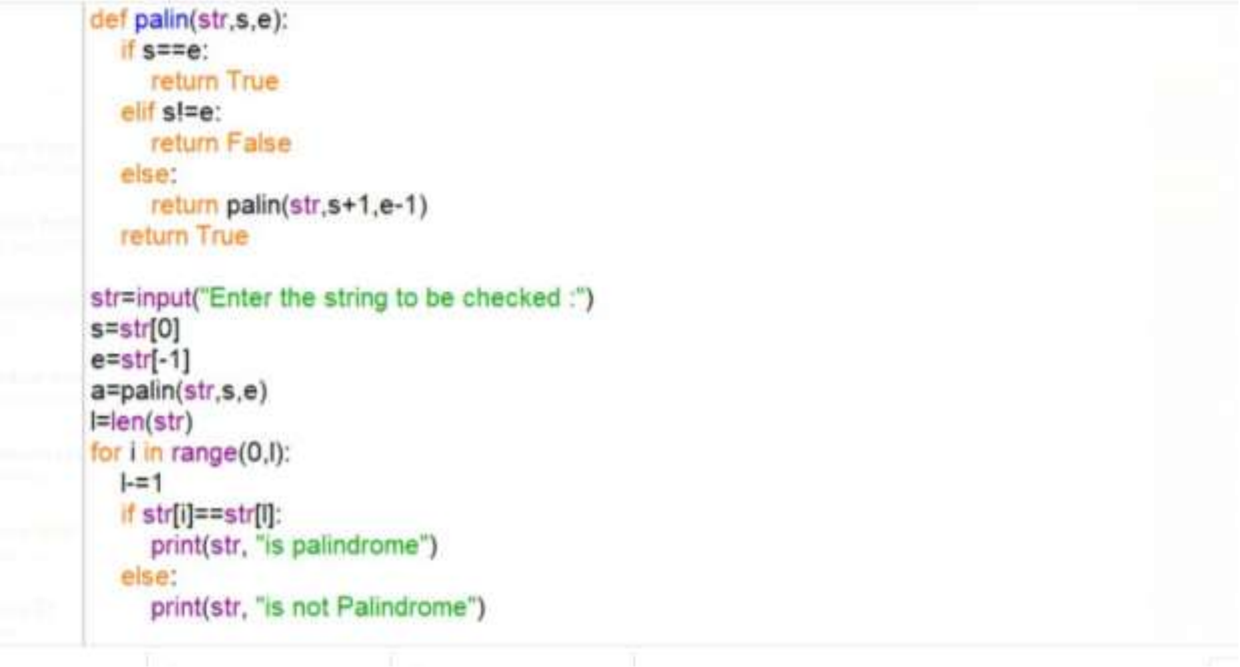


```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>>
============== RESTART: C:\Users\asus\Desktop\Practical file.py ==============
Enter the string :welcome to python programming
Original string is : welcome to python programming
Capitalised string is :  Welcome To Python Programming
>>>
```

2.PALINDROME BY RECURSION

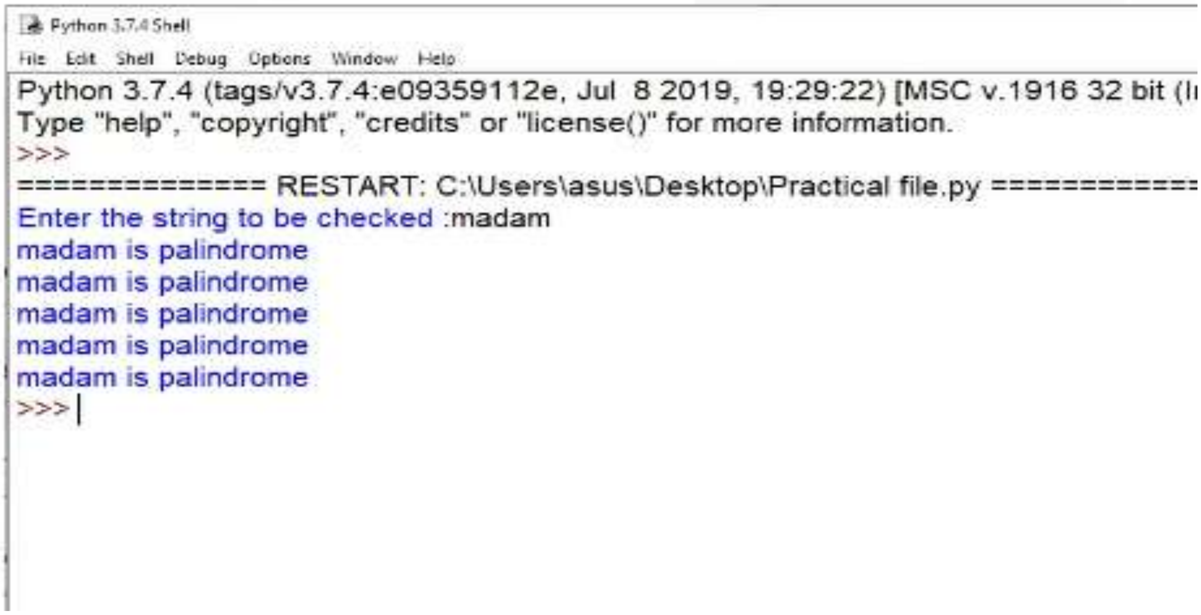
Code:



```
def palin(str,s,e):
    if s==e:
        return True
    elif s!=e:
        return False
    else:
        return palin(str,s+1,e-1)
    return True

str=input("Enter the string to be checked :")
s=str[0]
e=str[-1]
a=palin(str,s,e)
l=len(str)
for i in range(0,l):
    l-=1
    if str[i]==str[l]:
        print(str, "is palindrome")
    else:
        print(str, "is not Palindrome")
```

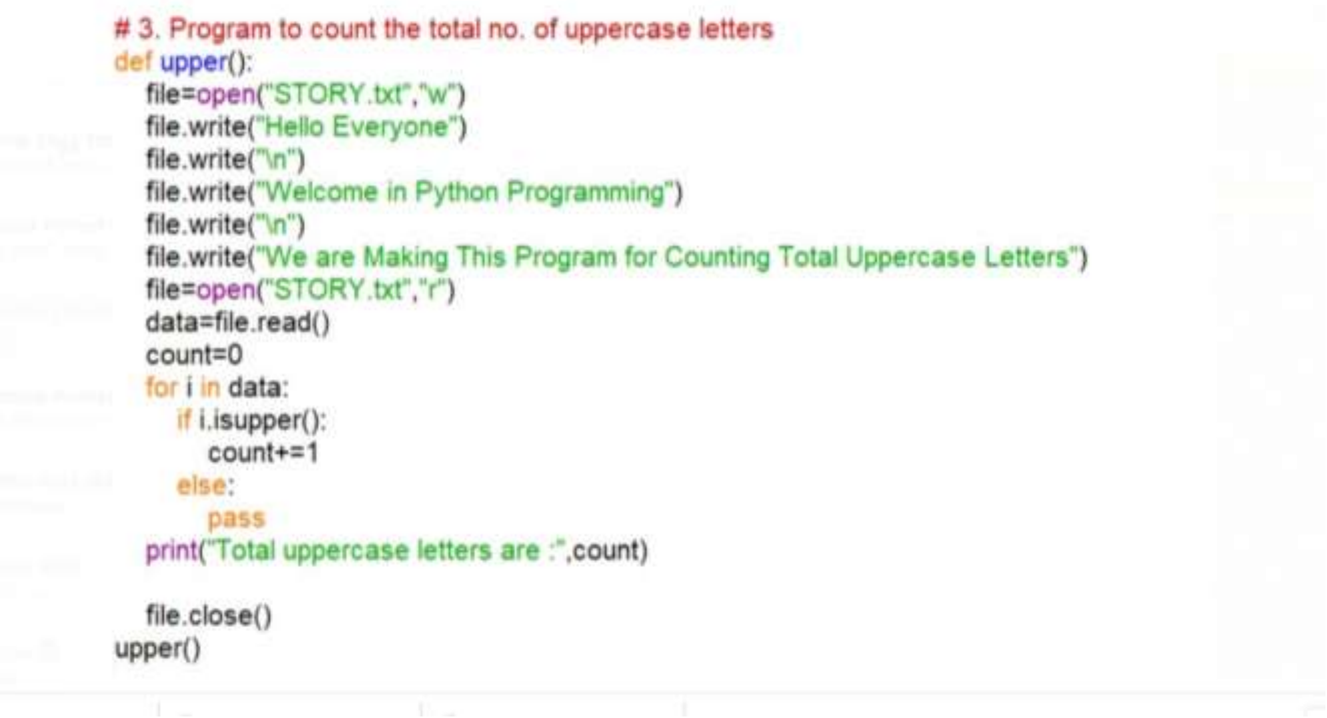
OUTPUT:



```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit (I
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============== RESTART: C:\Users\asus\Desktop\Practical file.py ===========
Enter the string to be checked :madam
madam is palindrome
madam is palindrome
madam is palindrome
madam is palindrome
madam is palindrome
>>> |
```

3.COUNT TOTAL UPPERCAE LETTERS IN A FILE

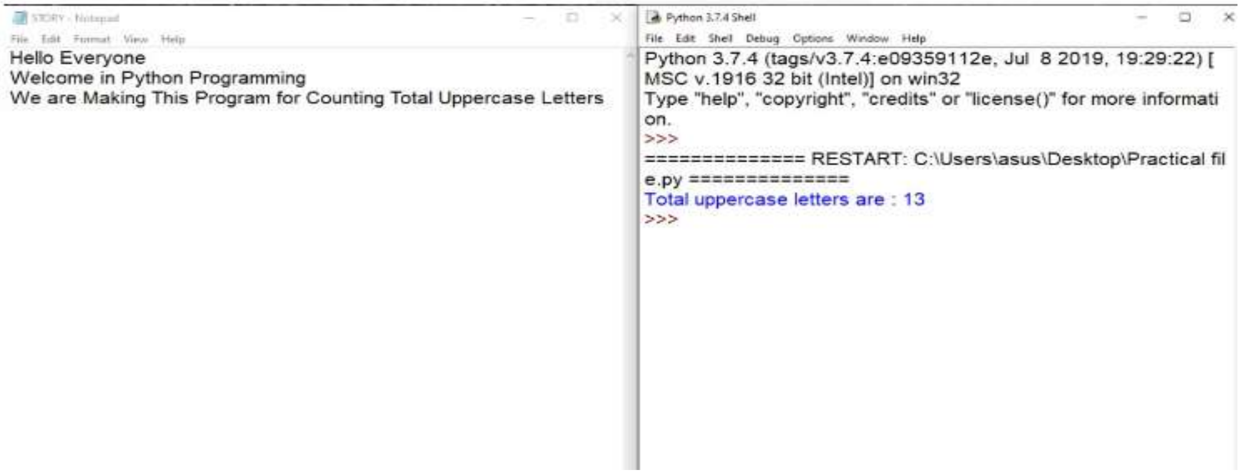
Code:



```
# 3. Program to count the total no. of uppercase letters
def upper():
    file=open("STORY.txt","w")
    file.write("Hello Everyone")
    file.write("\n")
    file.write("Welcome in Python Programming")
    file.write("\n")
    file.write("We are Making This Program for Counting Total Uppercase Letters")
    file=open("STORY.txt","r")
    data=file.read()
    count=0
    for i in data:
        if i.isupper():
            count+=1
        else:
            pass
    print("Total uppercase letters are :",count)

    file.close()
upper()
```

OUTPUT:

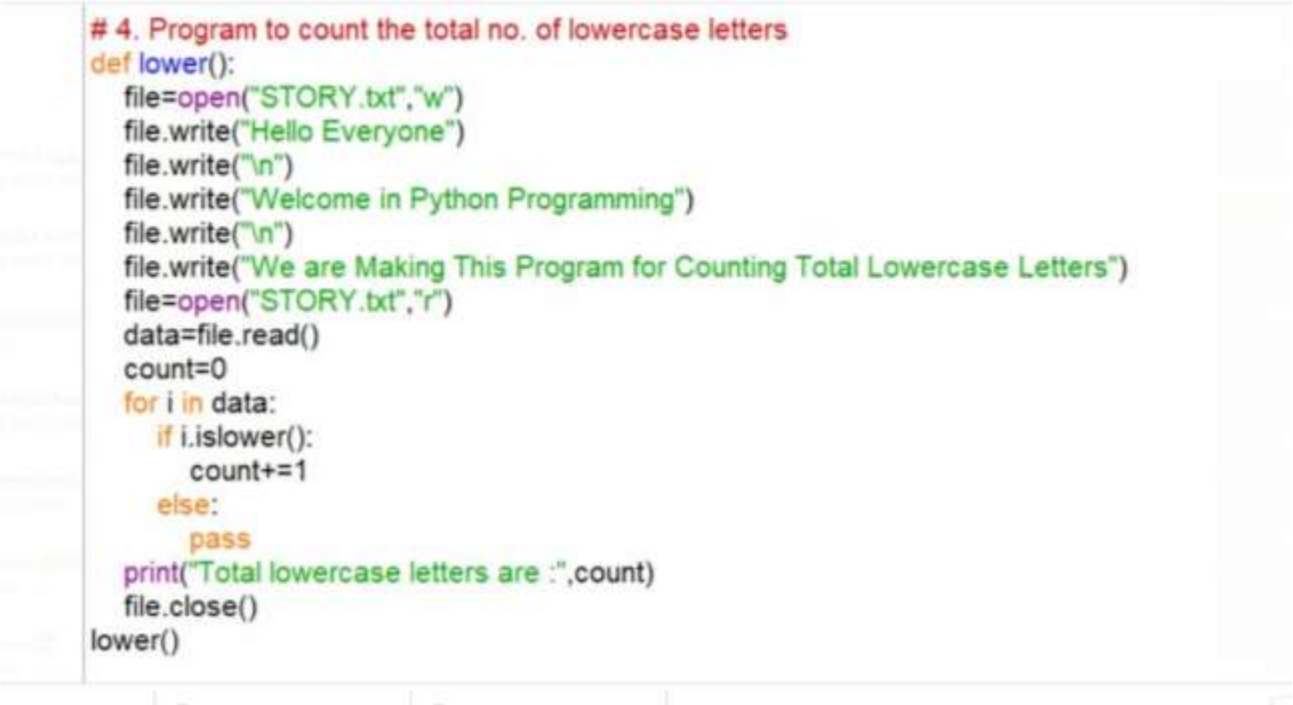

STORY - Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

```
Hello Everyone
Welcome in Python Programming
We are Making This Program for Counting Total Uppercase Letters
```

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [
MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more informati
on.
>>>
============== RESTART: C:\Users\asus\Desktop\Practical fil
e.py ==============
Total uppercase letters are : 13
>>>
```

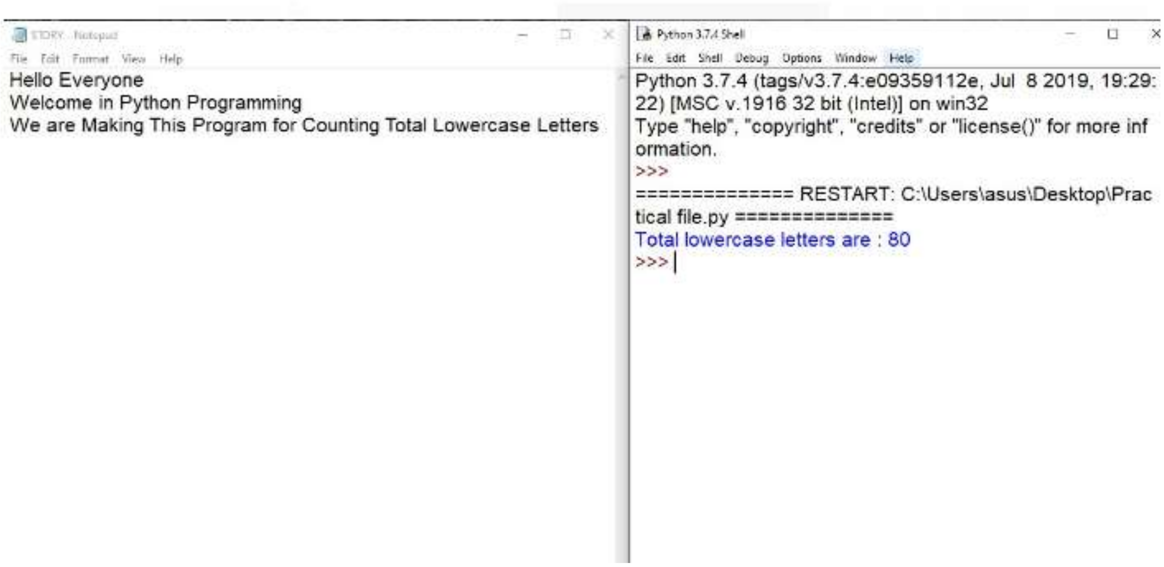
4.COUNT TOTAL LOWERCASE LETTERS IN A FILE

Code:



```
# 4. Program to count the total no. of lowercase letters
def lower():
    file=open("STORY.txt","w")
    file.write("Hello Everyone")
    file.write("\n")
    file.write("Welcome in Python Programming")
    file.write("\n")
    file.write("We are Making This Program for Counting Total Lowercase Letters")
    file=open("STORY.txt","r")
    data=file.read()
    count=0
    for i in data:
        if i.islower():
            count+=1
        else:
            pass
    print("Total lowercase letters are :",count)
    file.close()
lower()
```

OUTPUT:

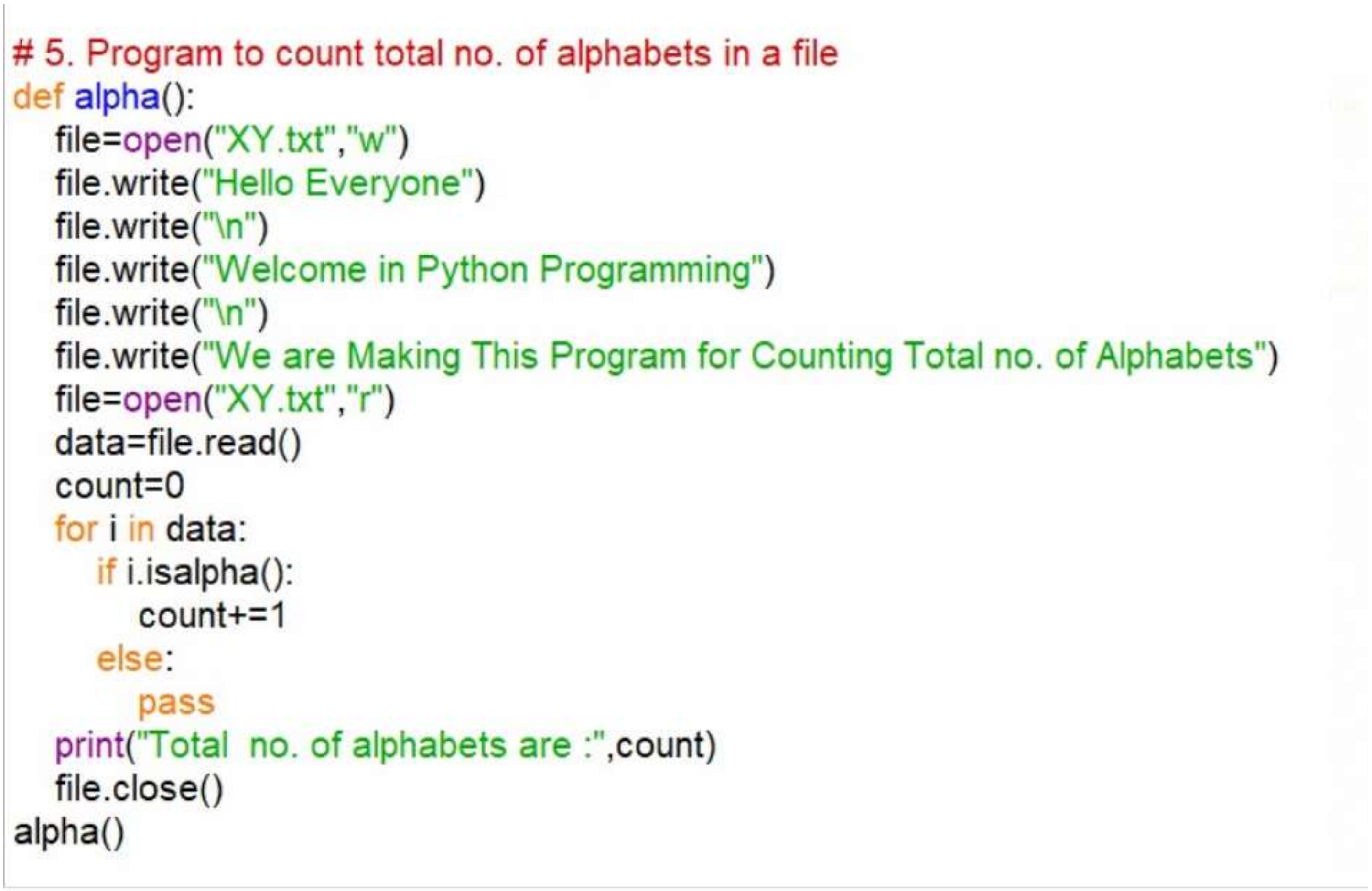

STORY - Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

```
Hello Everyone
Welcome in Python Programming
We are Making This Program for Counting Total Lowercase Letters
```

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:
22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more inf
ormation.
>>>
============== RESTART: C:\Users\asus\Desktop\Prac
tical file.py ==============
Total lowercase letters are : 80
>>>
```

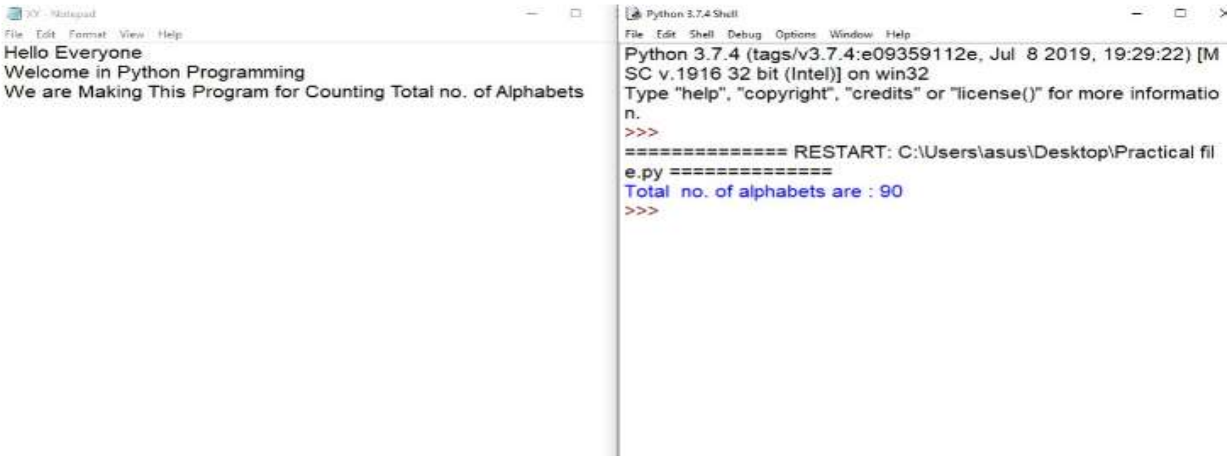
5.COUNT TOTAL NO. OF ALPHABETS IN A FILE

Code:



```python
# 5. Program to count total no. of alphabets in a file
def alpha():
    file=open("XY.txt","w")
    file.write("Hello Everyone")
    file.write("\n")
    file.write("Welcome in Python Programming")
    file.write("\n")
    file.write("We are Making This Program for Counting Total no. of Alphabets")
    file=open("XY.txt","r")
    data=file.read()
    count=0
    for i in data:
        if i.isalpha():
            count+=1
        else:
            pass
    print("Total  no. of alphabets are :",count)
    file.close()
alpha()
```

OUTPUT:

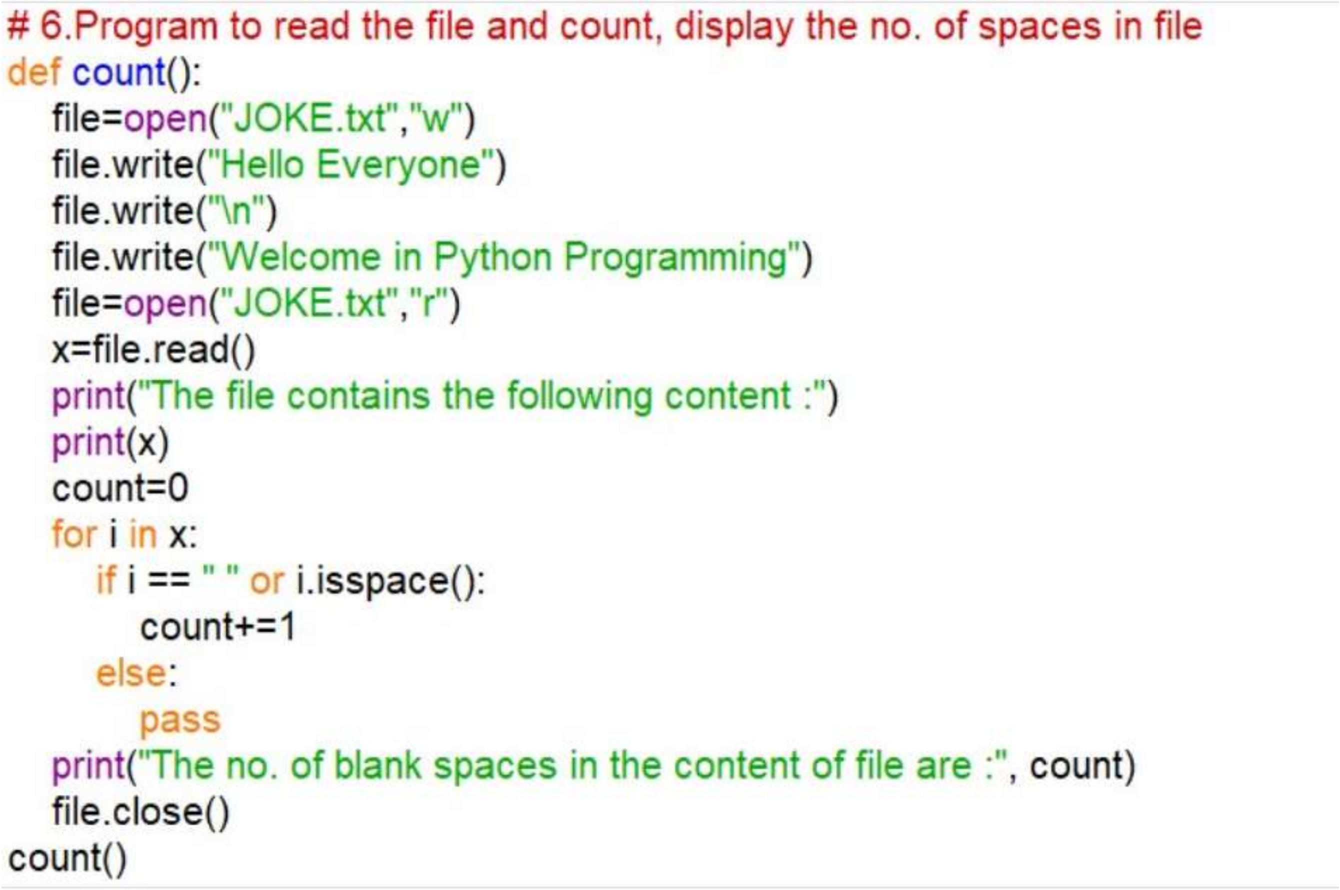

XY - Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

```
Hello Everyone
Welcome in Python Programming
We are Making This Program for Counting Total no. of Alphabets
```

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [M
SC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more informatio
n.
>>>
============== RESTART: C:\Users\asus\Desktop\Practical fil
e.py ==============
Total  no. of alphabets are : 90
>>>
```

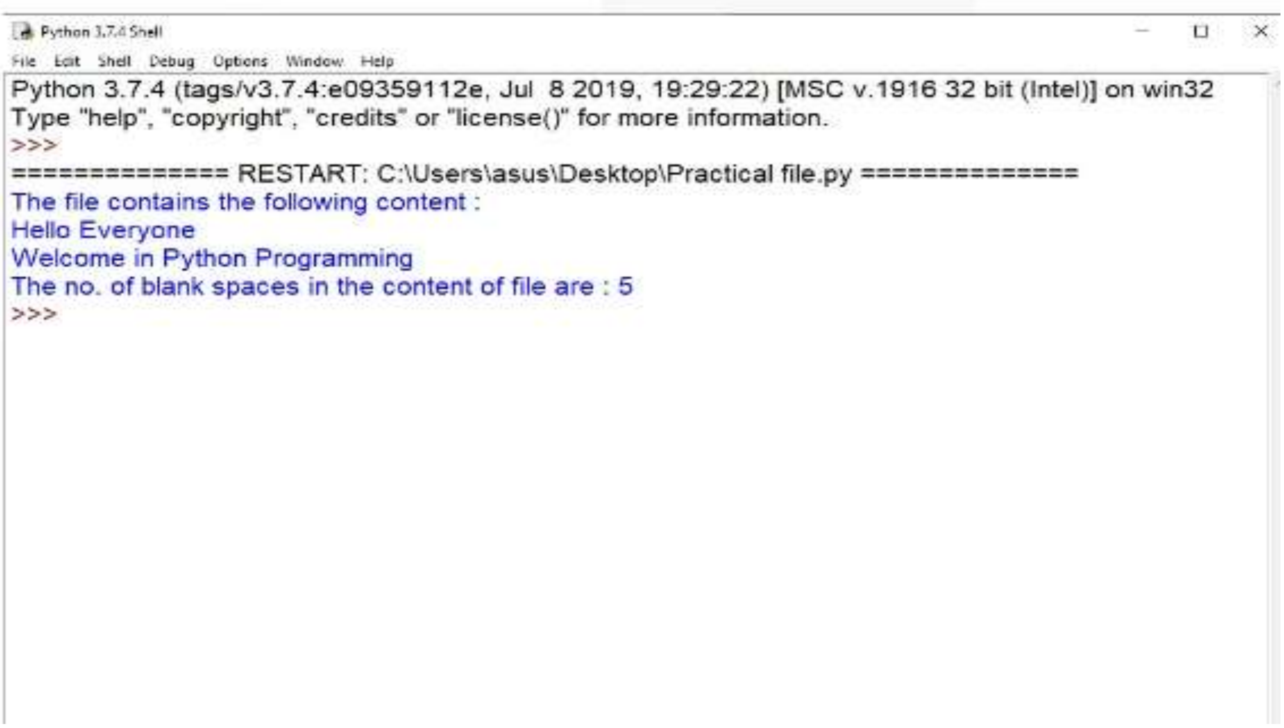
6.TO COUNT AND DISPLAY THE TOTAL NO. OF SPACES IN A FILE

Code:



```
# 6.Program to read the file and count, display the no. of spaces in file
def count():
    file=open("JOKE.txt","w")
    file.write("Hello Everyone")
    file.write("\n")
    file.write("Welcome in Python Programming")
    file=open("JOKE.txt","r")
    x=file.read()
    print("The file contains the following content :")
    print(x)
    count=0
    for i in x:
        if i == " " or i.isspace():
            count+=1
        else:
            pass
    print("The no. of blank spaces in the content of file are :", count)
    file.close()
count()
```

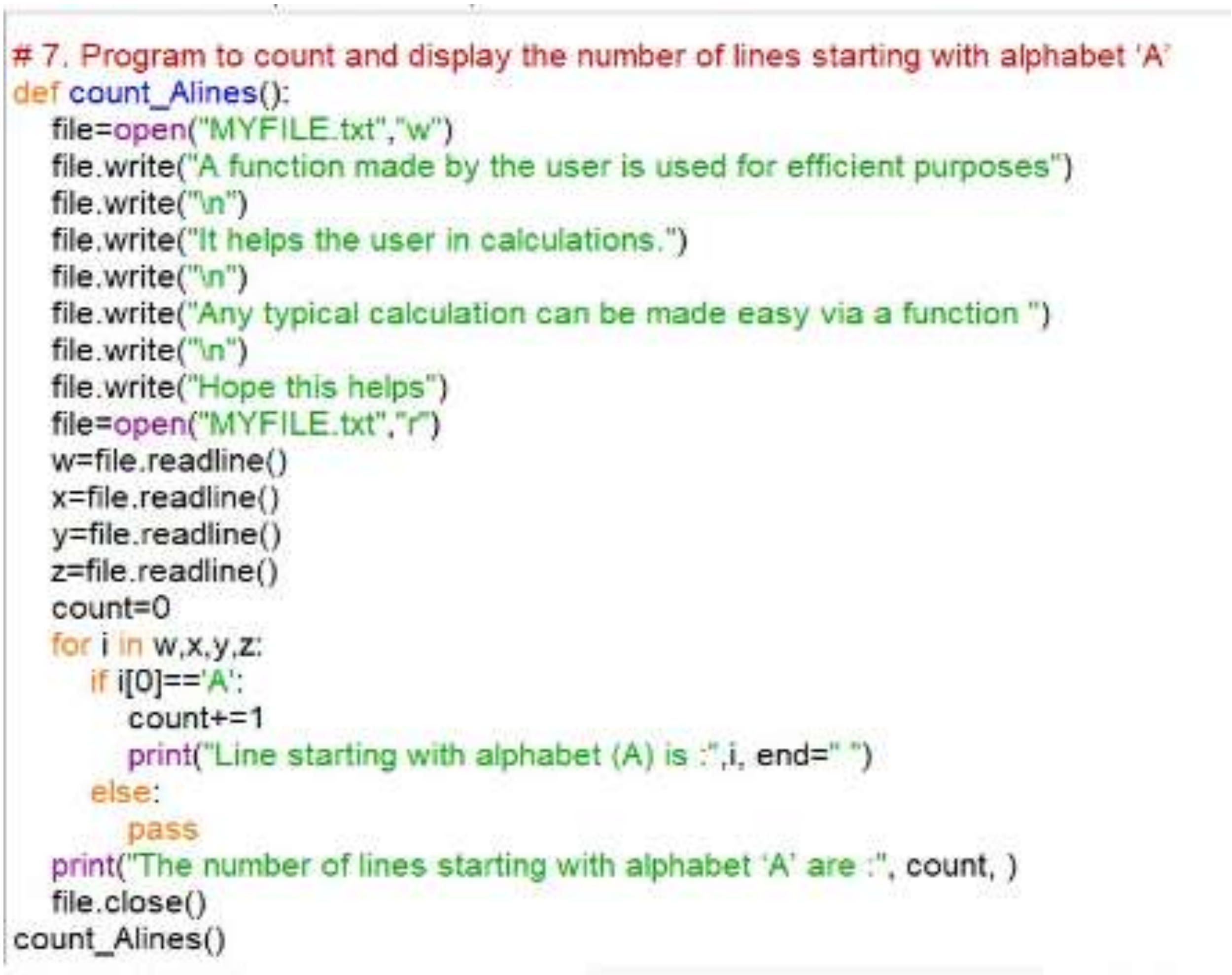
OUTPUT:



```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============== RESTART: C:\Users\asus\Desktop\Practical file.py ==============
The file contains the following content :
Hello Everyone
Welcome in Python Programming
The no. of blank spaces in the content of file are : 5
>>>
```

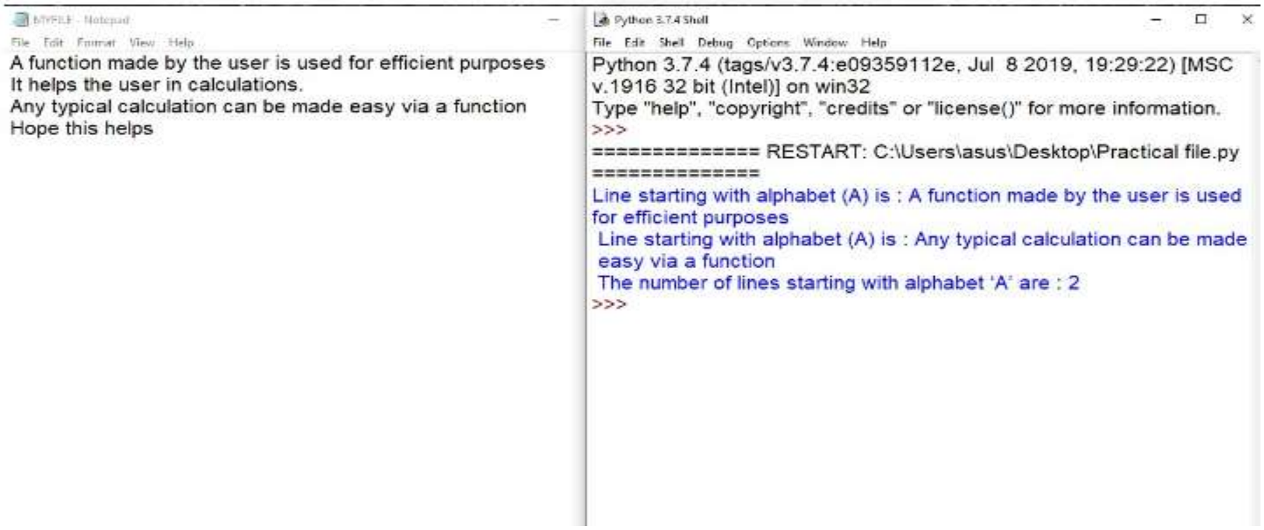
7.TO COUNT AND DISPLAY THE NO. OF LINES STARTING WITH ‘A’

Code:



```
# 7. Program to count and display the number of lines starting with alphabet 'A'
def count_Alines():
    file=open("MYFILE.txt","w")
    file.write("A function made by the user is used for efficient purposes")
    file.write("\n")
    file.write("It helps the user in calculations.")
    file.write("\n")
    file.write("Any typical calculation can be made easy via a function ")
    file.write("\n")
    file.write("Hope this helps")
    file=open("MYFILE.txt","r")
    w=file.readline()
    x=file.readline()
    y=file.readline()
    z=file.readline()
    count=0
    for i in w,x,y,z:
        if i[0]=='A':
            count+=1
            print("Line starting with alphabet (A) is :",i, end=" ")
        else:
            pass
    print("The number of lines starting with alphabet 'A' are :", count, )
    file.close()
count_Alines()
```

OUTPUT:



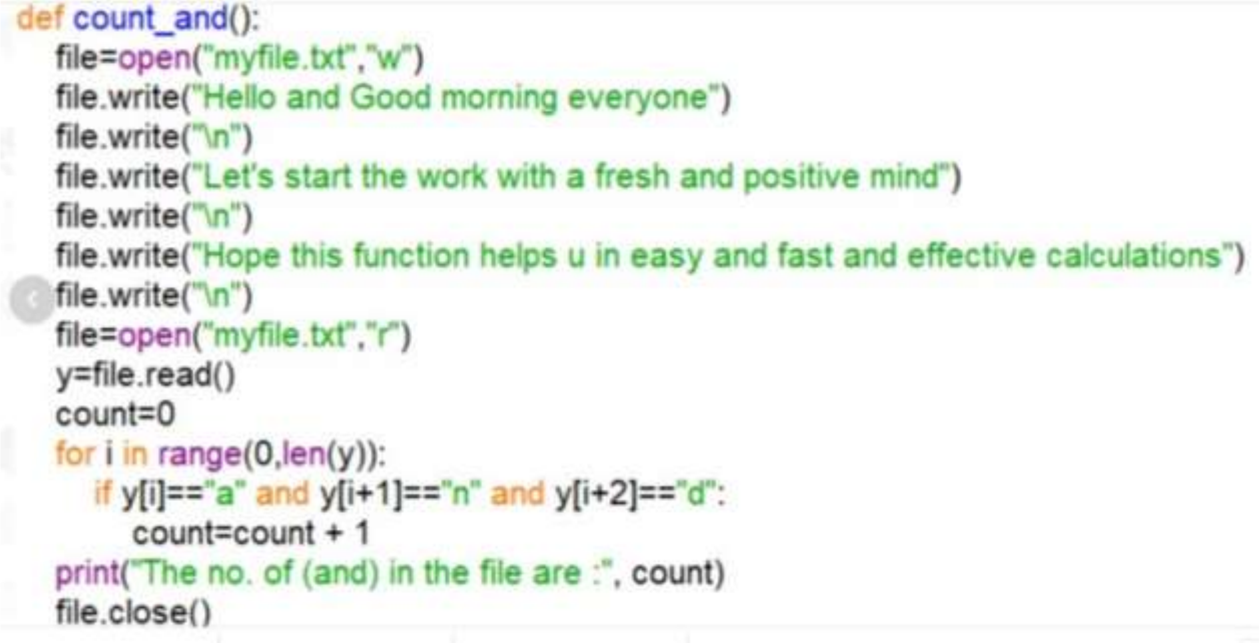
MYFILE - Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

```
A function made by the user is used for efficient purposes
It helps the user in calculations.
Any typical calculation can be made easy via a function
Hope this helps
```

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC
v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============== RESTART: C:\Users\asus\Desktop\Practical file.py
==============
Line starting with alphabet (A) is : A function made by the user is used
for efficient purposes
 Line starting with alphabet (A) is : Any typical calculation can be made
 easy via a function
 The number of lines starting with alphabet 'A' are : 2
>>>
```

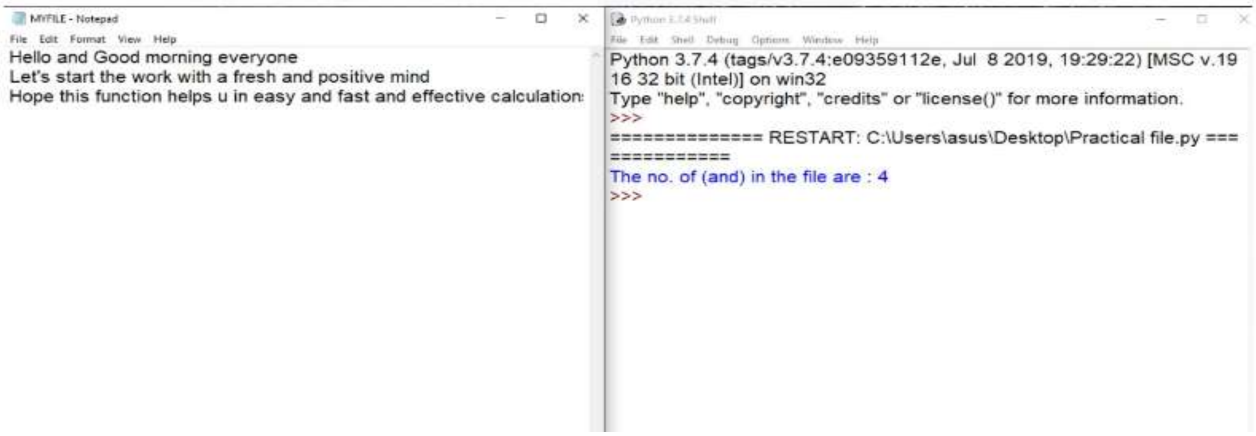
8.TO COUNT THE WORD ‘AND’ IN A FILE

Code:



```
def count_and():
    file=open("myfile.txt","w")
    file.write("Hello and Good morning everyone")
    file.write("\n")
    file.write("Let's start the work with a fresh and positive mind")
    file.write("\n")
    file.write("Hope this function helps u in easy and fast and effective calculations")
    file.write("\n")
    file=open("myfile.txt","r")
    y=file.read()
    count=0
    for i in range(0,len(y)):
        if y[i]=="a" and y[i+1]=="n" and y[i+2]=="d":
            count=count + 1
    print("The no. of (and) in the file are :", count)
    file.close()
```

OUTPUT:

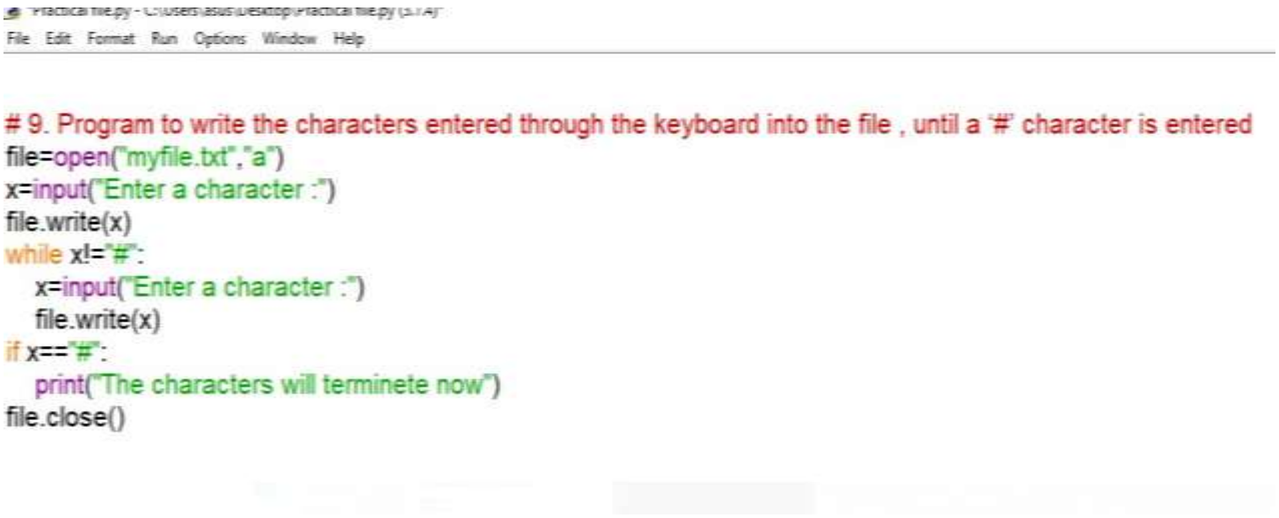

MYFILE - Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

```
Hello and Good morning everyone
Let's start the work with a fresh and positive mind
Hope this function helps u in easy and fast and effective calculation:
```

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.19
16 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> 
============== RESTART: C:\Users\asus\Desktop\Practical file.py ===
===========
The no. of (and) in the file are : 4
>>> 
```

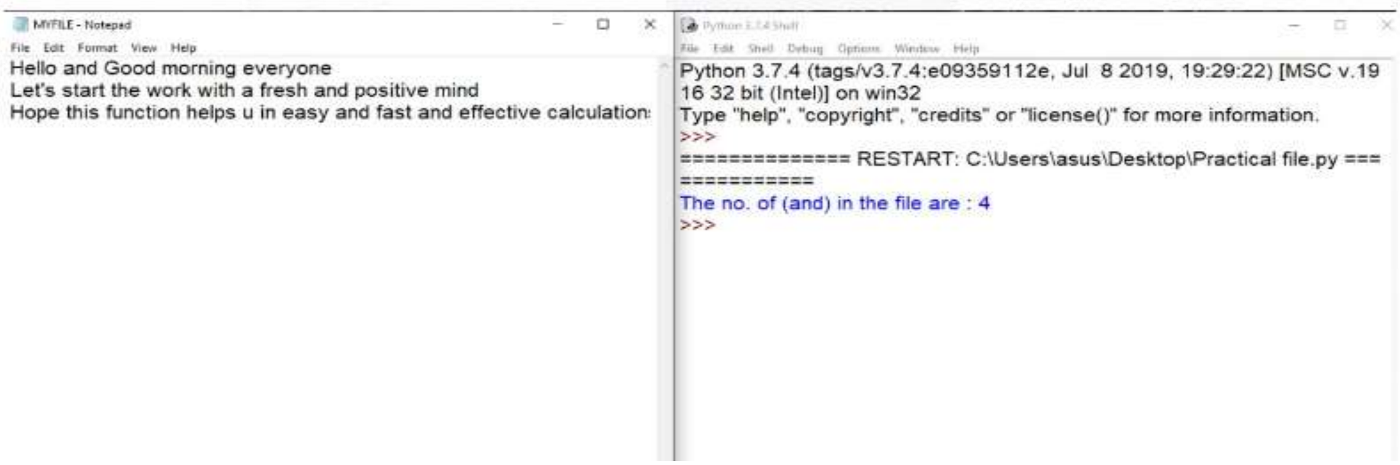
9.TO WRITE CHARACTERS INTO A FILE UNTIL '#' IS ENTERED

Code:


Practical file.py - C:\Users\asus\Desktop\Practical file.py (3.7.4)
File Edit Format Run Options Window Help

```
# 9. Program to write the characters entered through the keyboard into the file , until a '#' character is entered
file=open("myfile.txt","a")
x=input("Enter a character :")
file.write(x)
while x!="#":
    x=input("Enter a character :")
    file.write(x)
if x=="#":
    print("The characters will terminete now")
file.close()
```

OUTPUT:

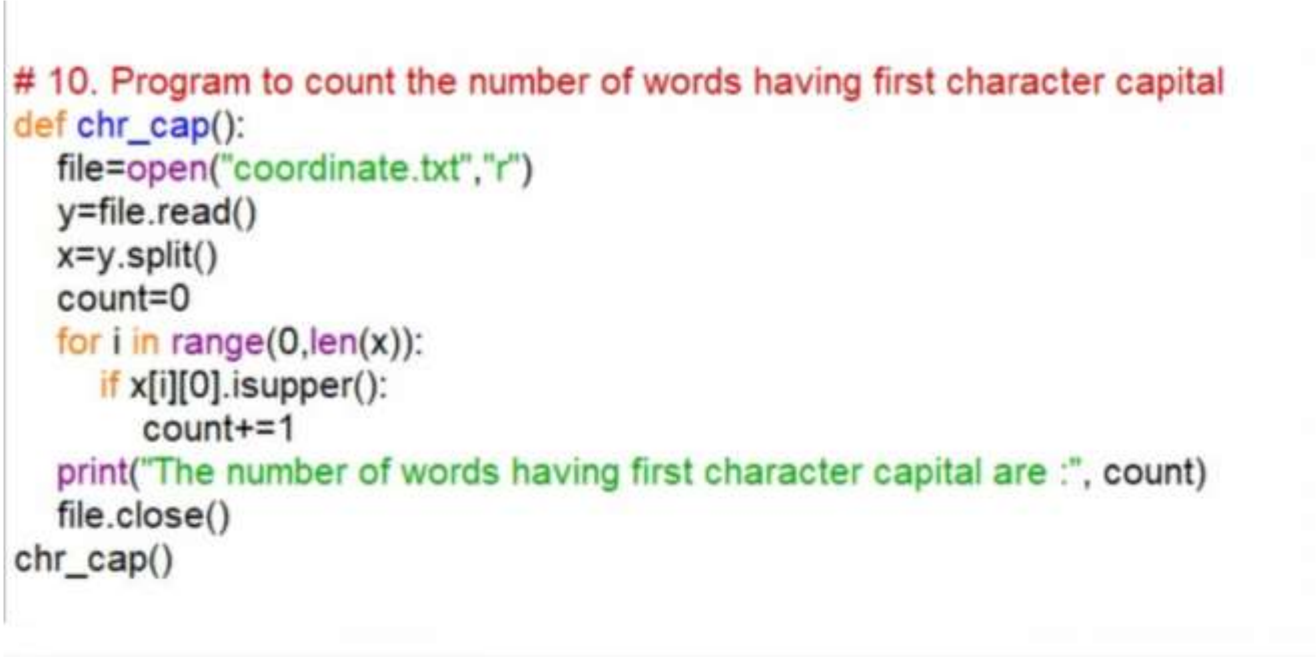

MYFILE - Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

```
Hello and Good morning everyone
Let's start the work with a fresh and positive mind
Hope this function helps u in easy and fast and effective calculation:
```

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.19
16 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> 
============== RESTART: C:\Users\asus\Desktop\Practical file.py ===
===========
The no. of (and) in the file are : 4
>>> 
```

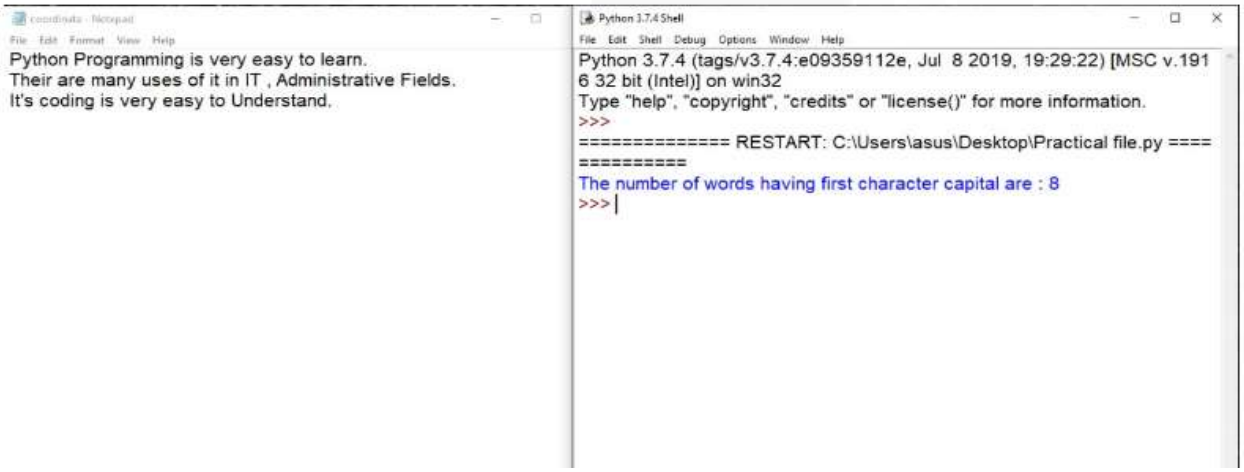
10.TO COUNT THE WORDS HAVING FIRST CHARACTER CAPITAL

Code:



```
# 10. Program to count the number of words having first character capital
def chr_cap():
    file=open("coordinate.txt","r")
    y=file.read()
    x=y.split()
    count=0
    for i in range(0,len(x)):
        if x[i][0].isupper():
            count+=1
    print("The number of words having first character capital are :", count)
    file.close()
chr_cap()
```

OUTPUT:



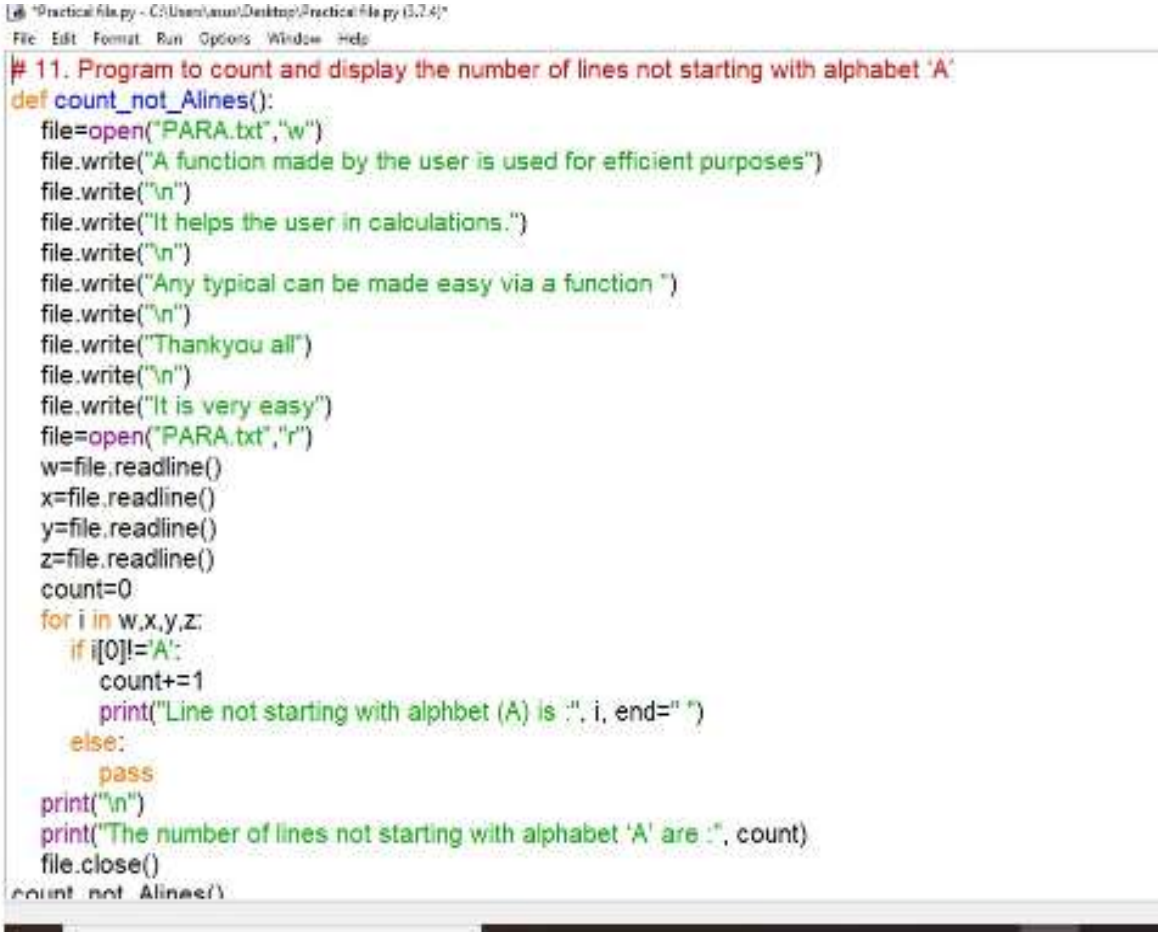
Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

```
Python Programming is very easy to learn.
Their are many uses of it in IT , Administrative Fields.
It's coding is very easy to Understand.
```

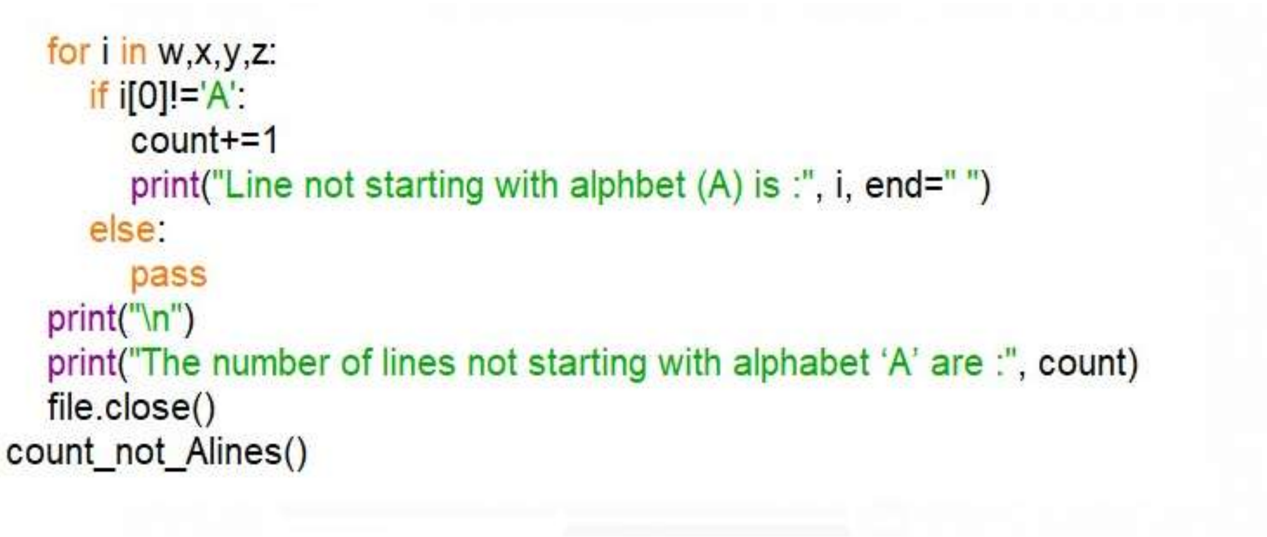
```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.191
6 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============== RESTART: C:\Users\asus\Desktop\Practical file.py ====
==========
The number of words having first character capital are : 8
>>> 
```

11.TO COUNT AND DISPLAY NO. OF LINES NOT STARTING WITH ‘A’

Code:

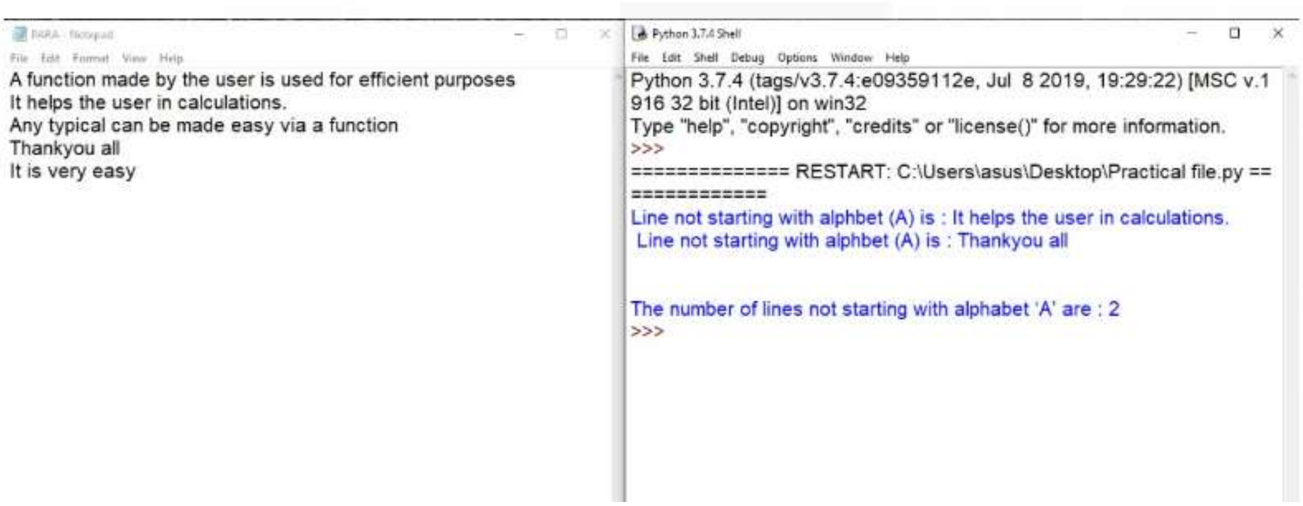

Practical file.py - C:\Users\asus\Desktop\Practical file.py (3.7.4)
File Edit Format Run Options Window Help

```
# 11. Program to count and display the number of lines not starting with alphabet 'A'
def count_not_Alines():
    file=open("PARA.txt","w")
    file.write("A function made by the user is used for efficient purposes")
    file.write("\n")
    file.write("It helps the user in calculations.")
    file.write("\n")
    file.write("Any typical can be made easy via a function ")
    file.write("\n")
    file.write("Thankyou all")
    file.write("\n")
    file.write("It is very easy")
    file=open("PARA.txt","r")
    w=file.readline()
    x=file.readline()
    y=file.readline()
    z=file.readline()
    count=0
    for i in w,x,y,z:
        if i[0]!='A':
            count+=1
            print("Line not starting with alphbet (A) is :", i, end=" ")
        else:
            pass
    print("\n")
    print("The number of lines not starting with alphabet 'A' are :", count)
    file.close()
count_not_Alines()
```



```
    for i in w,x,y,z:
        if i[0]!='A':
            count+=1
            print("Line not starting with alphbet (A) is :", i, end=" ")
        else:
            pass
    print("\n")
    print("The number of lines not starting with alphabet ‘A’ are :", count)
    file.close()
count_not_Alines()
```

OUTPUT:


PARA - Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

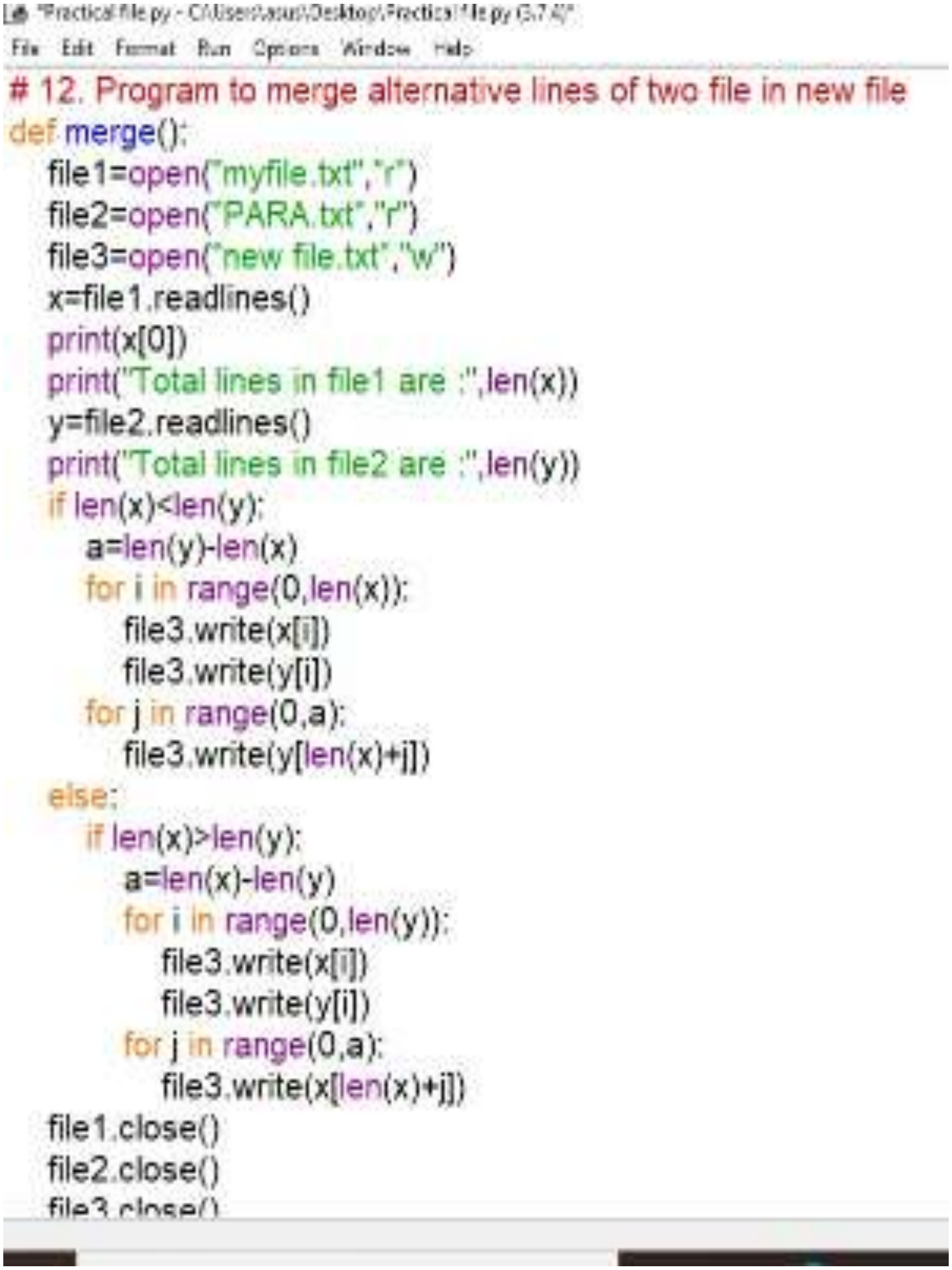
```
A function made by the user is used for efficient purposes
It helps the user in calculations.
Any typical can be made easy via a function
Thankyou all
It is very easy
```

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1
916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============== RESTART: C:\Users\asus\Desktop\Practical file.py ==
============
Line not starting with alphbet (A) is : It helps the user in calculations.
 Line not starting with alphbet (A) is : Thankyou all


The number of lines not starting with alphabet 'A' are : 2
>>>
```

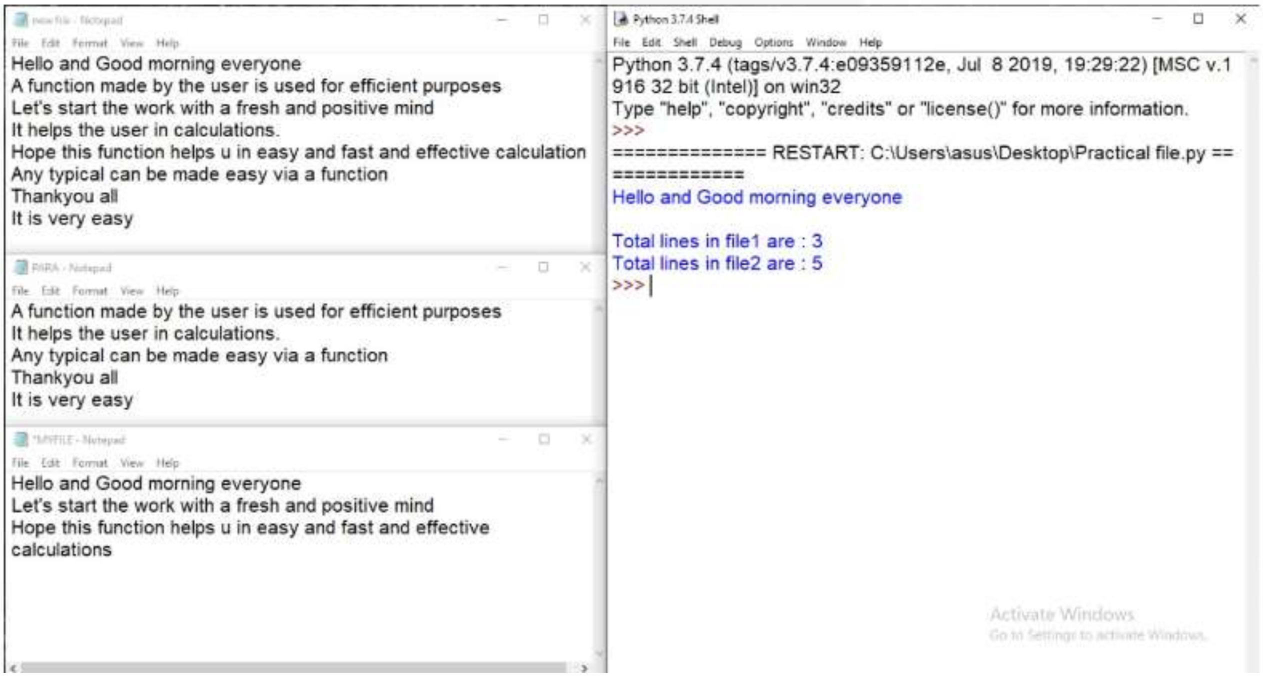
12.TO MERGE ALTERNATIVE LINES OF TWO FILES

Code:


Practical file.py - C:\Users\asus\Desktop\Practical file.py (3.7.4)
File Edit Format Run Options Window Help

```
# 12. Program to merge alternative lines of two file in new file
def merge():
    file1=open("myfile.txt","r")
    file2=open("PARA.txt","r")
    file3=open("new file.txt","w")
    x=file1.readlines()
    print(x[0])
    print("Total lines in file1 are :",len(x))
    y=file2.readlines()
    print("Total lines in file2 are :",len(y))
    if len(x)<len(y):
        a=len(y)-len(x)
        for i in range(0,len(x)):
            file3.write(x[i])
            file3.write(y[i])
        for j in range(0,a):
            file3.write(y[len(x)+j])
    else:
        if len(x)>len(y):
            a=len(x)-len(y)
            for i in range(0,len(y)):
                file3.write(x[i])
                file3.write(y[i])
            for j in range(0,a):
                file3.write(x[len(x)+j])
    file1.close()
    file2.close()
    file3.close()
```

OUTPUT:


new file - Notepad
File Edit Format View Help
PARA - Notepad
File Edit Format View Help
*MYFILE - Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Activate Windows
Go to Settings to activate Windows.

```
Hello and Good morning everyone
A function made by the user is used for efficient purposes
Let's start the work with a fresh and positive mind
It helps the user in calculations.
Hope this function helps u in easy and fast and effective calculation
Any typical can be made easy via a function
Thankyou all
It is very easy
```

```
A function made by the user is used for efficient purposes
It helps the user in calculations.
Any typical can be made easy via a function
Thankyou all
It is very easy
```

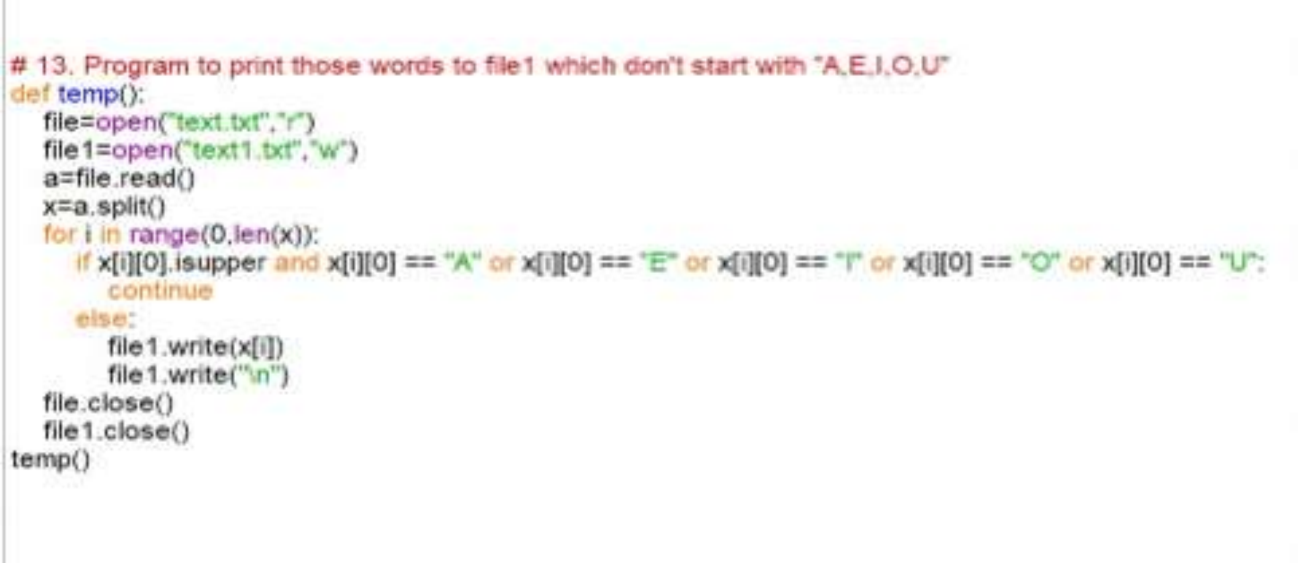
```
Hello and Good morning everyone
Let's start the work with a fresh and positive mind
Hope this function helps u in easy and fast and effective
calculations
```

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1
916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============== RESTART: C:\Users\asus\Desktop\Practical file.py ==
============
Hello and Good morning everyone

Total lines in file1 are : 3
Total lines in file2 are : 5
>>>
```

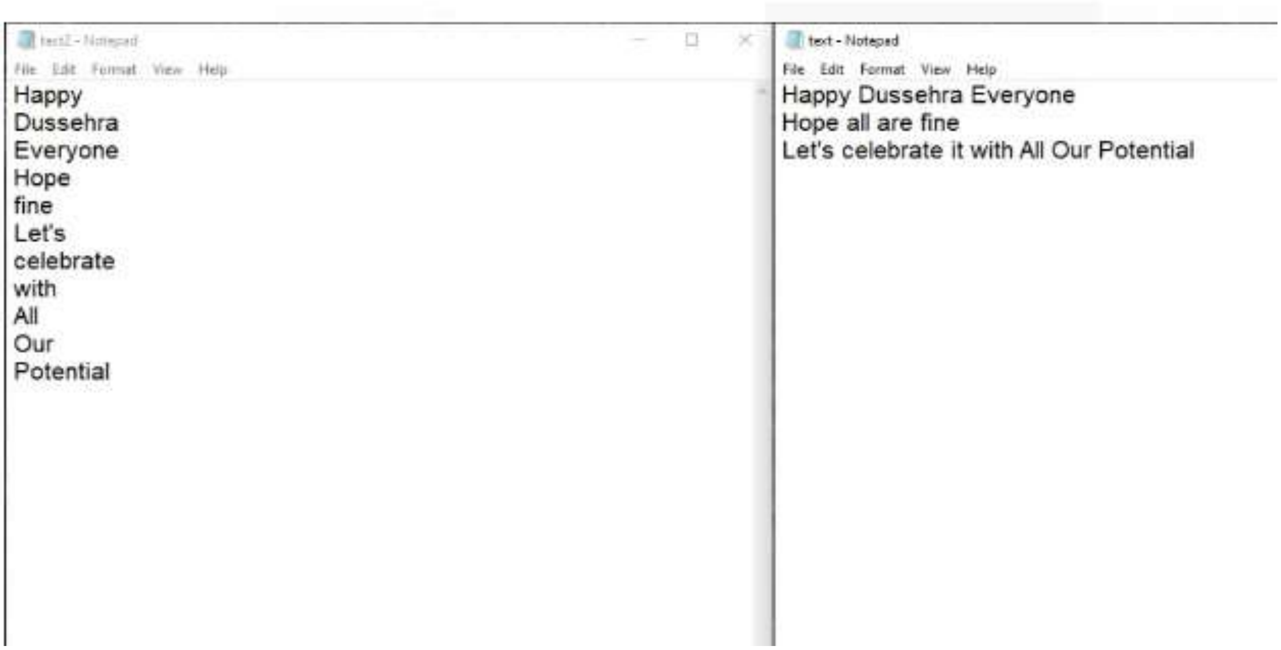
13.TO PRINT THOSE WORDS TO FILE1 WHICH DON’T START WITH ‘a,e,i,o,u’

Code:



```
# 13. Program to print those words to file1 which don't start with "A,E,I,O,U"
def temp():
    file=open("text.txt","r")
    file1=open("text1.txt","w")
    a=file.read()
    x=a.split()
    for i in range(0,len(x)):
        if x[i][0].isupper and x[i][0] == "A" or x[i][0] == "E" or x[i][0] == "I" or x[i][0] == "O" or x[i][0] == "U":
            continue
        else:
            file1.write(x[i])
            file1.write("\n")
    file.close()
    file1.close()
temp()
```

OUTPUT:

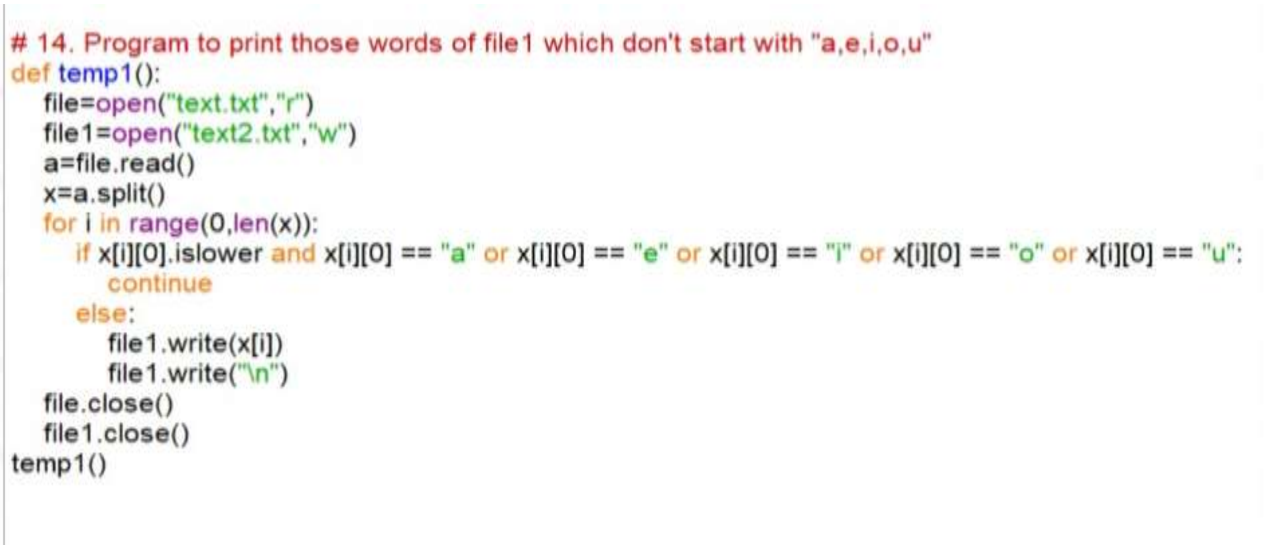


```
Happy
Dussehra
Everyone
Hope
fine
Let's
celebrate
with
All
Our
Potential
```

```
Happy Dussehra Everyone
Hope all are fine
Let's celebrate it with All Our Potential
```

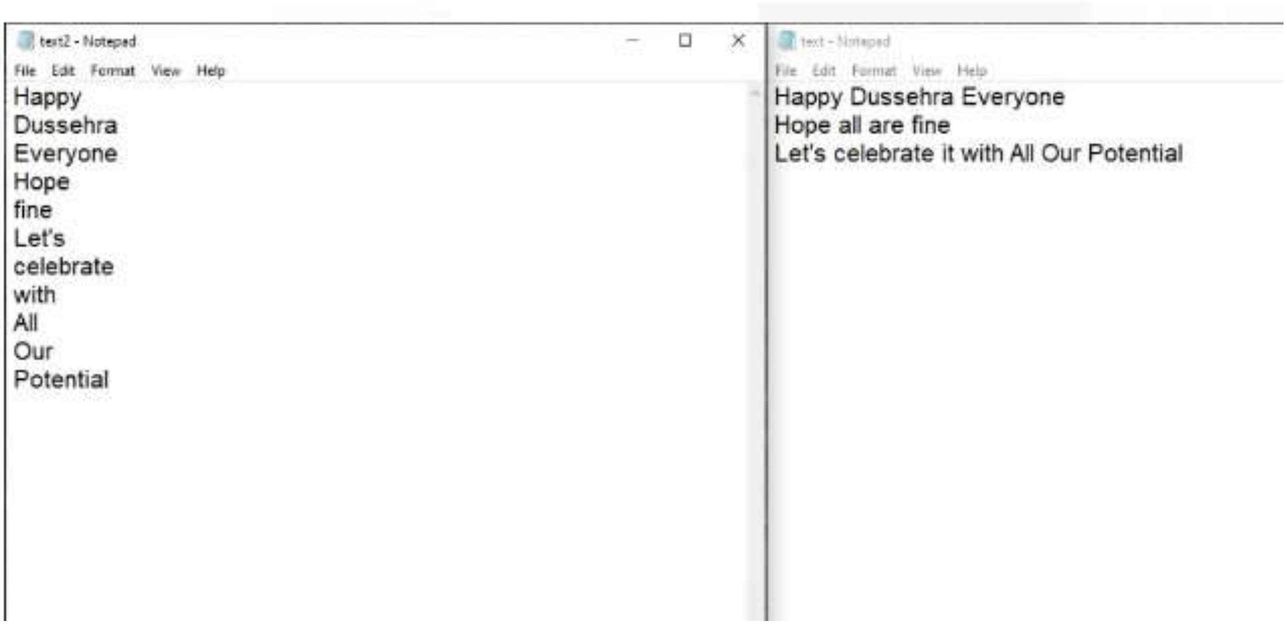
14. TO PRINT THOSE WORDS TO FILE1 WHICH DON’T START WITH ‘A,E,I,O,U’

Code:



```python
# 14. Program to print those words of file1 which don't start with "a,e,i,o,u"
def temp1():
    file=open("text.txt","r")
    file1=open("text2.txt","w")
    a=file.read()
    x=a.split()
    for i in range(0,len(x)):
        if x[i][0].islower and x[i][0] == "a" or x[i][0] == "e" or x[i][0] == "i" or x[i][0] == "o" or x[i][0] == "u":
            continue
        else:
            file1.write(x[i])
            file1.write("\n")
    file.close()
    file1.close()
temp1()
```

OUTPUT:

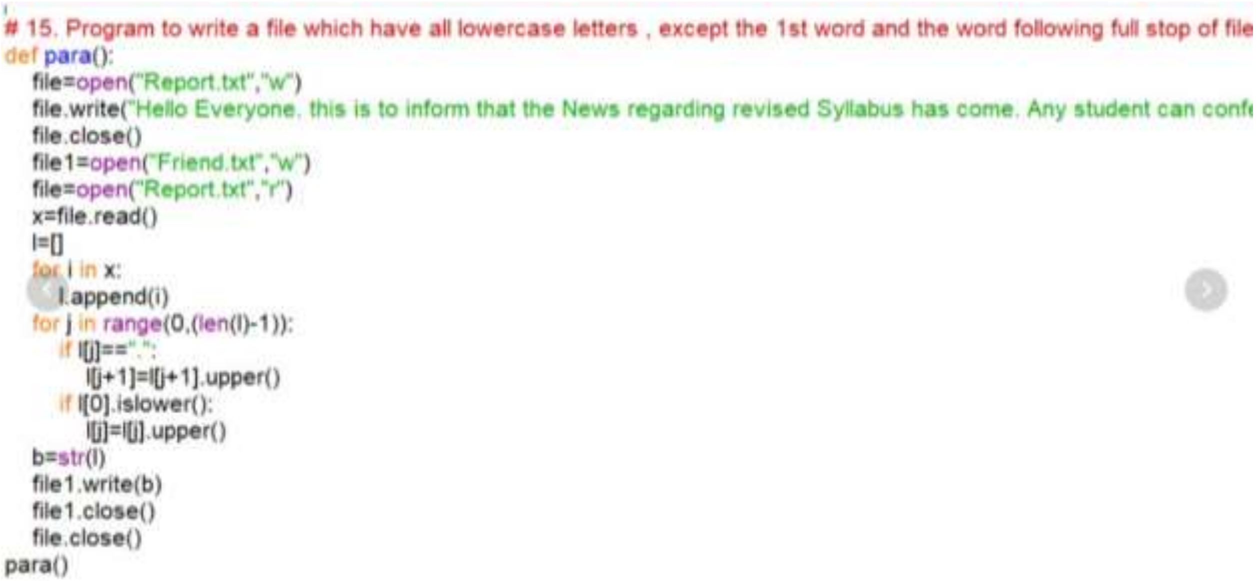


```
Happy
Dussehra
Everyone
Hope
fine
Let's
celebrate
with
All
Our
Potential
```

```
Happy Dussehra Everyone
Hope all are fine
Let's celebrate it with All Our Potential
```

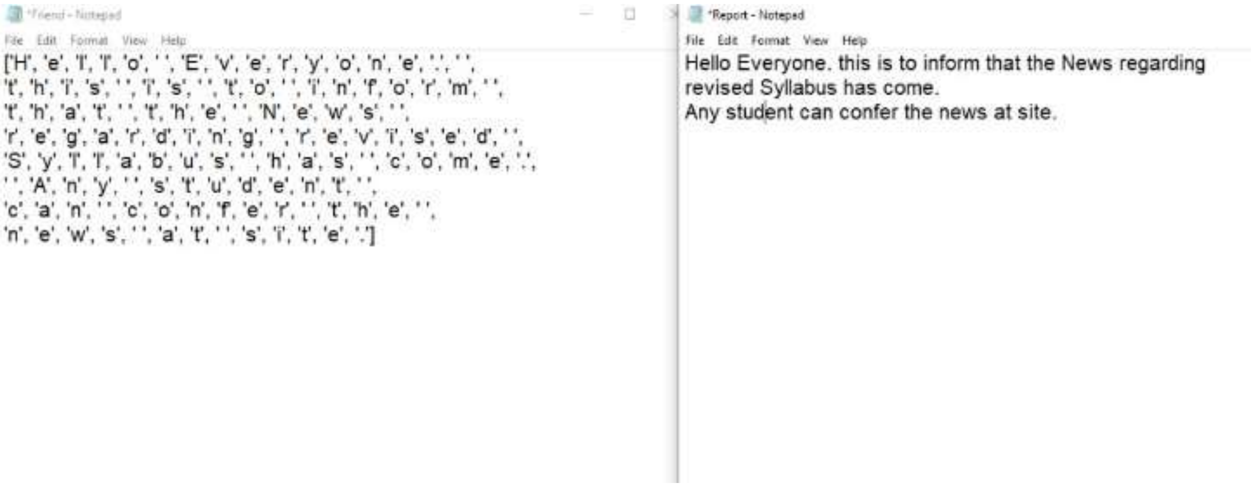
15.TO WRITTE A FILE WHICH HAS ALL LOWERCASE LETTERS,EXCEPT THE 1 WORD

Code:



```
# 15. Program to write a file which have all lowercase letters , except the 1st word and the word following full stop of file
def para():
    file=open("Report.txt","w")
    file.write("Hello Everyone. this is to inform that the News regarding revised Syllabus has come. Any student can conf
    file.close()
    file1=open("Friend.txt","w")
    file=open("Report.txt","r")
    x=file.read()
    l=[]
    for i in x:
        l.append(i)
    for j in range(0,(len(l)-1)):
        if l[j]==".":
            l[j+1]=l[j+1].upper()
        if l[0].islower():
            l[j]=l[j].upper()
    b=str(l)
    file1.write(b)
    file1.close()
    file.close()
para()
```

OUTPUT:

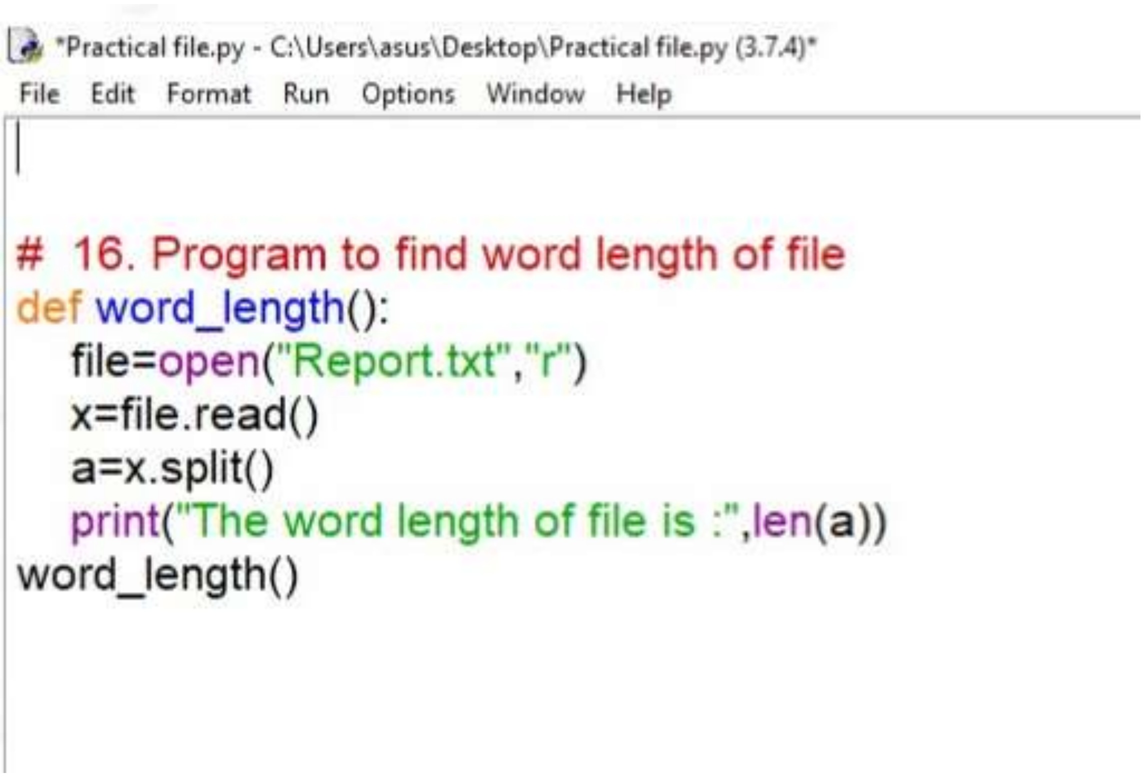


```
['H', 'e', 'l', 'l', 'o', ' ', 'E', 'v', 'e', 'r', 'y', 'o', 'n', 'e', '.', ' ',
't', 'h', 'i', 's', ' ', 'i', 's', ' ', 't', 'o', ' ', 'i', 'n', 'f', 'o', 'r', 'm', ' ',
't', 'h', 'a', 't', ' ', 't', 'h', 'e', ' ', 'N', 'e', 'w', 's', ' ',
'r', 'e', 'g', 'a', 'r', 'd', 'i', 'n', 'g', ' ', 'r', 'e', 'v', 'i', 's', 'e', 'd', ' ',
'S', 'y', 'l', 'l', 'a', 'b', 'u', 's', ' ', 'h', 'a', 's', ' ', 'c', 'o', 'm', 'e', '.',
' ', 'A', 'n', 'y', ' ', 's', 't', 'u', 'd', 'e', 'n', 't', ' ',
'c', 'a', 'n', ' ', 'c', 'o', 'n', 'f', 'e', 'r', ' ', 't', 'h', 'e', ' ',
'n', 'e', 'w', 's', ' ', 'a', 't', ' ', 's', 'i', 't', 'e', '.']
```

```
Hello Everyone. this is to inform that the News regarding
revised Syllabus has come.
Any student can confer the news at site.
```

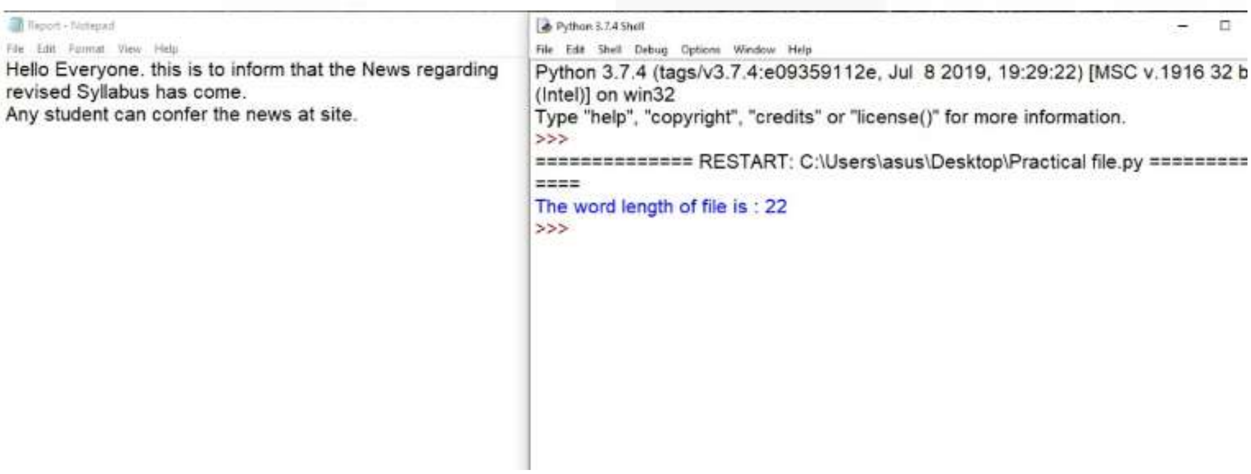
16.TO FIND WORD LENGTH OF FILE

Code


Practical file.py - C:\Users\asus\Desktop\Practical file.py (3.7.4)
File Edit Format Run Options Window Help

```
# 16. Program to find word length of file
def word_length():
    file=open("Report.txt","r")
    x=file.read()
    a=x.split()
    print("The word length of file is :",len(a))
word_length()
```

OUTPUT:

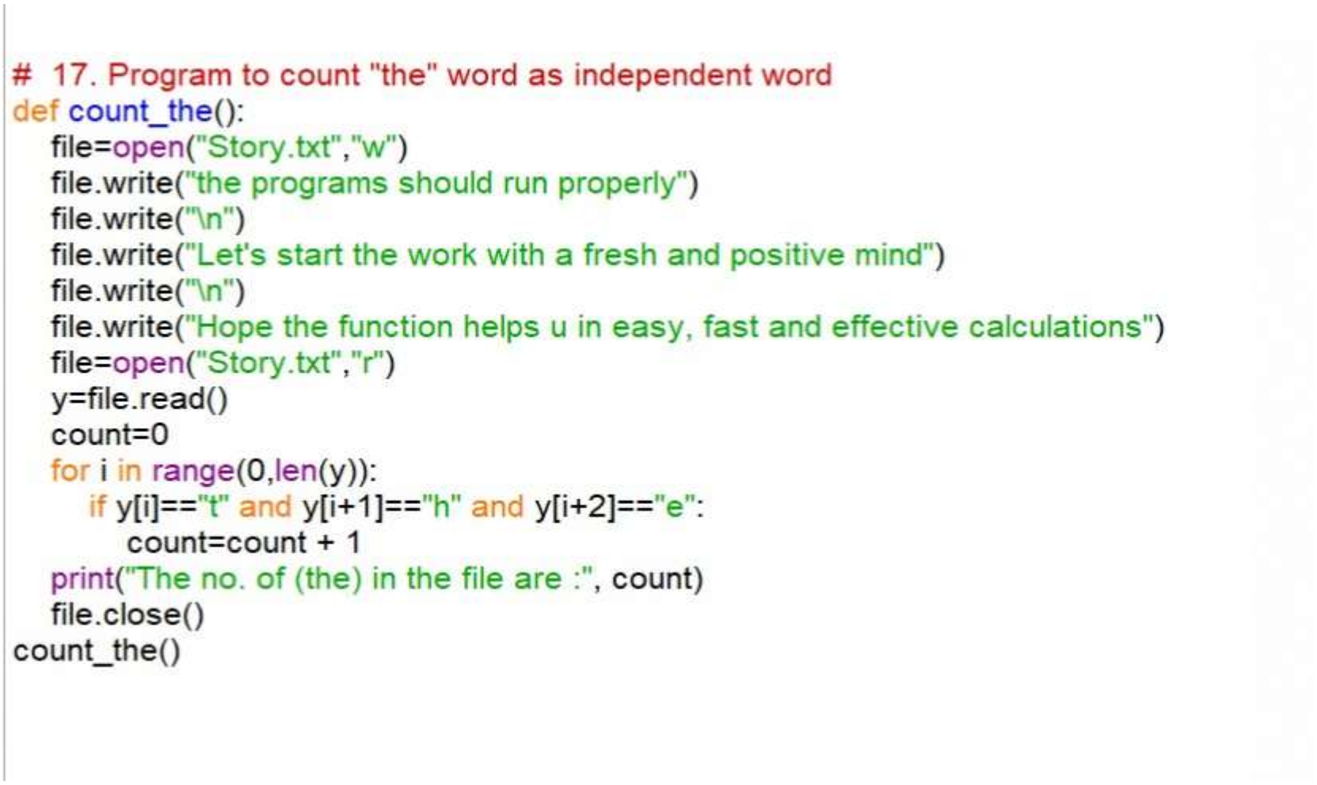

Report - Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

Hello Everyone. this is to inform that the News regarding revised Syllabus has come.
Any student can confer the news at site.

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 b
(Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============== RESTART: C:\Users\asus\Desktop\Practical file.py =========
====
The word length of file is : 22
>>>
```

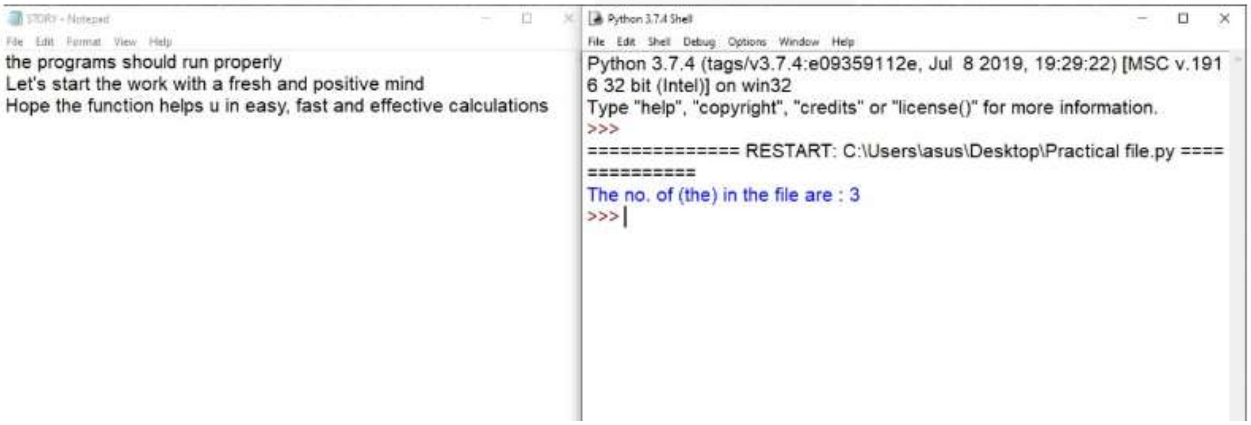
17.TO COUNT ‘THE’ WORD IN A FILE

Code:



```
# 17. Program to count "the" word as independent word
def count_the():
    file=open("Story.txt","w")
    file.write("the programs should run properly")
    file.write("\n")
    file.write("Let's start the work with a fresh and positive mind")
    file.write("\n")
    file.write("Hope the function helps u in easy, fast and effective calculations")
    file=open("Story.txt","r")
    y=file.read()
    count=0
    for i in range(0,len(y)):
        if y[i]=="t" and y[i+1]=="h" and y[i+2]=="e":
            count=count + 1
    print("The no. of (the) in the file are :", count)
    file.close()
count_the()
```

OUTPUT:

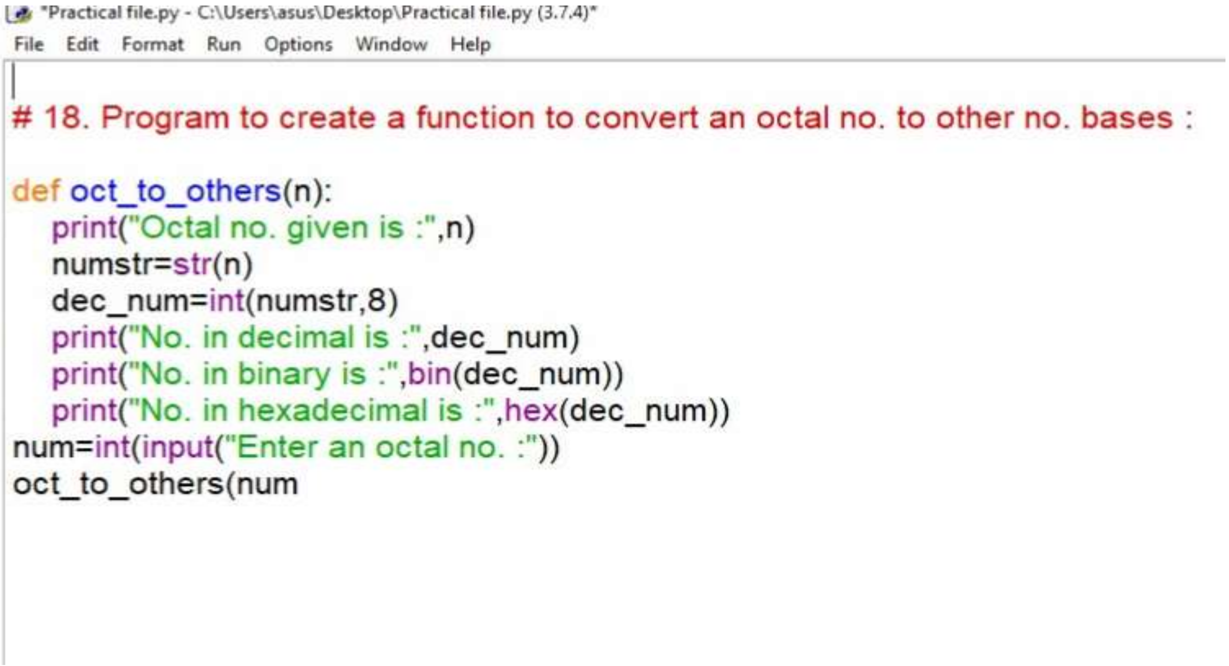

STORY - Notepad
File Edit Format View Help
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help

```
the programs should run properly
Let's start the work with a fresh and positive mind
Hope the function helps u in easy, fast and effective calculations
```

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.191
6 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
============== RESTART: C:\Users\asus\Desktop\Practical file.py ====
==========
The no. of (the) in the file are : 3
>>>
```

18.FUNCTION TO CONVERT OCTAL NO. INTO OTHER BASES

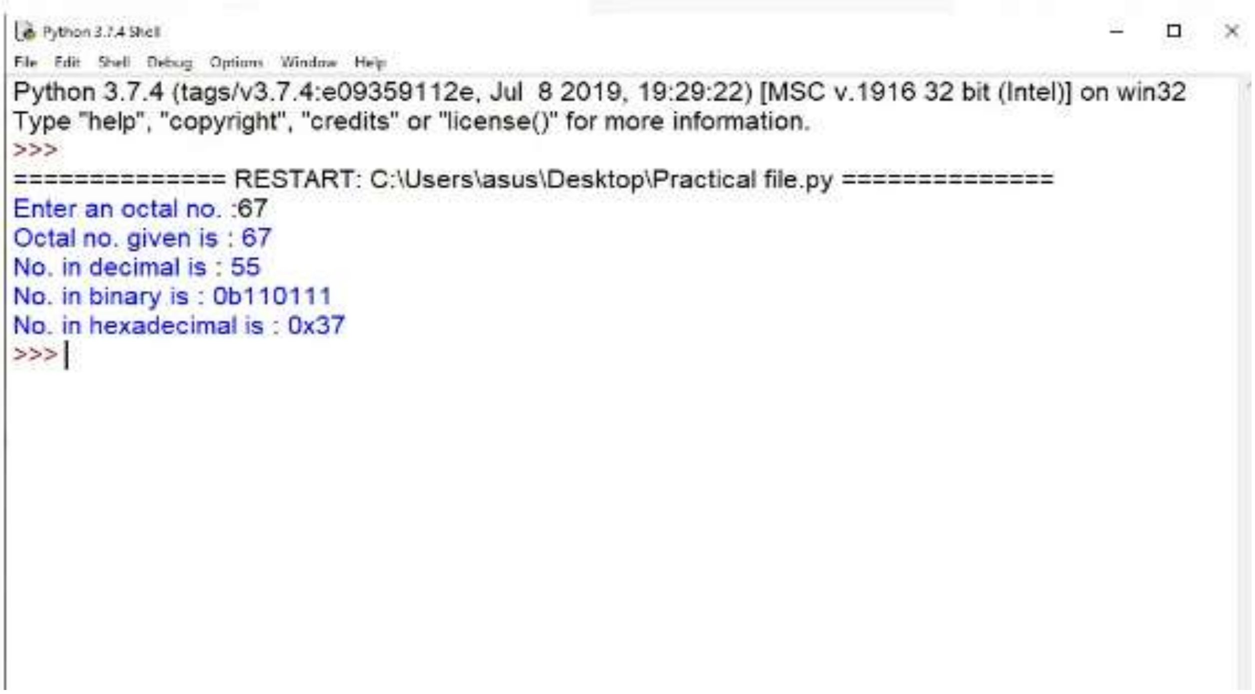
Code:


Practical file.py - C:\Users\asus\Desktop\Practical file.py (3.7.4)
File Edit Format Run Options Window Help

```
# 18. Program to create a function to convert an octal no. to other no. bases :

def oct_to_others(n):
    print("Octal no. given is :",n)
    numstr=str(n)
    dec_num=int(numstr,8)
    print("No. in decimal is :",dec_num)
    print("No. in binary is :",bin(dec_num))
    print("No. in hexadecimal is :",hex(dec_num))
num=int(input("Enter an octal no. :"))
oct_to_others(num
```

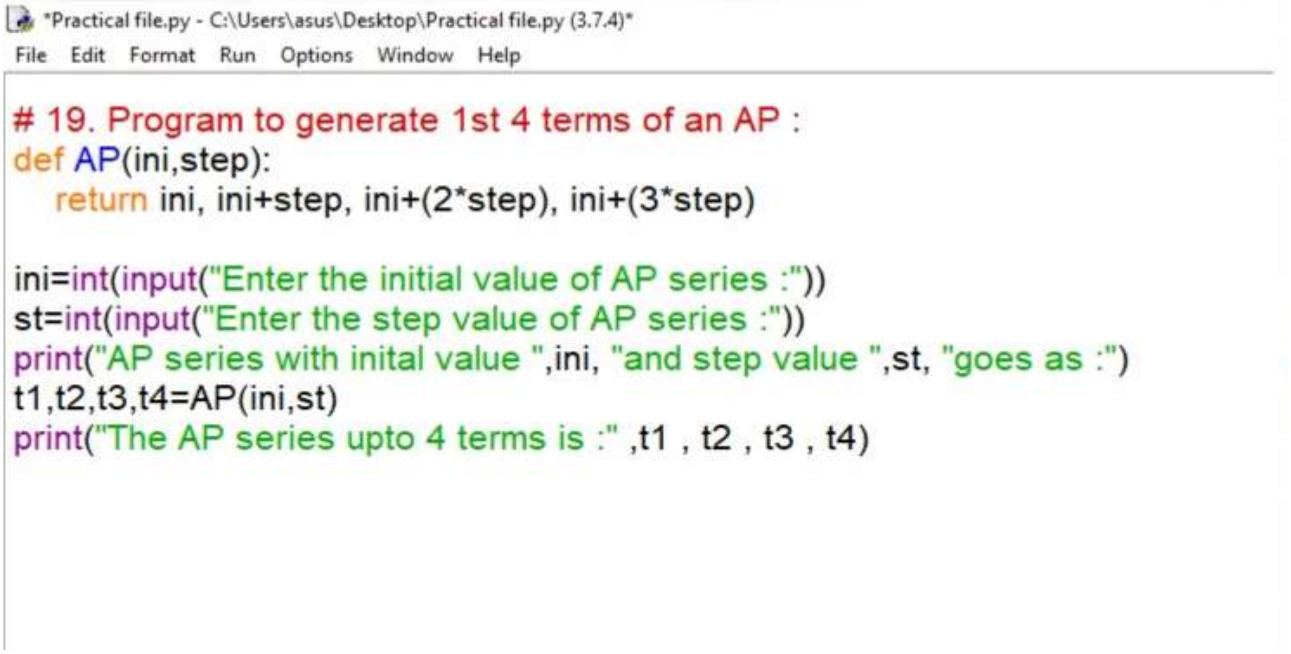
OUTPUT:



```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> 
============== RESTART: C:\Users\asus\Desktop\Practical file.py ==============
Enter an octal no. :67
Octal no. given is : 67
No. in decimal is : 55
No. in binary is : 0b110111
No. in hexadecimal is : 0x37
>>> 
```

19.TWO GENERATE 1ST 4 TERMS OF AP

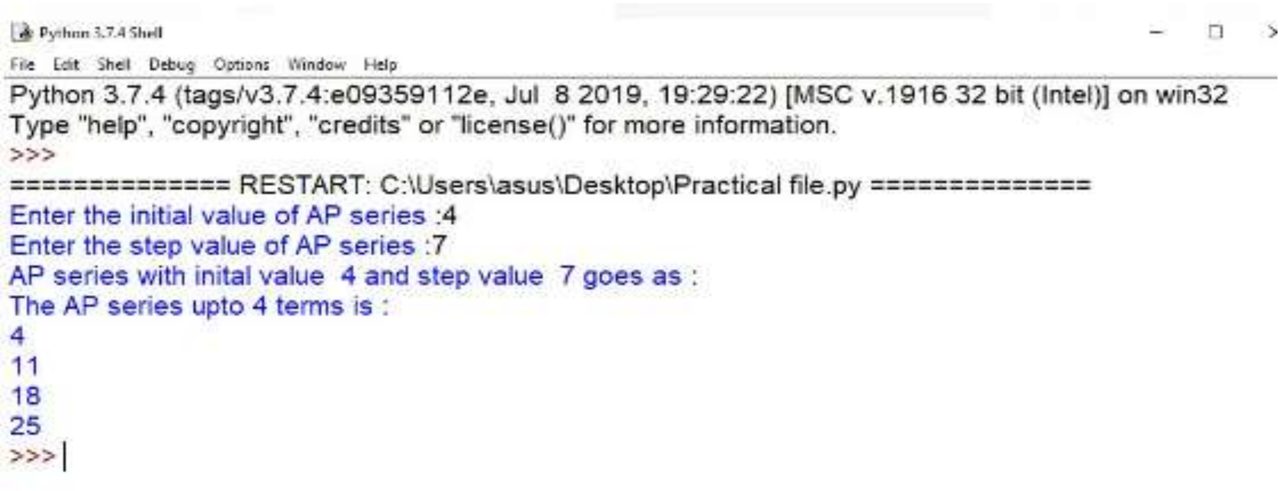
Code:


Practical file.py - C:\Users\asus\Desktop\Practical file.py (3.7.4)
File Edit Format Run Options Window Help

```python
# 19. Program to generate 1st 4 terms of an AP :
def AP(ini,step):
    return ini, ini+step, ini+(2*step), ini+(3*step)

ini=int(input("Enter the initial value of AP series :"))
st=int(input("Enter the step value of AP series :"))
print("AP series with inital value ",ini, "and step value ",st, "goes as :")
t1,t2,t3,t4=AP(ini,st)
print("The AP series upto 4 terms is :" ,t1 , t2 , t3 , t4)
```

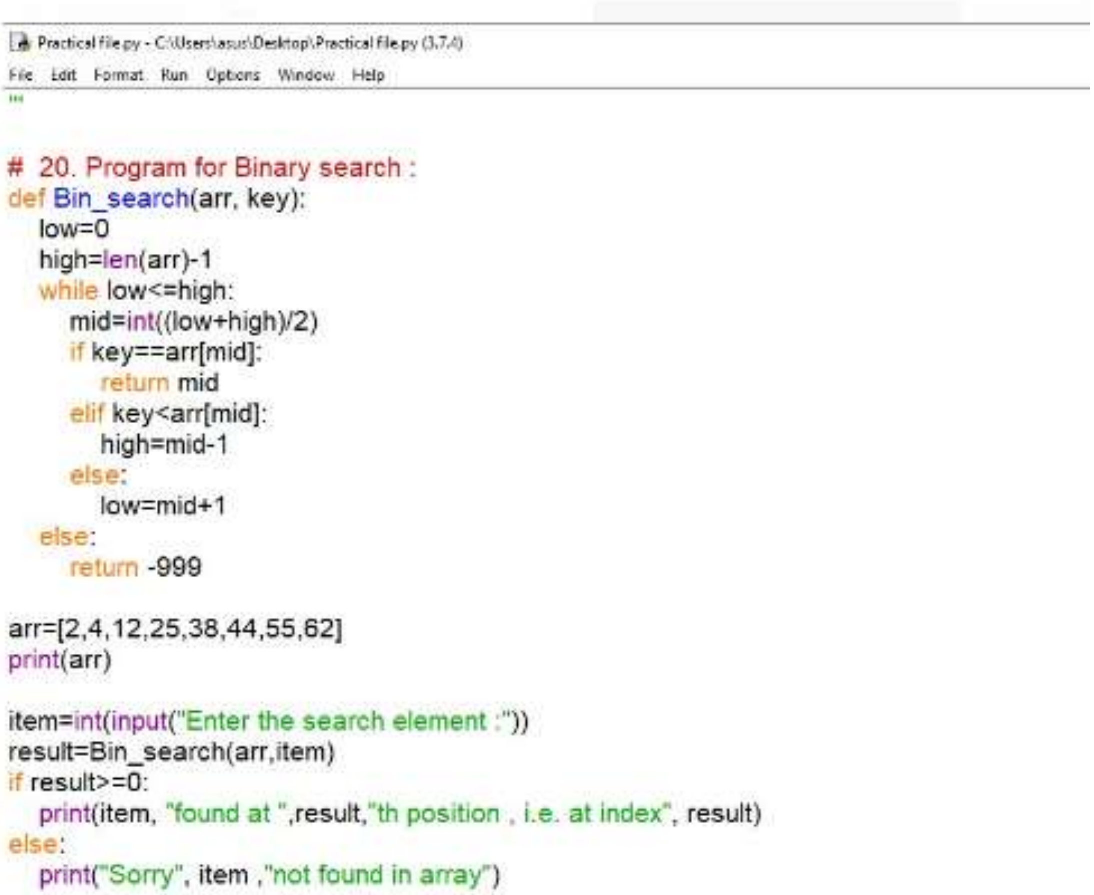
OUTPUT:



```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> 
============== RESTART: C:\Users\asus\Desktop\Practical file.py ==============
Enter the initial value of AP series :4
Enter the step value of AP series :7
AP series with inital value  4 and step value  7 goes as :
The AP series upto 4 terms is :
4
11
18
25
>>> |
```

20.PROGRAM FOR BINARY SEARCH

Code:


Practical file.py - C:\Users\asus\Desktop\Practical file.py (3.7.4)
File Edit Format Run Options Window Help

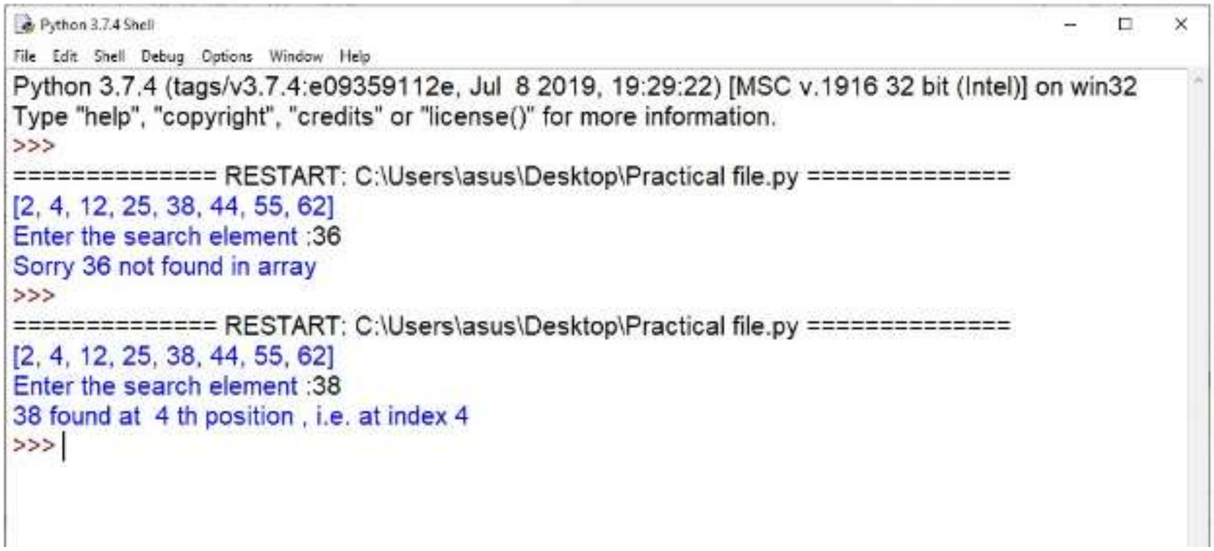
```
'''

# 20. Program for Binary search :
def Bin_search(arr, key):
    low=0
    high=len(arr)-1
    while low<=high:
        mid=int((low+high)/2)
        if key==arr[mid]:
            return mid
        elif key<arr[mid]:
            high=mid-1
        else:
            low=mid+1
    else:
        return -999

arr=[2,4,12,25,38,44,55,62]
print(arr)

item=int(input("Enter the search element :"))
result=Bin_search(arr,item)
if result>=0:
    print(item, "found at ",result,"th position , i.e. at index", result)
else:
    print("Sorry", item ,"not found in array")
```

OUTPUT:



```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 19:29:22) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> 
============== RESTART: C:\Users\asus\Desktop\Practical file.py ==============
[2, 4, 12, 25, 38, 44, 55, 62]
Enter the search element :36
Sorry 36 not found in array
>>> 
============== RESTART: C:\Users\asus\Desktop\Practical file.py ==============
[2, 4, 12, 25, 38, 44, 55, 62]
Enter the search element :38
38 found at  4 th position , i.e. at index 4
>>> 
```