Python Programming Examples on Sets & FileHandling:

✓ Python Program to Count the Number of Vowels Present in a String using Sets:

In [50]:
```python
s=str(input("Enter string :"))
count = 0
vowels = set("aeiou")
for letter in s:
    if letter in vowels:
        count += 1
print("Count of the vowels is:")
print(count)

```

```
Enter string :Hello World
Count of the vowels is:
3
```

✓ Python Program to Check Common Letters in Two Input Strings:

In [55]:
```python
my_str1 = str(input("Enter the first string :"))
my_str2 = str(input("Enter the second string :"))
set1=set(my_str1)
set2=set(my_str2)
lst=[]
for letter in set1:
    if letter in set2:
        if letter!=' ':
            lst.append(letter)
print("The list of common letters is: ",lst)

```

```
Enter the first string :Machine Learning
Enter the second string :Python Language
The list of common letters is:  ['a', 'L', 'n', 'g', 'h', 'e']
```

In [59]:
```python
1  # ALTERNATIVE
2  s1= str(input("Enter first string:"))
3  s2=str(input("Enter second string:"))
4  a=list(set(s1)&set(s2))
5  print("The common letters are:")
6  for i in a:
7      print(i)
8
```

```
Enter first string:Machine Learning
Enter second string:Python Language
The common letters are:
a
L
n
g

h
e
```

✓ Python Program that Displays which Letters are in the First String but not in the Second:

In [62]:
```python
1  my_str1 = str(input("Enter the first string :"))
2  my_str2 = str(input("Enter the second string :"))
3  set1=set(my_str1)
4  set2=set(my_str2)
5  a=list(set1-set2)
6  for i in a:
7      print(i)
```

```
Enter the first string :Machine
Enter the second string :Python
a
i
M
c
e
```

✓ Python Program that Displays which Letters are Present in Both the Strings:

In [61]:
```python
1  s1= str(input("Enter first string:"))
2  s2=str(input("Enter second string:"))
3  a=list(set(s1)|set(s2))
4  print("The common letters are:")
5  for i in a:
6      print(i)
```

```
Enter first string:Machine
Enter second string:Python
The common letters are:
a
y
n
i
o
t
M
P
c
h
e
```

✓ Python Program that Displays which Letters are in the Two Strings but not in Both:

In [65]:
```python
1  s1= str(input("Enter first string:"))
2  s2=str(input("Enter second string:"))
3  a=list((set(s1)|set(s2))-(set(s1)&set(s2)))
4  print("The common letters are:")
5  for i in a:
6      print(i)
```

```
Enter first string:Machine Learning
Enter second string:Python
The common letters are:
a
L
r
y

i
o
t
M
g
P
c
e
```

File Handling:

✓ Python Program to Read the Contents of a File:

In [14]:
```python
1  file=open(file="Text.txt", mode='w')
2  file.write("File Handling is an interesting topic")
3  file.write("\n")
4  file.write(" Exception handling is even better")
5
6  file.close()
7  # New file by the name "text.txt" created in the same directory
```

In [19]:
```python
1  file=open(file="Text.txt", mode='r')
2  file.read()
```

Out[19]: 'File Handling is an interesting topic\n Exception handling is even better'

✓ Python Program to Count the Number of Words in a Text File:

In [18]:
```python
1  file=open(file="Text.txt", mode='r')
2  my_str=file.read()
3  print(my_str)
4
5  print(len(my_str.split()))
```

```
File Handling is an interesting topic
 Exception handling is even better
11
```

✓ Python Program to Read a String from the User and Append it into a File:

In [22]:
```python
1  my_str1=str(input("Enter a string: "))
2  file=open(file="text.txt", mode='a')
3  file.write("\n")
4  file.write(my_str1)
5  file.close()
```

```
Enter a string: Machine Learning is the future.
```

✓ Python Program to Copy the Contents of One File into Another:

In [28]:
```python
1  file=open(file="Text2.txt", mode='w')
2  file.write("Hello World")
3  file.write("\n")
4
5  file.close()
6  # New file by the name "text2.txt" created in the same directory
```

```
In [24]:    1  file=open(file="Text.txt", mode='r')
            2  my_str=file.read(-1)
            3  file.close()
            4
            5  file1=open(file="Text2.txt", mode='w')
            6  file1.write(my_str)
            7  file1.close()
            8
```

✓ Python Program that Reads a Text File and Counts the Number of Times a Certain Letter Appears in the Text File:

```
In [27]:    1  file=open(file="Text.txt", mode='r')
            2  my_str=file.read(-1)
            3
            4  str1=str(input("Enter a character you wish to count in the text.txt file: ")
            5  my_str.count(str1)
```

Enter a character you wish to count in the text.txt file: c

Out[27]: 3

✓ Python Program to Append the Contents of One File to Another File:

```
In [29]:    1  with open("text.txt",'r') as file:
            2      my_str=file.read(-1)
            3
            4  with open("text2.txt",'a') as file2:
            5      file2.write(my_str)
```

✓ Python Program to Count the Number of Blank Spaces in a Text File:

```
In [43]:    1  with open("text.txt",'r') as file:
            2      my_str=file.read(-1)
            3
            4  my_str.count(' ')
```

Out[43]: 14

✓ Python Program to Read the Contents of a File in Reverse Order:

In [33]:

```python
with open("text.txt",'r') as file:
    my_str=file.read(-1)

print(my_str[::-1])
print(my_str)
```

```
.erutuf eht si gninraeL enihcaM
retteb neve si gnildnah noitpecxE
cipot gnitseretni na si gnildnaH eliF
File Handling is an interesting topic
 Exception handling is even better
Machine Learning is the future.
```

In [44]:

```python
# ALternative to above method
string=''

l=len(my_str)

while l!=0:
    string=string+my_str[l-1]
    l-=1

print(string)
```

```
.erutuf eht si gninraeL enihcaM
retteb neve si gnildnah noitpecxE
cipot gnitseretni na si gnildnaH eliF
```