Aryan RaJ Singh Rathore
Batch1

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#Problem1
class FileOps:
    def __init__(self,str1):
        self.str1=str1
    def writeer(self):
        with open("File12.txt","w")as f:
            f.write(self.str1)

    def vowelconst(self,x):
        if (x == 'a' or x == 'e' or
            x == 'i' or x == 'o' or x == 'u'):
            return True
        else:
            return False

    def reader(self):
        Vcount=0
        Ccount=0
        try:
            with open("File12.txt","r") as f:
                a=f.read()
        except FileNotFoundError:
            return FileNotFoundError
        for i in a:
            if self.vowelconst(i):
                Vcount+=1
            else:
                Ccount+=1
        return (Vcount,Ccount)
    def palindrome(self):
        try:
            with open("File12.txt","r") as f:
                a=f.read()
        except FileNotFoundError:
            return FileNotFoundError
        if a==a[::-1]:
            return "Y"
        else:
            return "N"

    def duplicates(self):
        try:
            with open("File12.txt","r") as f:
                a=f.read()
        except FileNotFoundError:
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            return FileNotFoundError
        dup=""
        for i in a:
            if i in dup:
                continue
            else:
                dup+=i
        return dup

    def finalfile(self):
        self.writeer()
        vowel,consonants=self.reader()
        pali=self.palindrome()
        dup=self.duplicates()
        with open("Output.txt","w") as f:
            f.write(pali+',')
            f.write(str(vowel)+',')
            f.write(str(consonants)+',')
            f.write(dup)
        print("Done")

str1=input("Enter the string:")
obj=FileOps(str1)
obj.finalfile()
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#Problem2
class WordFrequencyCounter:
    def __init__(self,str1):
        self.str1=str1
    def count_words(self):
        output={}
        a=self.str1.lower().strip()
        a=a.split()
        for i in a:
            if i not in output:
                output[i]=1
            else:
                output[i]+=1
        return output

str1="The quick brown fox jumps over the lazy dog. The dog barked."
obj=WordFrequencyCounter(str1)
print(obj.count_words())
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#Problem3
class binaryops:
    def __init__(self, n, l, s):
        self.n = n
        self.list = l
        self.spikes = s

    def spikess(self):
        output = []
        for i in self.list:
            a = i >> self.spikes
            output.append(a)
        return " ".join(map(str, output))


n = int(input("Enter the number of elements: "))
l = []
for i in range(n):
    a = int(input("Enter element : "))
    l.append(a)
s = int(input("Enter the number of spikes: "))
obj = binaryops(n, l, s)
print(obj.spikess())
```