Input:s1="thisappleissweet",s2="thisappleissour"

Output:["sweet","sour"]

Example2:

Input:s1="appleapple",s2="banana"

Output:["banana"]

Constraints:

1< =s1.length,s2.length< =200

s1ands2consistoflowercaseEnglishlettersandspaces.

s1ands2donothaveleadingortrailingspaces.

Allthewordsins1ands2areseparatedbyasinglespace.

Note:

Usedictionarytosolvetheproblem

For example:

Input	Result
thisappleissweet thisappleissour	sweetsour

Program:

```
s1 = input().split()
s2 = input().split()
d = {}
for i in s1:
    if i not in d:
        d[i] = 1
    else:
```

```
        d[i] += 1
for i in s2:
    if i not in d:
        d[i] = 1
    else:
        d[i] += 1
for i in d:
    if d[i] == 1:
        print(i, end=" ")
```

	Input	Expected	Got	
✔	this apple is sweet this apple is sour	sweet sour	sweet sour	✔
✔	apple apple banana	banana	banana	✔

Ex. No. : 8.5 **Date: 25.05.24**

Register No.: 231901018 **+Name: Kavin Sainath S**

Winner of Election

Givenanarrayofnamesofcandidatesinanelection.Acandidatenameinthearrayrepresentsa votecasttothecandidate.PrintthenameofcandidatesreceivedMaxvote.Ifthereistie,printa lexicographicallysmallername.

Examples:

Input: votes[ ] = {"john","johnny","jackie",
"johnny","john","jackie",
"jamie","jamie","john",

"johnny","jamie","johnny",
"john"};
Output:John
WehavefourCandidateswithnameas'John','Johnny','jamie','jackie'.ThecandidatesJohnand
Johnygetmaximumvotes.SinceJohnisalphabeticallysmaller,weprintit.Usedictionarytosolve
theaboveproblem

Sample Input:

10
John
John
Johny
Jamie
Jamie
Johny
Jack
Johny
Johny
Jackie

Sample Output:

Johny

For example:

Input	Result
10 John John Johny Jamie Jamie Johny Jack Johny Johny	Johny

Input	Result
Jackie	

Program:

```
n=int(input())
d={}
for i in range(n):
    s=input()
    if s not in d:
        d[s]=1
    else:
        d[s]+=1
h=0
for i in d:
    if h<d[i]:
        h=d[i]
        j=i
print(j)
```

	Input	Expected	Got	
✔	10 John John Johny Jamie Jamie Johny Jack Johny Johny Jackie	Johny	Johny	✔
✔	6 Ida Ida Ida Kiruba Kiruba Kiruba	Ida	Ida	✔

09- Functions

Ex. No. : 9.1 **Date: 01.06.24**

Register No.: 231901018 **Name: Kavin Sainath S**

Christmas Discount

Ane-commercecompanyplanstogivetheircustomersaspecialdiscountforChristmas. Theyareplanningtoofferaflatdiscount.Thediscountvalueiscalculatedasthesumofallthe primedigitsinthetotalbillamount.

Writeanpythoncodetofindthediscountvalueforthegiventotalbillamount.

Constraints

1< =orderValue< 10e^{100000}

Input

Theinputconsistsofanintegerorder Value,representingthetotalbillamount.

Output

Printanintegerrepresentingthediscountvalueforthegiventotalbillamount.

ExampleInput

578

Output

12

For example:

Test	Result
print(christmasDiscount(578))	12

Program:

```
def is_prime_digit(digit):
    return digit in [2,3,5,7]
def christmasDiscount(n):
    s=discount=0
```

```
prime_digitis=[2,3,5,7]
for digit in str(n):
    digit=int(digit)
    if is_prime_digit(digit):
        discount+=digit
return discount
```

	Test	Expected	Got	
✔	print(christmasDiscount(578))	12	12	✔

Ex. No. : 9.2 **Date: 01.06.24**

Register No.: 231901018 **Name: Kavin Sainath S**

Check Product of Digits

Writeacodetocheckwhetherproductofdigitsatevenplacesisdivisiblebysumofdigitsat oddplaceofapositiveinteger.
InputFormat:

Takeaninputintegerfromstdin.

OutputFormat:

PrintTRUEorFALSE.

ExampleInput:

1256

Output:

TRUE

ExampleInput:

1595

Output:

FALSE

Forexample:

Test	Result
print(productDigits(1256))	True

Test	Result
print(productDigits(1595))	False

Program:

```
def productDigits(n):
    a=n
    temp=[]
    list1=[]
    list2=[]
    rem=0
    while a!=0:
        rem=a%10
        temp.append(rem)
        a=a//10
    for i in range(len(temp)):
        if(i+1)%2==0:
            list1.append(temp[i])
        else:
            list2.append(temp[i])
    pro=1
    sum=0
    for i in list1:
```

```
    sum+=i
for i in list2:
    pro*=i
if pro%sum==0:
    return True
else:
    return False
```

	Test	Expected	Got	
✔	`print(productDigits(1256))`	`True`	`True`	✔
✔	`print(productDigits(1595))`	`False`	`False`	✔

Ex. No. : 9.3 **Date: 01.06.24**

Register No.: 231901018 **Name: Kavin Sainath S**

Abundant Number

Anabundantnumberisanumberforwhichthesumofitsproperdivisorsisgreaterthanthenumber itself.Properdivisorsofthenumberarethosethatarestrictlylesserthanthenumber.

Input Format
Takeinputanintegerfromstdin

Output Format:
ReturnYesifgivennumberisAbundant.Otherwise,printNo

Example input:
12

Output
Yes
Explanation
Theproperdivisorsof12are:1,2,3,4,6,whosesumis1+2+3+4+6=16.Sincesumofproperdivisorsis greaterthanthegivennumber,12isanabundantnumber.

Example input:
13

Output
No

Explanation
Theproperdivisorsof13is:1,whosesumis1.Sincesumofproperdivisorsisnotgreaterthanthe givennumber,13isnotanabundantnumber.

Forexample:

Test	Result
print(abundant(12))	Yes
print(abundant(13))	No

Program:

```
def abundant(number):
    d_s=sum([divisor for divisor in range(1,number) if number % divisor == 0])
    if d_s>number:
        return"Yes"
    else:
        return "No"
```

	Test	Expected	Got	
✔	print(abundant(12))	Yes	Yes	✔
✔	print(abundant(13))	No	No	✔

Ex. No. : 9.4 **Date: 01.06.24**

Register No.: 231901018 **Name Kavin Sainath S**

Ugly number

Anumberisconsideredtobeuglyifitsonlyprimefactorsare2,3or5.
[1,2,3,4,5,6,8,9,10,12,15, ...]isthesequenceofuglynumbers.
Task:
completethefunctionwhichtakesanumbernasinputandchecksifit'sanuglynumber.returnugly ifitisugly,elsereturn notugly
Hint:
AnuglynumberUcanbeexpressedas:U=2^a*3^b*5^c,wherea,bandcarenonnegative integers.

For example:

Test	Result
print(checkUgly(6))	ugly
print(checkUgly(21))	notugly

Program:

```
def checkUgly(n):
    if n <= 0:
```