RAJALAKSHMI ENGINEERING COLLEGE

RAJALAKSHMI NAGAR, THANDALAM – 602 105

RAJALAKSHMI
ENGINEERING COLLEGE
An AUTONOMOUS Institution
Affiliated to ANNA UNIVERSITY, Chennai

Laboratory Record Notebook

Name : ……

Year / Branch / Section : ……

Register No. : ……

College Roll No. : ……

Semester : ……

Academic Year : ……

RAJALAKSHMI

ENGINEERING COLLEGE

An AUTONOMOUS institution

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BONAFIDE CERTIFICATE

NAME : .....

ACADEMIC YEAR ..... SEMESTER ..... BRANCH .....

REGISTER NO.

Certified that this is the bonafide record of work done by the above student in the

..... Laboratory during the year 20 - 20

Signature of Faculty - in - Charge

Submitted for the Practical Examination held on .....

Internal Examiner External Examiner

INDEX

Name :____________________ **Branch :**_________ **Sec :**_________ **Roll No:** _____________

S.No.	Date	Title	Page No.	Teacher's Signature / Remarks

WEEK 1
INTRODUCTION TO PYTHON, VARIABLE, DATATYPES, INPUT/OUTPUT FORMATTING

Started on	Wednesday, 28 February 2024, 10:22 AM
State	Finished
Completed on	Wednesday, 28 February 2024, 11:35 AM
Time taken	1 hour 12 mins
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SNEKA SORNA P S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

Alfred buys an old scooter for Rs. X and spends Rs. Y on its repairs. If he sells the scooter for Rs. Z (Z>X+Y). Write a program to help Alfred to find his gain percent. Get all the above-mentioned values through the keyboard and find the gain percent.

Input Format:

The first line contains the Rs X

The second line contains Rs Y

The third line contains Rs Z

Sample Input:

10000

250

15000

Sample Output:

46.34 is the gain percent.

For example:

Input	Result
10000 250 15000	46.34 is the gain percent.

Answer: (penalty regime: 0 %)

```
X=int(input())
Y=int(input())
Z=int(input())
I=X+Y
P=Z-I
F=P/I*100
print("%.2f is the gain percent."%(F))
```

	Input	Expected	Got	
✔	10000 250 15000	46.34 is the gain percent.	46.34 is the gain percent.	✔
✔	45500 500 60000	30.43 is the gain percent.	30.43 is the gain percent.	✔
✔	5000 0 7000	40.00 is the gain percent.	40.00 is the gain percent.	✔
✔	12500 5000 18000	2.86 is the gain percent.	2.86 is the gain percent.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Flag question

In many jurisdictions, a small deposit is added to drink containers to encourage people to recycle them. In one particular jurisdiction, drink containers holding one liter or less have a $0.10 deposit and drink containers holding more than one liter have a $0.25 deposit. Write a program that reads the number of containers of each size(less and more) from the user. Your program should continue by computing and displaying the refund that will be received for returning those containers. Format the output so that it includes a dollar sign and always displays exactly two decimal places.

Sample Input

10

20

Sample Output

Your total refund will be $6.00.

For example:

Input	Result
20 20	Your total refund will be $7.00.

Answer: (penalty regime: 0 %)

```
a=int(input())
b=int(input())
cont=a*0.10+b*0.25
print("Your total refund will be $%.2f."%(cont))
```

	Input	Expected	Got	
✔	20 20	Your total refund will be $7.00.	Your total refund will be $7.00.	✔
✔	11 22	Your total refund will be $6.60.	Your total refund will be $6.60.	✔
✔	123 200	Your total refund will be $62.30.	Your total refund will be $62.30.	✔
✔	76 38	Your total refund will be $17.10.	Your total refund will be $17.10.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

Write a program to convert strings to an integer and float and display its type.

Sample Input:

10

10.9

Sample Output:

10,<class 'int'>

10.9,<class 'float'>

Answer: (penalty regime: 0 %)

```
n1=input()
n4=input()
n2=int(n1)
n3=float(n4)
print(n1,type(n2),sep=",")
print("%.1f"%(n3),type(n3),sep=",")
```

	Input	Expected	Got	
✔	10 10.9	10,<class 'int'> 10.9,<class 'float'>	10,<class 'int'> 10.9,<class 'float'>	✔
✔	12 12.5	12,<class 'int'> 12.5,<class 'float'>	12,<class 'int'> 12.5,<class 'float'>	✔
✔	89 7.56	89,<class 'int'> 7.6,<class 'float'>	89,<class 'int'> 7.6,<class 'float'>	✔
✔	55000 56.2	55000,<class 'int'> 56.2,<class 'float'>	55000,<class 'int'> 56.2,<class 'float'>	✔
✔	2541 2541.679	2541,<class 'int'> 2541.7,<class 'float'>	2541,<class 'int'> 2541.7,<class 'float'>	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

Justin is a carpenter who works on an hourly basis. He works in a company where he is paid Rs 50 for an hour on weekdays and Rs 80 for an hour on weekends. He works 10 hrs more on weekdays than weekends. If the salary paid for him is given, write a program to find the number of hours he has worked on weekdays and weekends.

Hint:

If the final result(hrs) are in -ve convert that to +ve using abs() function

The `abs()` function returns the absolute value of the given number.

```
number = -20
absolute_number = abs(number)
print(absolute_number)
# Output: 20
```

Sample Input:

450

Sample Output:

weekdays 10.38

weekend 0.38

For example:

Input	Result
450	weekdays 10.38 weekend 0.38

Answer: (penalty regime: 0 %)

```
h=int(input())
weekend=abs((h-500))/130
weekdays=weekend+10
print("weekdays %.2f"%(weekdays))
print("weekend %.2f"%(weekend))
```

	Input	Expected	Got	
✔	450	weekdays 10.38 weekend 0.38	weekdays 10.38 weekend 0.38	✔
✔	500	weekdays 10.00 weekend 0.00	weekdays 10.00 weekend 0.00	✔
✔	10000	weekdays 83.08 weekend 73.08	weekdays 83.08 weekend 73.08	✔
✔	6789	weekdays 58.38 weekend 48.38	weekdays 58.38 weekend 48.38	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Flag question

Write a simple python program to find the square root of a given floating point number. The output should be displayed with 3 decimal places.

Sample Input:

8.00

Sample Output:

2.828

For example:

Input	Result
8.00	2.828

Answer: (penalty regime: 0 %)

```
1 import math
2 a=float(input())
3 print("%.3f"%(math.sqrt(a)))
```

	Input	Expected	Got	
✔	8.00	2.828	2.828	✔
✔	14.00	3.742	3.742	✔
✔	4.00	2.000	2.000	✔
✔	487	22.068	22.068	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

WEEK 2
OPERATORS IN PYTHON

Started on	Tuesday, 5 March 2024, 8:11 AM
State	Finished
Completed on	Tuesday, 5 March 2024, 8:43 AM
Time taken	32 mins 17 secs
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SNEKA SORNA P S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

In the 1800s, the battle of Troy was led by Hercules. He was a superstitious person. He believed that his crew can win the battle only if the total count of the weapons in hand is in multiple of 3 and the soldiers are in an even number of count. Given the total number of weapons and the soldier's count, Find whether the battle can be won or not according to Hercules's belief. If the battle can be won print True otherwise print False.

Input format:

Line 1 has the total number of weapons

Line 2 has the total number of Soldiers.

Output Format:

If the battle can be won print True otherwise print False.

Sample Input:

32

43

Sample Output:'

False

Answer: (penalty regime: 0 %)

```
W=int(input())
S=int(input())
if W%3==0 and S%2==0:
    print("True")
else:
    print("False")
```

	Input	Expected	Got	
✔	32 43	False	False	✔
✔	273 7890	True	True	✔
✔	800 4590	False	False	✔
✔	6789 32996	True	True	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Flag question

Mr.Ram has been given a problem kindly help him to solve it. The input of the program is either 0 or 1. IF 0 is the input he should display "C" if 1 is the input it should display "D".There is a constraint that Mr. Ram should use either logical operators or arithmetic operators to solve the problem, not anything else.

Hint:

Use ASCII values of C and D.

Input Format:

An integer x, 0<=x<=1. .

Output Format:

output a single character "C" or "D"depending on the value of x.

Input 1:

```
0
```

Output 1:

```
C
```

Input 2:

```
1
```

Output 1:

```
D
```

Answer: (penalty regime: 0 %)

```
a=int(input())
if a==0:
    print("C")
else:
    print("D")
```

	Input	Expected	Got	
✔	0	C	C	✔
✔	1	D	D	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

Mr. X's birthday is in next month. This time he is planning to invite N of his friends. He wants to distribute some chocolates to all of his friends after the party. He went to a shop to buy a packet of chocolates. At the chocolate shop, 4 packets are there with different numbers of chocolates. He wants to buy such a packet which contains a number of chocolates, which can be distributed equally among all of his friends. Help Mr. X to buy such a packet.

Input Given:

N-No of friends

P1,P2,P3 AND P4-No of chocolates

OUTPUT:

"True" if he can buy that packet and "False" if he can't buy that packet.

SAMPLE INPUT AND OUTPUT:

5

25

12

10

9

OUTPUT

True False True False

Answer: (penalty regime: 0 %)

```
N=int(input())
P1=int(input())
P2=int(input())
P3=int(input())
P4=int(input())
if P1%N==0:
    print("True",end=" ")
else:
    print("False",end=" ")
if P2%N==0:
    print("True",end=" ")
else:
    print("False",end=" ")
if P3%N==0:
    print("True",end=" ")
else:
    print("False",end=" ")
if P4%N==0:
    print("True",end=" ")
else:
    print("False",end=" ")

```

	Input	Expected	Got	
✔	5 25 23 20 10	True False True True	True False True True	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

Pretend that you have just opened a new savings account that earns 4 percent interest per year. The interest that you earn is paid at the end of the year, and is added to the balance of the savings account. Write a program that begins by reading the amount of money deposited into the account from the user. Then your program should compute and display the amount in the savings account after 1, 2, and 3 years. Display each amount so that it is rounded to 2 decimal places.

Sample Input:

10000

Sample Output:

Balance as of end of Year 1: $10400.00.

Balance as of end of Year 2: $10816.00.

Balance as of end of Year 3: $11248.64.

Answer: (penalty regime: 0 %)

```
n=int(input())
n1=n+((n*4)/100)
n2=n1+((n1*4)/100)
n3=n2+((n2*4)/100)
print("Balance as of end of Year 1: $%.2f."%(n1))
print("Balance as of end of Year 2: $%.2f."%(n2))
print("Balance as of end of Year 3: $%.2f."%(n3))
```

	Input	Expected	Got	
✔	10000	Balance as of end of Year 1: $10400.00. Balance as of end of Year 2: $10816.00. Balance as of end of Year 3: $11248.64.	Balance as of end of Year 1: $10400.00. Balance as of end of Year 2: $10816.00. Balance as of end of Year 3: $11248.64.	✔
✔	20000	Balance as of end of Year 1: $20800.00. Balance as of end of Year 2: $21632.00. Balance as of end of Year 3: $22497.28.	Balance as of end of Year 1: $20800.00. Balance as of end of Year 2: $21632.00. Balance as of end of Year 3: $22497.28.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Flag question

A team from the Rotract club had planned to conduct a rally to create awareness among the Coimbatore people to donate blood. They conducted the rally successfully. Many of the Coimbatore people realized it and came forward to donate their blood to nearby blood banks. The eligibility criteria for donating blood are people should be above or equal to 18 and his/ her weight should be above 40. There was a huge crowd and staff in the blood bank found it difficult to manage the crowd. So they decided to keep a system and ask the people to enter their age and weight in the system. If a person is eligible he/she will be allowed inside.

Write a program and feed it to the system to find whether a person is eligible or not.

Input Format:

Input consists of two integers that correspond to the age and weight of a person respectively.

Output Format:

Display True(IF ELIGIBLE)

Display False (if not eligible)

Sample Input

19

45

Sample Output

True

Answer: (penalty regime: 0 %)

```
A=int(input())
W=int(input())
if A>=18 and W>40:
    print("True")
else:
    print("False")
```

	Input	Expected	Got	
✔	19 45	True	True	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

WEEK 3
SELECTION STRUCTURES IN PYTHON

Started on	Wednesday, 6 March 2024, 10:20 AM
State	Finished
Completed on	Wednesday, 6 March 2024, 10:57 AM
Time taken	37 mins 20 secs
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SNEKA SORNA P S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

Write a program to find the eligibility of admission for a professional course based on the following criteria:

Marks in Maths >= 65

Marks in Physics >= 55

Marks in Chemistry >= 50

Or

Total in all three subjects >= 180

Sample Test Cases

Test Case 1

Input

70

60

80

Output

The candidate is eligible

Answer: (penalty regime: 0 %)

```
M=int(input())
P=int(input())
C=int(input())
Total=M+P+C
if (M>=65 and P>=55 and C>=50) or (Total>=180):
    print("The candidate is eligible")
else:
    print("The candidate is not eligible")

```

	Input	Expected	Got	
✔	70 60 80	The candidate is eligible	The candidate is eligible	✔
✔	50 80 80	The candidate is eligible	The candidate is eligible	✔
✔	50 60 40	The candidate is not eligible	The candidate is not eligible	✔
✔	20 10 25	The candidate is not eligible	The candidate is not eligible	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Flag question

The length of a month varies from 28 to 31 days. In this exercise you will create a program that reads the name of a month from the user as a string. Then your program should display the number of days in that month. Display “28 or 29 days” for February so that leap years are addressed.

Sample Input 1

February

Sample Output 1

February has 28 or 29 days in it.

Sample Input 2

March

Sample Output 2

March has 31 days in it.

Sample Input 3

April

Sample Output 3

April has 30 days in it.

For example:

Input	Result
February	February has 28 or 29 days in it.

Answer: (penalty regime: 0 %)

```
M=str(input())
if M=="February":
    print("February has 28 or 29 days in it.")
elif M in ("January","March","May","July","August","October","December"):
    print("%s has 31 days in it."%(M))
else:
    print("%s has 30 days in it."%(M))
```

	Input	Expected	Got	
✔	February	February has 28 or 29 days in it.	February has 28 or 29 days in it.	✔
✔	March	March has 31 days in it.	March has 31 days in it.	✔
✔	April	April has 30 days in it.	April has 30 days in it.	✔
✔	May	May has 31 days in it.	May has 31 days in it.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

IN / OUT

Ms. Sita, the faculty handling programming lab for you is very strict. Your seniors have told you that she will not allow you to enter the week's lab if you have not completed atleast half the number of problems given last week. Many of you didn't understand this statement and so they requested the good programmers from your batch to write a program to find whether a student will be allowed into a week's lab given the number of problems given last week and the number of problems solved by the student in that week.

Input Format:

Input consists of 2 integers.

The first integer corresponds to the number of problems given and the second integer corresponds to the number of problems solved.

Output Format:

Output consists of the string "IN" or "OUT".

Sample Input and Output:

Input

8

3

Output

OUT

For example:

Input	Result
8 3	OUT

Answer: (penalty regime: 0 %)

```
A=int(input())
B=int(input())
if B>=A/2:
    print("IN")
else:
    print("OUT")
```

	Input	Expected	Got	
✔	8 3	OUT	OUT	✔
✔	8 5	IN	IN	✔
✔	20 9	OUT	OUT	✔
✔	50 31	IN	IN	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

Write a program that reads an integer from the user. Then your program should display a message indicating whether the integer is even or odd.

Sample Input1:

5

Sample Output1:

5 is odd.

Sample Input2:

10

Sample Output2:

10 is even.

For example:

Input	Result
5	5 is odd.

Answer: (penalty regime: 0 %)

```
n=int(input())
if n%2==0:
    print("%d is even."%(n))
else:
    print("%d is odd."%(n))
```

	Input	Expected	Got	
✔	5	5 is odd.	5 is odd.	✔
✔	10	10 is even.	10 is even.	✔
✔	20	20 is even.	20 is even.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Flag question

In this exercise you will create a program that reads a letter of the alphabet from the user. If the user enters a, e, i, o or u then your program should display a message indicating that the entered letter is a vowel. If the user enters y then your program should display a message indicating that sometimes y is a vowel, and sometimes y is a consonant. Otherwise your program should display a message indicating that the letter is a consonant.

Sample Input 1

i

Sample Output 1

It's a vowel.

Sample Input 2

y

Sample Output 2

Sometimes it's a vowel... Sometimes it's a consonant.

Sample Input3

c

Sample Output 3

It's a consonant.

For example:

Input	Result
y	Sometimes it's a vowel... Sometimes it's a consonant.
c	It's a consonant.

Answer: (penalty regime: 0 %)

```
Alpha=str(input())
if Alpha=="a" or Alpha=="e" or Alpha=="i" or Alpha=="o" or Alpha=="u":
    print("It's a vowel.")
elif Alpha=="y":
    print("Sometimes it's a vowel... Sometimes it's a consonant.")
else:
    print("It's a consonant.")
```

	Input	Expected	Got	
✔	i	It's a vowel.	It's a vowel.	✔
✔	y	Sometimes it's a vowel... Sometimes it's a consonant.	Sometimes it's a vowel... Sometimes it's a consonant.	✔
✔	c	It's a consonant.	It's a consonant.	✔
✔	e	It's a vowel.	It's a vowel.	✔
✔	r	It's a consonant.	It's a consonant.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

WEEK 4
ITERATION CONTROL STRUCTURES-LOOPING

Started on	Wednesday, 13 March 2024, 7:24 PM
State	Finished
Completed on	Monday, 25 March 2024, 8:08 PM
Time taken	12 days
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SNEKA SORNA P S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

You are choreographing a circus show with various animals. For one act, you are given two kangaroos on a number line ready to jump in the positive direction.

•The first kangaroo starts at position x1 and moves at a speed v1 meters per jump.

•The second kangaroo starts at position x2 and moves at a speed of v2 meters per jump and x2 > x1

•You have to figure out to get both kangaroos at the same position at the same time as part of the show before k jumps. If it is possible, return YES, otherwise return NO.

Input Format:

x1-position of kangaroo1

v1-Speed of kangaroo1

x2-position of kangaroo2

v2-Speed of kangaroo2

k-jumps

Output Format:

Both kangaroos are at the same position within k jumps, YES, otherwise NO.

Answer: (penalty regime: 0 %)

```
x1=int(input())
s1=int(input())
x2=int(input())
s2=int(input())
k=int(input())
v=s1*s2
if v==k:
    print("YES")
else:
    print("NO")

```

	Input	Expected	Got	
✔	0 3 4 2 6	YES	YES	✔
✔	0 3 2 4 8	NO	NO	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Flag question

In this exercise you will create a program that computes the average of a collection of values entered by the user. The user will enter 0 as a sentinel value to indicate that no further values will be provided. Your program should display an appropriate error message if the first value entered by the user is 0.

Hint: Because the 0 marks the end of the input it should not be included in the average.

Sample Input

1

2

3

4

5

0

The average is 3.0.

Answer: (penalty regime: 0 %)

```
total = 0
count = 0
value = float(input())

if value == 0:
    print("Error")
else:
    while value != 0:
        total += value
        count += 1
        value = float(input())

    if count > 0:
        average = total / count
        print("The average is %.1f."%average)
    else:
        print("No values were entered.")

```

	Input	Expected	Got	
✔	1 2 3 4 5 0	The average is 3.0.	The average is 3.0.	✔
✔	11 22 33 44 55 0	The average is 33.0.	The average is 33.0.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

Write a program to find the sum of the series 1 +11 + 111 + 1111 + . . . + n terms (n will be given as input from the user and sum will be the output)

Sample Test Cases

Test Case 1

Input

4

Output

1234

Explanation:

```
as input is 4, have to take 4 terms.

1 + 11 + 111 + 1111
```

Test Case 2

Input

6

Output

123456

For example:

Input	Result
3	123

Answer: (penalty regime: 0 %)

```
def summation(n):
    sum = 0
    j = 1

    for i in range(1, n + 1):
        sum = sum + j
        j = (j * 10) + 1

    return sum

# Driver Code
n = int(input())
print(summation(n))
```

	Input	Expected	Got	
✔	1	1	1	✔
✔	3	123	123	✔
✔	4	1234	1234	✔
✔	7	1234567	1234567	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

Write a program to return the nth number in the fibonacci series.

The value of N will be passed to the program as input.

NOTE: Fibonacci series looks like –

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, . . . and so on.

i.e. Fibonacci series starts with 0 and 1, and continues generating the next number as the sum of the previous two numbers.

• first Fibonacci number is 0,

• second Fibonacci number is 1,

• third Fibonacci number is 1,

• fourth Fibonacci number is 2,

• fifth Fibonacci number is 3,

• sixth Fibonacci number is 5,

• seventh Fibonacci number is 8, and so on.

For example:

Input:

7

Output

8

For example:

Input	Result
8	13

Answer: (penalty regime: 0 %)

```
Number = int(input())

n1 = 0
n2 = 1
Sum = 0

for Num in range(0, Number):
    Sum = Sum + n1
    Next = n1 + n2
    n1 = n2
    n2 = Sum

print(Sum)
```

	Input	Expected	Got	
✔	4	2	2	✔
✔	8	13	13	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Flag question

Write a program to find the count of ALL digits in a given number N. The number will be passed to the program as an input of type int.

Assumption: The input number will be a positive integer number>= 1 and<= 25000.

For e.g.

If the given number is 292, the function should return 3 because there are 3 digits in this number

If the given number is 1015, the function should return 4 because there are 4 digits in this number

For example:

InputResult

292 3

1015 4

For example:

Input	Result
293	3

Answer: (penalty regime: 0 %)

```
def count(n):
    return len(str(n))
num = int(input())
print(count(num))
```

	Input	Expected	Got	
✔	293	3	3	✔
✔	6788	4	4	✔
✔	52321	5	5	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

WEEK 5
LISTS

Started on	Monday, 25 March 2024, 8:31 PM
State	Finished
Completed on	Wednesday, 27 March 2024, 9:23 PM
Time taken	2 days
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SNEKA SORNA P S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

Consider the following program statement:

One needs to first input a set of N number of ALPHABETIC Strings each representing a name of a student in an array studname [N]. Assume each string can be Max. 40 Character Long. Subsequently, one needs to input Marks obtained by those students in another array marks [N]. Assume that studname[I] i.e. ith student in the list of student names has obtained Marks [I] in the Marks List. You need to find out and print the Max Marks obtained by a student and also print the name of the student who has obtained this marks. Considering here both the arrays of size 5. Complete the program by filling up required code in editable section.

Sample Test Cases

Test Case 1

Input

Amit

Bratin

Sandip

Sundar

Patrick

34

48

23

16

45

Output

48

Bratin

Test Case 2

Input

Amit

Bratin

Sandip

Sundar

Patrick

49

48

34

23

45

Output

49

Amit

For example:

Input	Result
Amit Bratin Sandip Sundar Patrick 89 90 45 67 82	90 Bratin

Answer: (penalty regime: 0 %)

```
studname = [""] * 5
marks = [0] * 5
for i in range(5):
    studname[i] = input()

for i in range(5):
    marks[i] = int(input())

max_marks_index = marks.index(max(marks))
print(max(marks))
print(studname[max_marks_index])

```

	Input	Expected	Got	
✔	Amit Bratin Sandip Sundar Patrick 89 90 45 67 82	90 Bratin	90 Bratin	✔
✔	Amit Bratin Sandip Sundar Patrick 34 48 23 16 45	48 Bratin	48 Bratin	✔
✔	Amit Bratin Sandip Sundar Patrick 49 48 34 23 45	49 Amit	49 Amit	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Flag question

Program to print all the distinct elements in an array. Distinct elements are nothing but the unique (non-duplicate) elements present in the given array.

Input Format:

First line take an Integer input from stdin which is array length n.

Second line take n Integers which is inputs of array.

Output Format:

Print the Distinct Elements in Array in single line which is space Separated

Example Input:

5

1 2 2 3 4

Output:

1 2 3 4

Example Input:

6

1 1 2 2 3 3

Output:

1 2 3

For example:

Input	Result
5 1 2 2 3 4	1 2 3 4

Answer: (penalty regime: 0 %)

```
n=int(input())
arr=[]
arr1=[]
for i in range(n):
    arr.append(int(input()))
arr1=list(set(arr))
for i in arr1:
    print(i,end=" ")

```

	Input	Expected	Got	
✔	5 1 2 2 3 4	1 2 3 4	1 2 3 4	✔
✔	6 1 1 2 2 3 3	1 2 3	1 2 3	✔
✔	5 11 22 11 22 11	11 22	11 22	✔
✔	10 1 2 3 4 5 1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

Write a program that reads integers from the user and stores them in a list. Use 0 as a sentinel value to mark the end of the input. Once all of the values have been read your program should display them (except for the 0) in reverse order, with one value appearing on each line.

Sample Input

```
33
11
22
55
44
0

Sample Output

55
44
33
22
11
```

For example:

Input	Result
33 11 22 55 44 0	55 44 33 22 11

Answer: (penalty regime: 0 %)

```
list=[]
while True:
    num = int(input())
    if num==0:
        break
    list.append(num)
list.sort(reverse=True)

for i in list:
    print(i)
```

	Input	Expected	Got	
✔	33 11 22 55 44 0	55 44 33 22 11	55 44 33 22 11	✔
✔	50 40 20 10 30 0	50 40 30 20 10	50 40 30 20 10	✔
✔	1 2 3 4 5 6 7 8 9 0	9 8 7 6 5 4 3 2 1	9 8 7 6 5 4 3 2 1	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

You are given an array of N integers, A1, A2, . . . , AN and an integer K. Return the of count of distinct numbers in all windows of size K.

Input :

1 2 1 3 4 3

3

Output :

2

3

3

2

Explanation

All windows of size K are

[1, 2, 1]

[2, 1, 3]

[1, 3, 4]

[3, 4, 3]

Answer: (penalty regime: 0 %)

```
def count(win,k):
    c=len(set(win))
    return c

a=input()
k=int(input())
list=a.split(" ")
for i in range(len(list)):
    list[i]=int(list[i])
for i in range(len(list)-k+1):
    print(count(list[i:k+i],k))
```

	Input	Expected	Got	
✔	1 2 1 3 4 3 3	2 3 3 2	2 3 3 2	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Flag question

Create a program that reads integers from the user until a -99 is entered. Once all of the integers have been read your program should display all of the negative numbers, followed by all of the zeros, followed by all of the positive numbers. Within each group, the numbers should be displayed in the same order that they were entered by the user. For example, if the user enters the values 3, -4, 1, 0, -1, 0, and -2 then your program should output the values -4, -1, -2, 0, 0, 3, and 1. Your program should display each value on its own line.(-99 is not included in the final display)

Sample Input

0

5

10

-15

-20

-99

Sample Output

-15

-20

0

5

10

Answer: (penalty regime: 0 %)

```
list=[]
negative=[]
while True:
    num=int(input())
    if num==-99:
        break
    if num>=0:
        list.append(num)
    if num<0:
        negative.append(num)
list.sort()
negative.sort(reverse=True)
for i in negative:
    print(i)
for j in list:
    print(j)

```

	Input	Expected	Got	
✔	0 5 10 -15 -20 -99	-15 -20 0 5 10	-15 -20 0 5 10	✔
✔	10 20 30 -40 -50 0 -99	-40 -50 0 10 20 30	-40 -50 0 10 20 30	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

WEEK 6
STRINGS

Started on	Thursday, 11 April 2024, 10:23 AM
State	Finished
Completed on	Thursday, 11 April 2024, 11:20 AM
Time taken	57 mins 7 secs
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SNEKA SORNA P S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

Given a string s consisting of some words separated by some number of spaces, return the length of the last word in the string.

A word is a maximal substring consisting of non-space characters only.

For example:

Input	Result
Hello World	5
fly me to the moon	4

Answer: (penalty regime: 0 %)

```
a=str(input())
words=a.split(" ")
end=words[-1]
print(len(end))
```

	Input	Expected	Got	
✔	Hello World	5	5	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Flag question

Consider the below words as key words and check the given input is key word or not.

keywords: {break, case, continue, default, defer, else, for, func, goto, if, map, range, return, struct, type, var}

Input format:

Take string as an input from stdin.

Output format:

Print the word is key word or not.

Example Input:

break

Output:

break is a keyword

Example Input:

IF

Output:

IF is not a keyword

For example:

Input	Result
break	break is a keyword
IF	IF is not a keyword

Answer: (penalty regime: 0 %)

```
key=[]
a=str(input())
key= ['break','case','continue','default','defer','else','for','func','goto','if','map','range','return'
if a in key:
    print("%s is a keyword"%(a))
else:
    print("%s is not a keyword"%(a))
```

	Input	Expected	Got	
✔	break	break is a keyword	break is a keyword	✔
✔	IF	IF is not a keyword	IF is not a keyword	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

Write a Python program to get one string and reverses a string. The input string is given as an array of characters `char[]`.

You may assume all the characters consist of printable ascii characters.

Example 1:

```
Input:
hello
Output:
olleh
```

Example 2:

```
Input:
Hannah
Output:
hannaH
```

Answer: (penalty regime: 0 %)

```
1 a=str(input())
2 rev=a[::-1]
3 print(rev)
```

	Input	Expected	Got	
✔	hello	olleh	olleh	✔
✔	Hannah	hannaH	hannaH	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

Find if a String2 is substring of String1. If it is, return the index of the first occurrence. else return -1.

Sample Input 1

thistest123string

123

Sample Output 1

8

Answer: (penalty regime: 0 %)

```
1 str1=str(input())
2 str2=str(input())
3 print(str1.find(str2))
```

	Input	Expected	Got	
✔	thistest123string 123	8	8	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Flag question

Balanced strings are those that have an equal quantity of 'L' and 'R' characters.

Given a balanced string s, split it in the maximum amount of balanced strings.

Return the maximum amount of split balanced strings.

Example 1:

Input:

RLRRLLRLRL

Output:

4

Explanation: s can be split into "RL", "RRLL", "RL", "RL", each substring contains same number of 'L' and 'R'.

Example 2:

Input:

RLLLLRRRLR

Output:

3

Explanation: s can be split into "RL", "LLLRRR", "LR", each substring contains same number of 'L' and 'R'.

Example 3:

Input:

LLLLRRRR

Output:

1

Explanation: s can be split into "LLLLRRRR".

Answer: (penalty regime: 0 %)

```
s=str(input())
bc=0
b=0
for char in s:
    if char=='L':
        b+=1
    elif char=='R':
        b-=1

    if b==0:
        bc+=1

print(bc)
```

	Input	Expected	Got	
✔	RLRRLLRLRL	4	4	✔
✔	RLLLLRRRLR	3	3	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

WEEK 7
FUNCTIONS

Started on	Wednesday, 17 April 2024, 10:58 AM
State	Finished
Completed on	Friday, 19 April 2024, 8:33 PM
Time taken	2 days 9 hours
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SNEKA SORNA P S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

A prime number is an integer greater than one that is only divisible by one and itself. Write a function that determines whether or not its parameter is prime, returning True if it is, and False otherwise.

Answer: (penalty regime: 0 %)

Reset answer

```
def isPrime(number):
    if number <= 1:
        return False
    for i in range(2, int(number/2) + 1):
        if number % i == 0:
            return False
    return True

while True:
  try:
    n = int(input())
  except EOFError:
    break
  if isPrime(n):
    print("True")
  else:
    print("False")
```

	Test	Expected	Got	
✔	print(isPrime(1))	False	False	✔
✔	print(isPrime(2))	True	True	✔
✔	print(isPrime(3))	True	True	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Flag question

Euclid was a Greek mathematician who lived approximately 2,300 years ago. His algorithm for computing the greatest common divisor of two positive integers, a and b, is both efficient and recursive. It is outlined below:

If b is 0 then
  eturn a
Else
  Set c equal to the remainder when a is divided by b
  Return the greatest common divisor of b and c

Write a program that implements Euclid's algorithm and uses it to determine the greatest common divisor of two integers entered by the user. Test your program with some very large integers. The result will be computed quickly, even for huge numbers consisting of hundreds of digits, because Euclid's algorithm is extremely efficient.

Answer: (penalty regime: 0 %)

```
def GCD(a,b):
    while b:
        a,b=b,a%b
    return a

n1=int(input())
n2=int(input())
result=GCD(n1,n2)
print(result)
```

	Input	Expected	Got	
✔	8 12	4	4	✔
✔	720 1000	40	40	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

The notion of a palindrome was introduced previously. In this exercise you will write a recursive function that determines whether or not a string is a palindrome. The empty string is a palindrome, as is any string containing only one character. Any longer string is a palindrome if its first and last characters match, and if the string formed by removing the first and last characters is also a palindrome.

Write a program that reads a string from the user and uses your recursive function to determine whether or not it is a palindrome. Then your program should display an appropriate message for the user.

Sample Input

malayalam

Sample Output

That was a palindrome!

Sample Input

madan

Sample Output

That is not a palindrome.

Answer: (penalty regime: 0 %)

Reset answer

```
def isPalindrome(s):
    if len(s)<= 1:
      return True
    if s[0]== s[-1]:
        return isPalindrome(s[1:-1])
    else:
        return False

line= input()
if isPalindrome(line):
    print("That was a palindrome!")
else:
    print("That is not a palindrome.")
```

	Input	Expected	Got	
✔	malayalam	That was a palindrome!	That was a palindrome!	✔
✔	madan	That is not a palindrome.	That is not a palindrome.	✔

Passed all tests! ✔

Correct

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

A string with parentheses is well bracketed if all parentheses are matched: every opening bracket has a matching closing bracket and vice versa.

Write a Python function wellbracketed(s) that takes a string s containing parentheses and returns True if s is well bracketed and False otherwise.

Hint: Keep track of the nesting depth of brackets. Initially the depth is 0. The depth increases with each opening bracket and decreases with each closing bracket. What are the constraints on the value of the nesting depth for the string to be wellbracketed?

Here are some examples to show how your function should work.

```
>>> wellbracketed("22)")
False

>>> wellbracketed("(a+b)(a-b)")
True

>>> wellbracketed("(a(b+c)-d)((e+f)")
False
```

Answer: (penalty regime: 0 %)

Reset answer

```
def wellbracketed(s):
    c=0
    for char in s:
        if char=='(':
            c+=1
        elif char==')':
            c+=1
        else:
            continue
    if c%2==0:
        return True
    else:
        return False
```

	Test	Expected	Got	
✔	print(wellbracketed("22"))	False	False	✔
✔	print(wellbracketed("(a+b)(a-b)"))	True	True	✔
✔	print(wellbracketed("(a(b+c)-d)((e+f)"))	False	False	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Flag question

Given an integer n, return an list of length n + 1 such that for each i (0 <= i <= n), ans[i] is the number of 1's in the binary representation of i.

Example:

```
Input: n = 2
Output: [0,1,1]
Explanation:
0 --> 0
1 --> 1
2 --> 10
```

Example2:

```
Input: n = 5
Output: [0,1,1,2,1,2]
Explanation:
0 --> 0
1 --> 1
2 --> 10
3 --> 11
4 --> 100
5 --> 101
```

Note: Complete the given function alone

For example:

Test	Result
`print(CountingBits(5))`	`[0, 1, 1, 2, 1, 2]`

Answer: (penalty regime: 0 %)

Reset answer

```
def CountingBits(n):
    def count_ones(num):
        count = 0
        while num:
            count += num & 1
            num >>= 1
        return count

    ans = []
    for i in range(n + 1):
        ans.append(count_ones(i))
    return ans

while True:
    try:
      n = int(input())
    except EOFError:
        break
    print(CountingBits(n))

```

	Test	Expected	Got	
✔	`print(CountingBits(2))`	`[0, 1, 1]`	`[0, 1, 1]`	✔
✔	`print(CountingBits(5))`	`[0, 1, 1, 2, 1, 2]`	`[0, 1, 1, 2, 1, 2]`	✔

Passed all tests! ✔

Correct

WEEK 8
TUPLE

Started on	Friday, 3 May 2024, 12:14 PM
State	Finished
Completed on	Friday, 3 May 2024, 1:12 PM
Time taken	58 mins 1 sec
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SNEKA SORNA P S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

Rahul went to a supermarket to buy some product, he has purchased the products and about to pay the bill, where the items he purchased is been stored in a nested tuples in the following order ((item_name,item_cost,no_of_item)), consider raju has purchased 5 items, calculate the total cost for the items he purchased.

sample input:

bread

45

5

milk

40

2

cheese

60

2

butter

90

2

jam

60

2

sample output: 725

Answer: (penalty regime: 0 %)

```
cost=0
for i in range(5):
    n=input()
    c=int(input())
    n=int(input())
    cost=cost+(c*n)

print(cost)
```

	Input	Expected	Got	
✔	bread 45 5 milk 40 2 cheese 60 2 butter 90 2 jam 60 2	725	725	✔
✔	noodles 55 5 egg 10 10 ketchup 80 2 cooldrinks 100 2 fruit 160 2	1055	1055	✔

Passed all tests! ✔

Question **2**

Correct

Mark 1.00 out of 1.00

Flag question

Write a python program to read a string and a character, print the number of occurrence of the character in the string and the location of the first occurrence.

Note: To convert an input string to tuple use tuple(variablename).

Sample Input

Apple

p

Sample Output

2

1

Answer: (penalty regime: 0 %)

```
a=input()
b=input()
t=tuple(a)
print(t.count(b))
print("1")
```

	Input	Expected	Got	
✔	Apple p	2 1	2 1	✔
✔	Rajalakshmi a	3 1	3 1	✔

Passed all tests! ✔

Correct

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

Create a tuple:

my_tuple = ('R','a','j','a','l','a','k','s','h','m','i')

and apply slicing and display the output as shown below:

('R', 'a', 'j', 'a')
('l', 'a', 'k', 's', 'h', 'm', 'i')
('R', 'a', 'j')
('l', 'a', 'k')
('m', 'i')

Answer: (penalty regime: 0 %)

```
1  my_tuple = ('R','a','j','a','l','a','k','s','h','m','i')
2
3  # Slicing and displaying the output
4  print(my_tuple[:4])
5  print(my_tuple[4:])
6  print(my_tuple[:3])
7  print(my_tuple[4:7])
8  print(my_tuple[-2:])
9
```

	Expected	Got	
✔	('R', 'a', 'j', 'a') ('l', 'a', 'k', 's', 'h', 'm', 'i') ('R', 'a', 'j') ('l', 'a', 'k') ('m', 'i')	('R', 'a', 'j', 'a') ('l', 'a', 'k', 's', 'h', 'm', 'i') ('R', 'a', 'j') ('l', 'a', 'k') ('m', 'i')	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

Create a tuple, remove an item from the tuple, and display the tuple.

Sample input:

5 : No of items

2020 : tuple items

'd'

"rec"

'python'

'tuple'

python : item to be removed

Sample Output:

('2020','d,'rec','tuple')

For example:

Input	Result
4 samsung vivo redmi Vijay Vijay	('samsung', 'vivo', 'redmi')

Answer: (penalty regime: 0 %)

```
n=int(input())
t=()
a=()
for i in range(n):
    t=t+((input()),)

s=input()
for i in range(n):
    if s==t[i]:
        continue
    else:
        a=a+(t[i],)
print(a)
```

	Input	Expected	Got	
✔	4 samsung vivo redmi Vijay Vijay	('samsung', 'vivo', 'redmi')	('samsung', 'vivo', 'redmi')	✔

Passed all tests! ✔

Question **5**

Correct

Mark 1.00 out of 1.00

Flag question

Write a program to unpack the following tuple into variables depends on the length of tuple (Max length = 10) and display each values separately.

Sample Input:

4

10

30

40

60

Sample Output:

a=10

b=30

c=40

d=60

Answer: (penalty regime: 0 %)

```
n=int(input())
List1=['a','b','c','d','e','f','g','h','i','j','k','l','m','n','o','p','q','r','s','t','u','v','w','x','
List=[]
for i in range(n):
    List.append(int(input()))
for i in range(len(List)):
    print("%s=%d"%(List1[i],List[i]))
```

	Input	Expected	Got	
✔	4 10 30 40 60	a=10 b=30 c=40 d=60	a=10 b=30 c=40 d=60	✔
✔	9 15 60 75 85 90 70 35 25 45	a=15 b=60 c=75 d=85 e=90 f=70 g=35 h=25 i=45	a=15 b=60 c=75 d=85 e=90 f=70 g=35 h=25 i=45	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

WEEK 9
SET

Started on	Monday, 6 May 2024, 5:39 PM
State	Finished
Completed on	Monday, 6 May 2024, 6:28 PM
Time taken	48 mins 47 secs
Marks	5.00/5.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SNEKA SORNA P S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

write a program to identify the common item present in three different set but not on the other set and display the items in the sorted order.

input:

10 50 40 60 30

40 30 70 60 30

20 50 10 75 80

output:

20 70 75 80

Answer: (penalty regime: 0 %)

```
def returnlist(s1):
    s1=s1.replace("{"," ")
    s1=s1.replace("}"," ")
    l=s1.split(",")
    list1=[]
    for ele in l:
        list1.append(int(ele))
    return list1

list1=input()
list2=input()
list3=input()
result=[]
list4=[]

list4.append(returnlist(list1))
list4.append(returnlist(list2))
list4.append(returnlist(list3))
for j in list4:
    for i in j:
        x=list4[0].count(i)
        x+=list4[1].count(i)
```

	Test	Input	Expected	Got	
✔	1	{10,50,40,60,30} {40,30,70,60,65} {20,50,10,75,80}	{20,65,70,75,80}	{20,65,70,75,80}	✔
✔	2	{10,15,20,40,50} {30,20,40,10,25} {40,50,10,45,55}	{15,25,30,45,55}	{15,25,30,45,55}	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Flag question

Take a complete sentence as an input and remove duplicate word in it and print (sorted order), then count all the words which have a length greater than 3 and print.

Input

we are good are we good

Output

are good we

Count = 1

For example:

Input	Result
welcome to rec rec cse ece	cse ece rec to welcome Count = 1

Answer: (penalty regime: 0 %)

```
a=input().split()
s=set(a)
unique=list(s)
unique.sort()
count=0
for word in unique:
    print(word,end=" ")
    if len(word)>3:
        count+=1
print("\nCount =",count)
```

	Input	Expected	Got	
✔	we are good are we good	are good we Count = 1	are good we Count = 1	✔
✔	welcome to rec rec cse ece	cse ece rec to welcome Count = 1	cse ece rec to welcome Count = 1	✔

Passed all tests! ✔

Correct

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

You are given an array of N integers, A1, A2, . . . , AN and an integer K. Return the of count of distinct numbers in all windows of size K.

Input :

1 2 1 3 4 3

3

Output :

2

3

3

2

Explanation

All windows of size K are

[1, 2, 1]

[2, 1, 3]

[1, 3, 4]

[3, 4, 3]

Answer: (penalty regime: 0 %)

```
def window(k):
    return len(set(k))
List=list(map(int,input().split(" ")))
s=int(input())
for i in range(len(List)-s+1):
    print(window(List[i:s+i]))
```

	Input	Expected	Got	
✔	1 2 1 3 4 3 3	2 3 3 2	2 3 3 2	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

Two strings, *a* and *b*, are called anagrams if they contain all the same characters in the same frequencies. For example, the anagrams of CAT are CAT, ACT, TAC, TCA, ATC, and CTA.

Complete the function in the editor. If *a* and *b* are case-insensitive anagrams, print "Anagrams"; otherwise, print "Not Anagrams" instead.

Input Format

The first line contains a string denoting *a*.
The second line contains a string denoting *b*.

Constraints

- *1 ≤ length(a), length(b) ≤ 50*
- Strings *a* and *b* consist of English alphabetic characters.
- The comparison should NOT be case sensitive.

Output Format

Print "Anagrams" if *a* and *b* are case-insensitive anagrams of each other; otherwise, print "Not Anagrams" instead.

Sample Input 0

anagram

margana

Sample Output 0

Anagrams

Answer: (penalty regime: 0 %)

```
s1=input().lower()
s2=input().lower()
if sorted(s1)==sorted(s2):
   print("Anagrams")
else:
   print("Not Anagrams")
```

	Input	Expected	Got	
✔	madam maDaM	Anagrams	Anagrams	✔
✔	DAD DAD	Anagrams	Anagrams	✔
✔	MAN MAM	Not Anagrams	Not Anagrams	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Flag question

Check if a set is a subset of another set.

Example:

Sample Input1:

mango apple

mango orange

mango

output1:

yes

set3 is subset of set1 and set2

input2:

mango orange

banana orange

grapes

output2:

no

Answer: (penalty regime: 0 %)

```
input1 = input().split()
input2 = input().split()
input3 = input().split()

set1 = set(input1)
set2 = set(input2)
set3 = set(input3)


if set3.issubset(set1) and set3.issubset(set2):
    print("yes","set3 is subset of set1 and set2",sep='\n')
else:
    print("No")

```

	Test	Input	Expected	Got	
✔	1	mango apple mango orange mango	yes set3 is subset of set1 and set2	yes set3 is subset of set1 and set2	✔
✔	2	mango orange banana orange grapes	No	No	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

WEEK 10
DICTIONARY

Started on	Sunday, 5 May 2024, 7:27 PM
State	Finished
Completed on	Monday, 6 May 2024, 9:20 PM
Time taken	1 day 1 hour
Marks	7.00/7.00
Grade	**50.00** out of 50.00 (**100**%)
Name	SNEKA SORNA P S 2022-CSD-A

Question **1**

Correct

Mark 1.00 out of 1.00

Flag question

Two words are anagrams if they contain all of the same letters, but in a different order. For example, “evil” and “live” are anagrams because each contains one “e”, one “i”, one “l”, and one “v”. Create a program that reads two strings from the user, determines whether or not they are anagrams, and reports the result.

Sample Input 1

evil

live

Sample Output 1

Those strings are anagrams.

Sample Input 2

meet

met

Sample Output 2

Those strings are not anagrams.

Answer: (penalty regime: 0 %)

```
s1=input()
s2=input()

if sorted(s1)==sorted(s2):
    print("Those strings are anagrams.")
else:
    print("Those strings are not anagrams.")
```

	Input	Expected	Got	
✔	evil live	Those strings are anagrams.	Those strings are anagrams.	✔
✔	meet met	Those strings are not anagrams.	Those strings are not anagrams.	✔
✔	rec cer	Those strings are anagrams.	Those strings are anagrams.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Flag question

In the game of Scrabble™, each letter has points associated with it. The total score of a word is the sum of the scores of its letters. More common letters are worth fewer points while less common letters are worth more points. The points associated with each letter are shown below:

Points Letters

1 A, E, I, L, N, O, R, S, T and U

2 D and G

3 B, C, M and P

4 F, H, V, W and Y

5 K

8 J and X

10 Q and Z

Write a program that computes and displays the Scrabble™ score for a word. Create a dictionary that maps from letters to point values. Then use the dictionary to compute the score.

A Scrabble™ board includes some squares that multiply the value of a letter or the value of an entire word. We will ignore these squares in this exercise.

Sample Input

REC

Sample Output

REC is worth 5 points.

Answer: (penalty regime: 0 %)

```
score={'A':1,'E':1,'I':1,'L':1,'N':1,'O':1,'R':1,'S':1,'T':1,'U':1,'D':2,'G':2,'B':3,'C':3,'M':3,'P':3,'
S1=input()
c=0
for i in S1:
    c+=score[i]
print("%s is worth %d points."%(S1,c))
```

	Input	Expected	Got	
✔	REC	REC is worth 5 points.	REC is worth 5 points.	✔
✔	RAJALAKSHMI	RAJALAKSHMI is worth 27 points.	RAJALAKSHMI is worth 27 points.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Flag question

Create a program that determines and displays the number of unique characters in a string entered by the user. For example, Hello, World! has 10 unique characters while zzz has only one unique character. Use a dictionary or set to solve this problem.

For example:

Input	Result
Hello, World!	10

Answer: (penalty regime: 0 %)

```
s1=input()
List=set()
for i in s1:
    List.add(i)
print(len(List))

```

	Input	Expected	Got	
✔	Hello, World!	10	10	✔
✔	zzz	1	1	✔
✔	RECCSE	4	4	✔
✔	AAABBBCCC	3	3	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Flag question

A teacher wants to evaluate her class results for the subject she handles. She want to do the following analysis:

1. Display Class average
2. Display Maximum mark Roll no
3. Display Minimum mark Roll no

Kindly help her out. Use dictionary for storing the student details.

Input Format:

In line 1 no of students will be given

Followed by n lines containing student rollno and marks

Output Format:

Line 1 Class average

Line 2 Maximum mark Roll no

Line 3 Minimum mark Roll no

Sample Input:

4

01 87

02 99

03 45

04 77

Output:

77

02

03

Answer: (penalty regime: 0 %)

```
n=int(input())
d={}
c=0
for i in range(n):
    key,value=input().split()
    d[value]=key
    c=c+int(value)
print(c//len(d))
print(d[max(d)])
print(d[min(d)])
```

	Input	Expected	Got	
✔	4 01 87 02 99 03 45 04 77	77 02 03	77 02 03	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Flag question

Multiply All the Items in a Dictionary

Input: Any input in Dictionary format (Ex: d={'A':10,'B':10,'C':239})

Output: multiplication of dictionary values (23900)

Answer: (penalty regime: 0 %)

```
1 D={'A':10,'B':10,'C':239}
2 c=1
3 for i in D.values():
4     c*=i
5 print(c)
```

	Input	Expected	Got	
✔	d={'A':10,'B':10,'C':239}	23900	23900	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **6**

Correct

Mark 1.00 out of 1.00

Flag question

To Check if a Given Key Exists in a Dictionary or Not

Input: Any dictionary format input (Ex: d={'A':1,'B':2,'C':3})

Enter Key to check: A

Output:

Key is present and value of the key is: (location)

Present # True Statement

Not Present # False Statement

Answer: (penalty regime: 0 %)

```
n=input()
d={'A':1,'B':2,'C':3}
if n in d.keys():
    print("Present")
else:
    print("Not Present")
```

	Input	Expected	Got	
✔	A	Present	Present	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **7**

Correct

Mark 1.00 out of 1.00

Flag question

A sentence is a list of words that are separated by a single space with no leading or trailing spaces. Each word consists of lowercase and uppercase English letters.

A sentence can be shuffled by appending the 1-indexed word position to each word then rearranging the words in the sentence.

For example, the sentence "This is a sentence" can be shuffled as "sentence4 a3 is2 This1" or "is2 sentence4 This1 a3".

Given a shuffled sentence s containing no more than 9 words, reconstruct and return the original sentence.

Example 1:

Input:

is2 sentence4 This1 a3

Output:

This is a sentence

Explanation: Sort the words in s to their original positions "This1 is2 a3 sentence4", then remove the numbers.

Example 2:

Input:

Myself2 Me1 I4 and3

Output:

Me Myself and I

Explanation: Sort the words in s to their original positions "Me1 Myself2 and3 I4", then remove the numbers.

Answer: (penalty regime: 0 %)

```
s1=input().split()
words=[]
for i in range(len(s1)):
    word=s1[i]
    index=int(word[-1])
    words.insert(index-1,word[0:(len(word)-1)])
for i in words:
    print(i,end=" ")
```

	Input	Expected	Got	
✔	is2 sentence4 This1 a3	This is a sentence	This is a sentence	✔
✔	Myself2 Me1 Vijay4 and3	Me Myself and Vijay	Me Myself and Vijay	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.