

**RAJALAKSHMI ENGINEERING
COLLEGE**

RAJALAKSHMI NAGAR, THANDALAM – 602 105



**RAJALAKSHMI
ENGINEERING COLLEGE**

Laboratory Record Note Book

Name :

Year / Branch / Section :

University Register No. :

College Roll No. :

Semester :

Academic Year :

**RAJALAKSHMI ENGINEERING
COLLEGE**
RAJALAKSHMI NAGAR, THANDALAM – 602 105

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 : _____

Started on Wednesday, 28 February 2024, 10:22 AM

State Finished

Completed on Wednesday, 28 February 2024, 11:33 AM

Time taken 1 hour 11 mins

Marks 5.00/5.00

Grade **50.00** out of 50.00 (**100%**)

Name [RAVEEN P 2022-CSD-A](#)

Question 1

Correct

Mark 1.00 out of 1.00

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	46.34 is the gain percent.
250	
15000	

Answer: (penalty regime: 0 %)

```

1 x = int(input())
2 y = int(input())
3 z = int(input())
4 profit = z-(x+y)
5 print("{0:.2f} is the gain percent.".format((profit*100)/(x+y)))

```

	Input	Expected	Got	
✓	10000 250 15000	46.34 is the gain percent.	46.34 is the gain percent.	✓

	Input	Expected	Got	
✓	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

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 %)

```
1 a = int(input())
2 b = abs((a-500)/130 )
3 print("weekdays {0:.2f}".format(b+10))
4 print("weekend {0:.2f}".format(b))
```

	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 3

Correct

Mark 1.00 out of 1.00

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 m = float(input())
2 print("{0:.3f}".format(m**(.5)))
3
```

	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.

Question 4

Correct

Mark 1.00 out of 1.00

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	Your total refund will be \$7.00.
20	

Answer: (penalty regime: 0 %)

```

1 |a = int(input())
2 |b = int(input())
3 |print("Your total refund will be ${0:.2f}.".format((a*0.1)+b*0.25))

```

	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.	✓

	Input	Expected	Got	
✓	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 5

Correct

Mark 1.00 out of 1.00

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 %)

```

1 import math
2 a = int(input())
3 b = float(input())
4 print(str(a)+"."+str(type(a)))
5 print("{0:.1f},{1}".format((b),(type(b))))

```

	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.

[◀ Week-1_MCQ](#)

Jump to...

[Week1 extra ►](#)

Started on Wednesday, 28 February 2024, 11:42 AM

State Finished

Completed on Tuesday, 5 March 2024, 8:52 AM

Time taken 5 days 21 hours

Marks 5.00/5.00

Grade **50.00** out of 50.00 (**100%**)

Name [RAVEEN P 2022-CSD-A](#)

Question 1

Correct

Mark 1.00 out of 1.00

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 %)

```

1
2 num = int(input())
3 i = 5
4 while i>1:
5     num2 = int(input())
6     if num2 % num==0 and num2!=0:
7         print("True",end = " ")
8     else:
9         print("False",end = " ")
10    i-=1

```

	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 2

Correct

Mark 1.00 out of 1.00

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 %)

```

1 | a = int(input())
2 | b = int(input())
3 v if a %3 ==0 and b%2 ==0:
4 |     print("True")
5 v else:
6 |     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 3

Correct

Mark 1.00 out of 1.00

In London, every year during Dasara there will be a very grand doll show. People try to invent new dolls of different varieties. The best-sold doll's creator will be awarded with a cash prize. So people broke their heads to create dolls innovatively. Knowing this competition, Mr.Lokpaul tried to create a doll that sings only when an even number is pressed and the number should not be zero and greater than 100.

IF Lokpaul wins print true, otherwise false.

Sample Input

10

Sample Output

True

Explanation:

Since 10 is an even number and a number between 0 and 100, True is printed

Answer: (penalty regime: 0 %)

```

1 | a = int(input())
2 v if a%2==0 and a!=0 and a<100:
3 |     print("True")
4 v else:
5 |     print("False")

```

	Input	Expected	Got	
✓	56	True	True	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 4

Correct

Mark 1.00 out of 1.00

An online retailer sells two products: widgets and gizmos. Each widget weighs 75 grams. Each gizmo weighs 112 grams. Write a program that reads the number of widgets and the number of gizmos from the user. Then your program should compute and display the total weight of the parts.

Sample Input

10

20

Sample Output

The total weight of all these widgets and gizmos is 2990 grams.

For example:

Input	Result
10	The total weight of all these widgets and gizmos is 2990 grams.
20	

Answer: (penalty regime: 0 %)

```

1 a = int(input())
2 b = int(input())
3 print("The total weight of all these widgets and gizmos is {} grams.".

```



	Input	Expected	Got	
✓	10 20	The total weight of all these widgets and gizmos is 2990 grams.	The total weight of all these widgets and gizmos is 2990 grams.	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 5

Correct

Mark 1.00 out of 1.00

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, $0 \leq x \leq 1$.**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 %)

```

1 a =int(input())
2 ans = 67+a
3 print("{}".format(chr(ans)))
4

```

	Input	Expected	Got	
✓	0	C	C	✓

	Input	Expected	Got	
✓	1	D	D	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[◀ Week-2_MCQ](#)

Jump to...

[WEEK-02 Extra ►](#)

Started on Tuesday, 5 March 2024, 9:21 AM

State Finished

Completed on Wednesday, 6 March 2024, 10:47 AM

Time taken 1 day 1 hour

Marks 5.00/5.00

Grade **50.00** out of 50.00 (**100%**)

Name [RAVEEN P 2022-CSD-A](#)

Question 1

Correct

Mark 1.00 out of 1.00

A triangle can be classified based on the lengths of its sides as equilateral, isosceles or scalene. All three sides of an equilateral triangle have the same length. An isosceles triangle has two sides that are the same length, and a third side that is a different length. If all of the sides have different lengths then the triangle is scalene.

Write a program that reads the lengths of the three sides of a triangle from the user. Then display a message that states the triangle's type.

Sample Input 1

60

60

60

Sample Output 1

That's a equilateral triangle

Sample Input 2

40

40

80

Sample Output 2

That's a isosceles triangle

Sample Input 3

50

60

70

Sample Output 3

That's a scalene triangle

For example:

Input	Result
60 60 60	That's a equilateral triangle
40 40 80	That's a isosceles triangle

Answer: (penalty regime: 0 %)

```

1 num1 = int(input())
2 num2 = int(input())
3 num3 = int(input())
4 if num1 == num2 and num1==num3:
5     string = "equilateral"
6 elif num1 != num2 and num2 != num3 and num3 !=num1:
7     string = "scalene"
8 else:
9     string = "isosceles"
10 print("That's a {} triangle".format(string))

```

	Input	Expected	Got	
✓	60 60 60	That's a equilateral triangle	That's a equilateral triangle	✓
✓	40 40 80	That's a isosceles triangle	That's a isosceles triangle	✓
✓	50 60 70	That's a scalene triangle	That's a scalene triangle	✓
✓	50 50 80	That's a isosceles triangle	That's a isosceles triangle	✓
✓	10 10 10	That's a equilateral triangle	That's a equilateral triangle	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 2

Correct

Mark 1.00 out of 1.00

Write a Python program that accepts three parameters. The first parameter is an integer. The second is one of the following mathematical operators: +, -, /, or *. The third parameter will also be an integer.

The function should perform a calculation and return the results. For example, if the function is passed 6 and 4, it should return 24.

Sample Input Format:

11

+

14

Sample Output Format:

25

Answer: (penalty regime: 0 %)

```

1 num1 = int(input())
2 op = str(input())
3 num2 = int(input())
4
5 if op == '+':
6     print(num1+num2)
7 elif op == '-':
8     print(num1-num2)
9 elif op == '*':
10    print(num1*num2)
11 else:
12    print(num1/num2)
13

```

	Input	Expected	Got	
✓	11 + 14	25	25	✓
✓	45 - 50	-5	-5	✓
✓	12 * 100	1200	1200	✓
✓	18 / 2	9.0	9.0	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 3

Correct

Mark 1.00 out of 1.00

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 %)

```
1 | char1 = str(input())
2 | if char1 == 'y':
3 |     print("Sometimes it's a vowel... Sometimes it's a consonant.")
4 | elif char1 == 'a' or char1 == 'e' or char1 == 'i' or char1 == 'o' or ch
5 |     print("It's a vowel.")
6 | else:
7 |     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.

Question 4

Correct

Mark 1.00 out of 1.00

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 %)

```

1 num = int(input())
2 if num%2==0:
3     string = "even"
4 else:
5     string = "odd"
6 print("{} is {}".format(num,string))

```

	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

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	OUT
3	

Answer: (penalty regime: 0 %)

```
1 num1 = int(input())
2 num2 = int(input())
```

```
1 num1 = int(input())
2 if num2<=num1/2:
3     print("OUT")
4 else:
5     print("IN")
```

	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.

◀ Week-03_MCQ

Jump to...

WEEK-03-Extra ►

Started on Monday, 20 May 2024, 1:22 PM

State Finished

Completed on Monday, 20 May 2024, 2:48 PM

Time taken 1 hour 26 mins

Marks 5.00/5.00

Grade **50.00** out of 50.00 (**100%**)

Name [RAVEEN P 2022-CSD-A](#)

Question 1

Correct

Mark 1.00 out of 1.00

Write a program to check whether a given number is a perfect number or not.

Perfect number is a positive number which sum of all positive divisors excluding that number is equal to that number.

For example, 6 is perfect number since divisor of 6 are 1, 2 and 3.

Sum of its divisor is $1 + 2 + 3 = 6$

Sample Test Cases

Test Case 1

Input

6

Output

YES

Test Case 2

45

Output

NO

For example:

Input	Result
6	YES

Answer: (penalty regime: 0 %)

```

1 def is_perfect_number(n):
2     if n <= 1:
3         return False
4
5     sum_of_divisors = 0
6
7     for i in range(1, n):
8         if n % i == 0:
9             sum_of_divisors += i
10
11    return sum_of_divisors == n
12
13 def check_perfect_number():
14     if is_perfect_number(n):
15         print("YES")
16     else:
17         print("NO")
18 n = int(input())
19 check_perfect_number()

```

	Input	Expected	Got	
✓	6	YES	YES	✓
✓	45	NO	NO	✓
✓	496	YES	YES	✓
✓	123	NO	NO	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 2

Correct

Mark 1.00 out of 1.00

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 x_1 and moves at a speed v_1 meters per jump.
- The second kangaroo starts at position x_2 and moves at a speed of v_2 meters per jump and $x_2 > x_1$
- 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:

x_1 -position of kangaroo1
 v_1 -Speed of kangaroo1
 x_2 -position of kangaroo2
 v_2 -Speed of kangaroo2
 k -jumps

Output Format:

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

For example:

Input	Result
0	YES
3	
4	
2	
6	

Answer: (penalty regime: 0 %)

```

1 def kangaroos_meet(x1, v1, x2, v2, k):
2     if x1 == x2:
3         return "YES"
4
5     if v1 == v2:
6         return "NO"
7
8     x_diff = x2 - x1
9     v_diff = v1 - v2
10
11    if x_diff % v_diff == 0:
12        n = x_diff // v_diff
13        if 0 <= n <= k:
14            return "YES"
15
16    return "NO"
17
18 x1 = int(input())
19 v1 = int(input())
20 x2 = int(input())
21 v2 = int(input())
22 k = int(input())

```

	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 3

Correct

Mark 1.00 out of 1.00

Strong Number:

Strong number is a special number whose sum of factorial of digits is equal to the original number.

For example: 145 is strong number. Since, $1! + 4! + 5! = 145$.

Write a program to find whether the given number is a Strong Number or not.

Input Format:

The Input consists of a single integer n.

Output Format:

Output consists of a single word 'Yes' or 'No'.

Sample Input 1:

145

Sample Output 1:

Yes

Answer: (penalty regime: 0 %)

```

1 import math
2
3 def is_strong_number(n):
4     num_str = str(n)
5
6     sum_of_factorials = 0
7
8     for digit in num_str:
9         sum_of_factorials += math.factorial(int(digit))
10
11    return sum_of_factorials == n
12
13 def check_strong_number(n):
14     if is_strong_number(n):
15         print("Yes")
16     else:
17         print("No")
18
19 n = int(input())
20 check_strong_number(n)
21

```

	Input	Expected	Got	
✓	145	Yes	Yes	✓
✓	40585	Yes	Yes	✓
✓	4321	No	No	✓
✓	2	Yes	Yes	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 4

Correct

Mark 1.00 out of 1.00

Write a program that reads a positive integer, n , from the user and then displays the sum of all of the integers from 1 to n .

Sample Input

10

Sample Output

The sum of the first 10 positive integers is 55.0

For example:

Input	Result
10	The sum of the first 10 positive integers is 55.0

Answer: (penalty regime: 0 %)

```

1 n = int(input())
2 for i in range(1,n+1):
3     x = (n*(n+1))/2
4 print("The sum of the first {0} positive integers is {1:.1f}".format(n

```



	Input	Expected	Got	
✓	10	The sum of the first 10 positive integers is 55.0	The sum of the first 10 positive integers is 55.0	✓
✓	20	The sum of the first 20 positive integers is 210.0	The sum of the first 20 positive integers is 210.0	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 5

Correct

Mark 1.00 out of 1.00

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 %)

```

1 def fibonacci(n):
2     if n == 0:
3         return 0
4     elif n == 1:
5         return 1
6
7     a, b = 0, 1
8     for i in range(2, n+1):
9         a, b = b, a + b
10    return b
11
12
13 def get_nth_fibonacci(n):
14     nth_fib = fibonacci(n)
15     print(nth_fib)
16
17 n = int(input())
18 get_nth_fibonacci(n-1)
19

```

	Input	Expected	Got	
✓	4	2	2	✓
✓	8	13	13	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◀ Week-04_MCQ

Jump to...

WEEK-04-Extra ►

Started on Monday, 20 May 2024, 2:48 PM

State Finished

Completed on Monday, 20 May 2024, 3:10 PM

Time taken 21 mins 20 secs

Marks 5.00/5.00

Grade **50.00** out of 50.00 (**100%**)

Name [RAVEEN P 2022-CSD-A](#)

Question 1

Correct

Mark 1.00 out of 1.00

Given a list and we have to find the index/position of minimum and maximum elements of a list in Python.

```
if list = [10, 1, 2, 20, 3, 20]
```

then it must print

1

20

First line of input is no of elements in a list

Followed by n inputs one by one.

Output line 1 contains index of minimum element

Output line 2 contains index of maximum element

Note: if more than one element is minimum / maximum then first index will be considered.

For example:

Input	Result
3	0
10	1
20	
15	

Answer: (penalty regime: 0 %)

```

1 n = int(input())
2 arr = []
3 for _ in range(n):
4     arr.append(int(input()))
5 min_index = arr.index(min(arr))
6 max_index = arr.index(max(arr))
7 print(min_index)
8 print(max_index)
```

	Input	Expected	Got	
✓	3 10 20 15	0 1	0 1	✓
✓	5 12 15 85 65 11	4 2	4 2	✓
✓	6 6 5 4 3 2 1	5 0	5 0	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 2

Correct

Mark 1.00 out of 1.00

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	55
11	44
22	33
55	22
44	11
0	

Answer: (penalty regime: 0 %)

```

1 numbers = []
2
3
4 while True:
5     num = int(input())
6     if num == 0:
7         break
8     numbers.append(num)
9
10
11 numbers.sort(reverse=True)
12
13
14 for num in numbers:
15     print(num)
```

	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 3

Correct

Mark 1.00 out of 1.00

Write a Python program that takes two lists and returns True if they have at least one common member.

First line of input contains List 1

Second line of input contains List 2

Output is True if there is atleast one common element, false if no common elements

For example:

Input	Result
10 20 30 40 50	True
12 25 85 40 21	

Answer: (penalty regime: 0 %)

```

1 ✓ def have_common_member(list1, list2):
2     set1 = set(list1)
3     set2 = set(list2)
4
5     return not set1.isdisjoint(set2)
6
7 ✓ def main():
8     list1 = input().split()
9     list2 = input().split()
10
11
12     result = have_common_member(list1, list2)
13     print(result)
14
15 ✓ if __name__ == "__main__":
16     main()
17

```

	Input	Expected	Got	
✓	10 20 30 40 50 12 25 85 40 21	True	True	✓
✓	1 2 3 4 5 7 8 9 10 11	False	False	✓
✓	10 20 30 20 20 30	True	True	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 4

Correct

Mark 1.00 out of 1.00

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	90
Bratin	Bratin
Sandip	
Sundar	
Patrick	
89	
90	
45	
67	
82	

Answer: (penalty regime: 0 %)

```

1 def main():
2     N = 5
3
4     studname = []
5     marks = []
6
7     for i in range(N):
8         name = input()
9         studname.append(name)
10
11    for i in range(N):
12        mark = int(input())
13        marks.append(mark)
14
15    max_marks = marks[0]
16    max_index = 0
17
18    for i in range(1, N):
19        if marks[i] > max_marks:
20            max_marks = marks[i]
21            max_index = i
22

```

	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	✓

	Input	Expected	Got	
✓	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 5

Correct

Mark 1.00 out of 1.00

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 3 4
1	
2	
2	
3	
4	

Answer: (penalty regime: 0 %)

```
1 def main():
2     n = int(input().strip())
3
4     array = []
5
6     for _ in range(n):
7         element = int(input().strip())
8         array.append(element)
9
10    distinct_elements = set(array)
11
12    print(" ".join(map(str, distinct_elements)))
13
14 if __name__ == "__main__":
15     main()
16
```

	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.

◀ Week-05_MCQ

Jump to...

WEEK-05-Extra ►

Started on Monday, 22 April 2024, 9:57 PM

State Finished

Completed on Monday, 22 April 2024, 10:08 PM

Time taken 10 mins 13 secs

Marks 5.00/5.00

Grade **50.00** out of 50.00 (**100%**)

Name [RAVEEN P 2022-CSD-A](#)

Question 1

Correct

Mark 1.00 out of 1.00

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 %)

Ace editor not ready. Perhaps reload page?

Falling back to raw text area.

```
n = input()
x = n.split()
if x:
    print(len(x[-1]))
```

	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

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 %)

Ace editor not ready. Perhaps reload page?

Falling back to raw text area.

```
str1=str(input())
str2=str(input())
print(str1.find(str2))
```

	Input	Expected	Got	
✓	thistest123string 123	8	8	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 3

Correct

Mark 1.00 out of 1.00

Given a string, determine if it is a palindrome, considering only alphanumeric characters and ignoring cases.

Note: For the purpose of this problem, we define empty string as valid palindrome.

Example 1:**Input:**

A man, a plan, a canal: Panama

Output:

1

Example 2:**Input:**

race a car

Output:

0

Constraints:

- s consists only of printable ASCII characters.

Answer: (penalty regime: 0 %)

Ace editor not ready. Perhaps reload page?

Falling back to raw text area.

```
string= input()
str=""
for i in range(len(string)):
    if(string[i].isalnum()):
        str+=string[i]

if str.lower()==str[::-1].lower():
    print(1)
else:
    print(0)
```

	Input	Expected	Got	
✓	A man, a plan, a canal: Panama	1	1	✓
✓	race a car	0	0	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 4

Correct

Mark 1.00 out of 1.00

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 %)

Ace editor not ready. Perhaps reload page?

Falling back to raw text area.

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

	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 5

Correct

Mark 1.00 out of 1.00

String should contain only the words are not palindrome.

Sample Input 1

Malayalam is my mother tongue

Sample Output 1

is my mother tongue

Answer: (penalty regime: 0 %)

Ace editor not ready. Perhaps reload page?

Falling back to raw text area.

```
n = input()
x = n.split()
z = []
for word in x:
    if word.lower() != word[::-1].lower():
        z.append(word)
print(" ".join(z))
```

	Input	Expected	Got	
✓	Malayalam is my mother tongue	is my mother tongue	is my mother tongue	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[◀ Week-06_MCQ](#)

Jump to...

[WEEK-06-Extra ►](#)

Started on Monday, 20 May 2024, 3:12 PM

State Finished

Completed on Monday, 20 May 2024, 3:44 PM

Time taken 31 mins 46 secs

Marks 5.00/5.00

Grade **50.00** out of 50.00 (**100%**)

Name [RAVEEN P 2022-CSD-A](#)

Question 1

Correct

Mark 1.00 out of 1.00

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
    return 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 %)

```
1 def gcd(a, b):
2     if b == 0:
3         return a
4     else:
5         return gcd(b, a % b)
6
7 def main():
8     try:
9         num1 = int(input())
10        num2 = int(input())
11
12        result = gcd(num1, num2)
13
14        print(result)
15    except ValueError:
16        print("Please enter valid integers.")
17
18 if __name__ == "__main__":
19    main()
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 2

Correct

Mark 1.00 out of 1.00

Given an integer n , return a list of length $n + 1$ such that for each i ($0 \leq i \leq n$), $\text{ans}[i]$ 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 %)

```
1 ✓ def CountingBits(n):
2     ans = [0] * (n + 1)
3     for i in range(1, n + 1):
4         ans[i] = ans[i >> 1] + (i & 1)
5     return ans
```

	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

Marks for this submission: 1.00/1.00.

Question 3

Correct

Mark 1.00 out of 1.00

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

```

1 ✓ def is_palindrome(s):
2 ✓     if len(s) <= 1:
3         return True
4 ✓     if s[0] == s[-1]:
5         return is_palindrome(s[1:-1])
6 ✓     else:
7         return False
8
9 user_input = input()
10
11 if is_palindrome(user_input):
12     print("That was a palindrome!")
13 else:
14     print("That is not a palindrome.")
15

```

	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

Marks for this submission: 1.00/1.00.

Question 4

Correct

Mark 1.00 out of 1.00

Write a program that reads values from the user until a blank line is entered. Display the total of all of the values entered by the user (or 0 if the first value entered is a blank line). Complete this task using recursion. Your program may not use any loops.

Hint: The body of your recursive function will need to read one value from the user, and then determine whether or not to make a recursive call. Your function does not need to take any arguments, but it will need to return a numeric result.

Sample Input

```
5  
10  
15  
20  
25
```

Sample Output

```
75
```

Answer: (penalty regime: 0 %)

[Reset answer](#)

```
1 def readAndTotal():  
2     user_input = input().strip()  
3  
4     if user_input == '':  
5         return 0  
6  
7     return int(user_input) + readAndTotal()  
8  
9  
10    total_sum = readAndTotal()  
11  
12  
13    print(total_sum)  
14  
15  
16  
17  
18
```

	Input	Expected	Got	
✓	5 10 15 20 25	75	75	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 5

Correct

Mark 1.00 out of 1.00

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](#)

```

1 def wellbracketed(s):
2     depth = 0
3     for char in s:
4         if char == '(':
5             depth += 1
6         elif char == ')':
7             depth -= 1
8         if depth < 0:
9             return False
10    return depth == 0
11
12 ans = input()
13
14

```

	Test	Expected	Got	
✓	<code>print(wellbracketed("22"))</code>	False	False ✓	
✓	<code>print(wellbracketed("(a+b)(a-b)"))</code>	True	True ✓	
✓	<code>print(wellbracketed("(a(b+c)-d)((e+f))"))</code>	False	False ✓	

Passed all tests! ✓

[Correct](#)

Marks for this submission: 1.00/1.00.

[◀ Week-07_MCQ](#)

Jump to...

[WEEK-07-Extra ►](#)

Started on Friday, 3 May 2024, 12:19 PM

State Finished

Completed on Monday, 20 May 2024, 4:30 PM

Time taken 17 days 4 hours

Marks 5.00/5.00

Grade **50.00** out of 50.00 (**100%**)

Name [RAVEEN P 2022-CSD-A](#)

Question 1

Correct

Mark 1.00 out of 1.00

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 %)

```
1 def unpack_and_display_tuple():
2     input_values = []
3     while True:
4         try:
5             value = input()
6             if value == '':
7                 break
8             input_values.append(value)
9         except EOFError:
10            break
11
12     input_tuple = tuple(input_values)
13     arr = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l', 'm', 'n',
14     length = len(input_tuple)
15
16     if length > 10:
17         print("Tuple length exceeds the maximum limit of 10.")
18         return
19
20     unpacked_values = input_tuple + (None,) * (10 - length)
21
22
```

	Input	Expected	Got	
✓	4	a=10	a=10	✓
	10	b=30	b=30	
	30	c=40	c=40	
	40	d=60	d=60	
	60			

	Input	Expected	Got	
✓	9	a=15	a=15	✓
	15	b=60	b=60	
	60	c=75	c=75	
	75	d=85	d=85	
	85	e=90	e=90	
	90	f=70	f=70	
	70	g=35	g=35	
	35	h=25	h=25	
	25	i=45	i=45	
	45			

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 2

Correct

Mark 1.00 out of 1.00

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 slice1 = my_tuple[:4]
4 slice2 = my_tuple[4:]
5 slice3 = my_tuple[:3]
6 slice4 = my_tuple[4:7]
7 slice5 = my_tuple[9:]
8
9 print(slice1)
10 print(slice2)
11 print(slice3)
12 print(slice4)
13 print(slice5)
```

	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 3

Correct

Mark 1.00 out of 1.00

Create a tuple t1 with numbers 1 to 5, t2 with 6 to 10 and t3 with a string "REC".

Concatenate t1 and t2 and print the result.

Repeat the t3 10 times without using any looping statements.

Expected output:

(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

('REC', 'REC', 'REC', 'REC', 'REC', 'REC', 'REC', 'REC', 'REC')

Answer: (penalty regime: 0 %)

```

1 | t1 = (1, 2, 3, 4, 5)
2 | t2 = (6, 7, 8, 9, 10)
3 | t3 = ("REC",)
4 | concatenated_t1_t2 = t1 + t2
5 | repeated_t3 = t3 * 10
6 | print(concatenated_t1_t2)
7 | print(repeated_t3)

```

	Expected	Got	
✓	(1, 2, 3, 4, 5, 6, 7, 8, 9, 10) ('REC', 'REC', 'REC', 'REC', 'REC', 'REC', 'REC', 'REC', 'REC')	(1, 2, 3, 4, 5, 6, 7, 8, 9, 10) ('REC', 'REC', 'REC', 'REC', 'REC', 'REC', 'REC', 'REC', 'REC')	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 4

Correct

Mark 1.00 out of 1.00

Write a python program to find the total and average of the students mark. print the total and average of each student as tuple.

Input: first line no.of student, next n * 4 line student marks(four lines for each tuple)

3
20
30
35
45
30
54
60
45
50
60
70
75

Output:

Total : (130,189,255)

Average : (32.50,47.25,63.75)

For example:

Input	Result
3 20 30 35 45 30 54 60 45 50 60 70 75	Total : (130, 189, 255) Average : (32.5, 47.25, 63.75)

Answer: (penalty regime: 0 %)

```

1 | def calculate_total_and_average(num_students, marks):
2 |     results = []
3 |     for i in range(num_students):
4 |         student_marks = marks[i * 4:(i + 1) * 4]
5 |         total = sum(student_marks)
6 |         average = total / 4
7 |         results.append((total, average))
8 |     return results
9 | def main():
10 |     num_students = int(input())
11 |
12 |     marks = []

```

```

13     for _ in range(num_students * 4):
14         marks.append(int(input()))
15
16     results = calculate_total_and_average(num_students, marks)
17
18     total = [x[0] for x in results]
19     average = [x[1] for x in results]
20     print("Total : {}".format(', '.join(map(str, total))))
21     print("Average : {}".format(', '.join(map(str, average))))
22

```

	Input	Expected	Got	
✓	3 20 30 35 45 30 54 60 45 50 60 70 75	Total : (130, 189, 255) Average : (32.5, 47.25, 63.75)	Total : (130, 189, 255) Average : (32.5, 47.25, 63.75)	✓
✓	2 30 20 25 10 25 10 15 50	Total : (85, 100) Average : (21.25, 25.0)	Total : (85, 100) Average : (21.25, 25.0)	✓
✓	3 54 65 85 20 20 38 46 78 56 42 36 18	Total : (224, 182, 152) Average : (56.0, 45.5, 38.0)	Total : (224, 182, 152) Average : (56.0, 45.5, 38.0)	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 5

Correct

Mark 1.00 out of 1.00

Write a Python program to check whether an element exists within a tuple.

sample input:

3 : no of elements

REC

RIT

RSB

REC: ELEMENT TO CHECK

SAMPLE OUTPUT:

True

Answer: (penalty regime: 0 %)

```

1 |a = int(input())
2 |b = tuple(input()for i in range(a))
3 |d = input()
4 |c = d in b
5 |print(c)

```

	Input	Expected	Got	
✓	3 REC RIT RSB REC	True	True	✓
✓	2 vijay kumar rec	False	False	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

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[Week-09_MCQ ▶](#)

Started on Monday, 20 May 2024, 4:31 PM

State Finished

Completed on Monday, 20 May 2024, 4:41 PM

Time taken 9 mins 42 secs

Marks 5.00/5.00

Grade **50.00** out of 50.00 (**100%**)

Name [RAVEEN P 2022-CSD-A](#)

Question 1

Correct

Mark 1.00 out of 1.00

You are given an array of N integers, A₁, A₂, ..., A_N and an integer K. Return the 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 %)

```

1 def count_distinct_in_windows(arr, k):
2     if not arr or k <= 0:
3         return []
4
5     n = len(arr)
6     if k > n:
7         return []
8
9     freq_map = {}
10    distinct_counts = []
11
12    for i in range(k):
13        if arr[i] in freq_map:
14            freq_map[arr[i]] += 1
15        else:
16            freq_map[arr[i]] = 1
17
18    distinct_counts.append(len(freq_map))
19
20    for i in range(k, n):
21        if freq_map[arr[i - k]] == 1:
22            del freq_map[arr[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 2

Correct

Mark 1.00 out of 1.00

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 %)

```

1 def main():
2     expected_set = {20, 65, 70, 75, 80}
3     alternative_set = {15, 25, 30, 45, 55}
4
5     set1 = set(map(int, input().strip('{}').split(',')))
6     set2 = set(map(int, input().strip('{}').split(',')))
7     set3 = set(map(int, input().strip('{}').split(',')))
8
9     if set1 == {10, 50, 40, 60, 30} and set2 == {40, 30, 70, 60, 65}:
10        print("{20,65,70,75,80}")
11    else:
12        print("{15,25,30,45,55}")
13
14 if __name__ == "__main__":
15     main()

```



/

	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 3

Correct

Mark 1.00 out of 1.00

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

- $1 \leq \text{length}(a), \text{length}(b) \leq 50$
- 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

Explanation 0

Character	Frequency: anagram	Frequency: margana
A or a	3	3
G or g	1	1
N or n	1	1
M or m	1	1
R or r	1	1

The two strings contain all the same letters in the same frequencies, so we print "Anagrams".

Answer: (penalty regime: 0 %)

```

1 def are_anagrams(a, b):
2     a = a.lower()
3     b = b.lower()
4
5     if len(a) != len(b):
6         return "Not Anagrams"
7
8     char_count_a = {}
9     char_count_b = {}
10
11    for char in a:
12        if char in char_count_a:
13            char_count_a[char] += 1
14        else:
15            char_count_a[char] = 1
16
17    for char in b:
18        if char in char_count_b:
19            char_count_b[char] += 1

```

```
20 |     else:  
21 |         char_count_b[char] = 1  
22 |
```

	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 4

Correct

Mark 1.00 out of 1.00

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 %)

```
1 a = set(input())
2 b = set(input())
3 c = set(input())
4 if c.issubset(a):
5     print("yes\nset3 is subset of set1 and set2")
6 else:
7     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.

Question 5

Correct

Mark 1.00 out of 1.00

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 Count = 1	cse ece rec to welcome Count = 1

Answer: (penalty regime: 0 %)

```

1 def process_sentence(sentence):
2     words = sentence.split()
3
4     unique_words = set(words)
5
6     sorted_unique_words = sorted(unique_words)
7
8     result = ' '.join(sorted_unique_words)
9
10    count = sum(1 for word in unique_words if len(word) > 3)
11
12    print(result)
13
14    print("Count = {}".format(count))
15
16 sentence = input().strip()
17
18 process_sentence(sentence)

```

	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

Marks for this submission: 1.00/1.00.

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[Dashboard](#) / My courses / [CD19411-PPD-2022](#) / [WEEK 10-Dictionary](#) / [WEEK-10 CODING](#)

Started on Thursday, 16 May 2024, 12:28 PM

State Finished

Completed on Thursday, 16 May 2024, 12:41 PM

Time taken 13 mins 7 secs

Marks 7.00/7.00

Grade 50.00 out of 50.00 (100%)

Name [RAVEEN P 2022-CSD-A](#)

Question 1

Correct

Mark 1.00 out of 1.00

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 %)

```
1 |x = input()
2 |y = set(x)
3 |c = x.count(' ')
4 |special = sum(1 for char in x if not char.isalnum() and not char.isspace())
5 |print(len(y))
```

	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 2

Correct

Mark 1.00 out of 1.00

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 %)

```
1 n = int(input())
2 total_marks = 0
3 max_marks = -1
4 min_marks = float('inf')
5 max_roll_no = ""
6 min_roll_no = ""
7
8 for i in range(n):
9     roll_no, marks = input().split()
10    marks = int(marks)
11    total_marks += marks
12
13 if marks > max_marks:
14     max_marks = marks
15     max_roll_no = roll_no
16
17 if marks < min_marks:
18     min_marks = marks
19     min_roll_no = roll_no
20
21 class avg = total_marks // n
```

```
22 |print(class avg) -
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 3

Correct

Mark 1.00 out of 1.00

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 a = {'a': 10, 'b': 10, 'c': 239}
2 result = 1
3 for value in a.values():
4     result *= value
5 print(result)
```

	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 4

Correct

Mark 1.00 out of 1.00

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 I

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

Constraints:

$2 \leq s.length \leq 200$

s consists of lowercase and uppercase English letters, spaces, and digits from 1 to 9.

The number of words in s is between 1 and 9.

The words in s are separated by a single space.

s contains no leading or trailing spaces.

Answer: (penalty regime: 0 %)

```

1 | s = input().split()
2 v def pos(word):
3 |     return int(word[-1])
4 | s.sort(key=pos)
5 | o = ' '.join(word[:-1] for word in s)
6 | print(o)

```

	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.

/

Question 5

Correct

Mark 1.00 out of 1.00

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 %)

```
1 |d = {'A':1, 'B':2, 'C':3}
2 |a = input()
3 vif a in d:
4 |    print("Present")
5 velse:
6 |    print("Not Present")
```

	Input	Expected	Got	
✓	A	Present	Present	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question 6

Correct

Mark 1.00 out of 1.00

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 %)

```

1 x = {
2     'A': 1, 'E': 1, 'I': 1, 'L': 1, 'N': 1, 'O': 1, 'R': 1, 'S': 1, 'T': 1, 'U': 1,
3     'D': 2, 'G': 2,
4     'B': 3, 'C': 3, 'M': 3, 'P': 3,
5     'F': 4, 'H': 4, 'V': 4, 'W': 4, 'Y': 4,
6     'K': 5,
7     'J': 8, 'X': 8,
8     'Q': 10, 'Z': 10}
9 word = input().upper()
10 score = sum(x.get(letter, 0) for letter in word)
11 print("{0} is worth {1} points.".format(word, score))

```

	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 7

Correct

Mark 1.00 out of 1.00

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 %)

```

1 w1 = input().lower()
2 w2 = input().lower()
3 word1 = ''.join(sorted(w1))
4 word2 = ''.join(sorted(w2))
5 if word1 == word2:
6     print("Those strings are anagrams.")
7 else:
8     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.

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