

CS23336-Introduction to Python Programming

Started on

Wednesday, 7 August 2024, 1:30 PM

State

Finished

Completed on

Wednesday, 7 August 2024, 2:18 PM

Time taken

48 mins 19 secs

Marks


10.00/10.00

Grade

100.00 out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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 %)

<pre>1 x=int(input()) 2 y=(x-500)/130 3 y=abs(y) 4 z=y+10 5 print("weekdays {:.2f}".format(z),"\nweekend {:.2f}".format(y),sep='')</pre>	
--	--



Feedback


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 2

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Write a program that returns the second last digit of the given number. Second last digit is being referred 10the digit in the tens place in the given number.

For example, if the given number is 197, the second last digit is 9.

Note1 - The second last digit should be returned as a positive number. i.e. if the given number is -197, the second last digit is 9.

Note2 - If the given number is a single digit number, then the second last digit does not exist. In such cases, the program should return -1. i.e. if the given number is 5, the second last digit should be returned as -1

For example:

Input Result

197	9
-197	9
5	-1

Answer:(penalty regime: 0 %)

```
1 a=input()
2 if len(a)==1:
3     print("-1")
4 elif len(a)>1:
5     print(a[-2])
```

Feedback

Input Expected Got


197	9	9
-197	9	9
5	-1	-1

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 3

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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 %)

<pre>1 a=int(input()) 2 b=int(input()) 3 sum1=a*.10 4 sum2=b*.25 5 tot=sum1+sum2 6 print(f"Your total refund will be \${tot:.2f}.")</pre>	
---	--

Feedback


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 4

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

In department 54% are boys and 46% are girls and 8% are hostel (boys/girls). write a python code to print total no of boys, girls and hostel students in the specific format using modulo operator.

input: 1500

output: Total Students : 1500, Boys : 810, Girls : 690, Hostel : 120

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 b=int((54/100)*a)
3 c=int((46/100)*a)
4 d=int((8/100)*a)
5 print("Total Students : ",a," Boys : ",b," Girls : ",c," Hostel : ",d,sep='')
```


Feedback

Input	Expected	Got
1500	Total Students : 1500, Boys : 810, Girls : 690, Hostel : 120	Total Students : 1500, Boys : 810, Girls : 690, Hostel : 120

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 5

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

You went on a tour to Ooty with your friends. As a part of the tour, you went boating with them. For the boat to remain stable, the number of people on one boat is restricted based on the weight of the people. You find that the boatman who is sailing your boat is so much greedy of money. For earning more, he takes too many people to travel in the boat at a time. So you want to check how many people can travel in the boat at a time so that the boat will not drown. Calculate the weight by considering the number of adults and number of children. Assume that an adult weighs 75 kg and children weigh 30 kg each. If the weight is normal, display Boat is stable, else display Boat will drown.

INPUT & OUTPUT FORMAT:

- Input consists of 3 integers.
- First input corresponds to the weight that the boat can handle.
- Second input corresponds to the number of adults.
- Third input corresponds to the number of children.

Answer:(penalty regime: 0 %)


```
1 a=int(input())
2 b=int(input())
3 c=int(input())
4 x=(b*75)+(c*30)
5 if x<=a:
6     print("Boat is stable")
7 else:
8     print("Boat will drow")
```

Feedback

Input	Expected	Got
340 2 3	Boat is stable	Boat is stable
600 7 4	Boat will drow	Boat will drow

Passed all tests!
Correct
Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Ramesh’s basic salary is input through the keyboard. His dearness allowance is 40% of his basic salary, and his house rent

allowance is 20% of his basic salary. Write a program to calculate his gross salary.

Sample Input:

10000

Sample Output:

16000

For example:

Input Result

10000 16000

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 basic=int(a*(40/100))
3 rent=int(a*(20/100))
4 print(basic+rent+a)
```

Feedback

Input Expected Got


10000	16000	16000
20000	32000	32000
28000	44800	44800
5000	8000	8000

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 7

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

In a Lab 36% are Dell and 34% Lennovo and 28% are Acer and 2% are Samsung. write a python code to print total systems and brand wise count in the specific format using sep operator.

input: 150

output: Total System:150

Dell:54

Lenovo:51

Acer:42

Samsung:3

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 dell=int(a*(36/100))
3 lenn=int(a*(34/100))
4 acer=int(a*(28/100))
5 sam=int(a*(2/100))
6 print("Total System:",a,sep='')
7 print("Dell:",dell,sep='')
8 print("Lenovo:",lenn,sep='')
9 print("Acer:",acer,sep='')
10 print("Samsung:",sam,sep='')
```

Feedback

Input	Expected	Got
150	Total System:150 Dell:54 Lenovo:51 Acer:42 Samsung:3	Total System:150 Dell:54 Lenovo:51 Acer:42 Samsung:3

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 8

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

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'>

For example:

Input	Result
10	10,<class 'int'>

10.9 10.9,<class 'float'>

Answer:(penalty regime: 0 %)

```
1 a=input()
2 b=int(a)
3 print(a,type(b),sep=',')
4 x=input()
5 y=float(x)
6 print(round(y,1),type(y),sep=',')
```

Feedback


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

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 9

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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
45500	
500	30.43 is the gain percent.
60000	

Answer:(penalty regime: 0 %)

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

Feedback


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

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 10

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

In a Logistic the Parcels to be delivered in 4 locations (1st locaion 20%, 2nd location 40%, 3rd location 30% and 4th

location 10%). write a python code to find the total no. of parcels after the delivery in 2 locations . use a format() to print the no of parcels delivered in in each location

Input:

250

output:

Total Parcels is 250

1st Location 50 parcels

2nd Location 100 parcels

3rd Location 75 parcels

4th Location 25 parcels

Answer:(penalty regime: 0 %)

```
1 t=int(input())
2 a=int(t*(20/100))
3 b=int(t*(40/100))
4 c=int(t*(30/100))
5 d=int(t*(10/100))
6 print("Total Parcels is",t)
7 print("1st Location",a,"parcels")
8 print("2nd Location",b,"parcels")
9 print("3rd Location",c,"parcels")
10 print("4th Location",d,"parcels")
```

Feedback

Input	Expected	Got
250	Total Parcels is 250 1st Location 50 parcels 2nd Location 100 parcels 3rd Location 75 parcels 4th Location 25 parcels	Total Parcels is 250 1st Location 50 parcels 2nd Location 100 parcels 3rd Location 75 parcels 4th Location 25 parcels

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Finish review

[Skip Quiz navigation](#)


Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#) [Question 6 This page](#) [Question 7 This page](#) [Question 8 This page](#) [Question 9 This page](#) [Question 10 This page](#)
[Show one page at a time](#) Finish review

CS23336-Introduction to Python Programming

Started on	Wednesday, 7 August 2024, 2:34 PM
State	Finished
Completed on	Wednesday, 7 August 2024, 3:49 PM
Time taken	1 hour 14 mins
Marks	10.00/10.00
Grade	100.00 out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

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

For example:

Input Result

32 False
43

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 b=int(input())
3 if((a%3 or b%2)==0):
4     print("True")
5 else:
6     print("False")
```

Feedback

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

Question text

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

For example:

Input Result

0	C
---	---

Answer:(penalty regime: 0 %)

<pre>1 a=int(input()) 2 if(a==0): 3 print("C") 4 elif(a==1): 5 print("D")</pre>	
---	--



Feedback


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

Question text

Write a program that returns the last digit of the given number. Last digit is being referred to the least significant digit i.e. the digit in the ones (units) place in the given number.

The last digit should be returned as a positive number.

For example,

if the given number is 197, the last digit is 7

if the given number is -197, the last digit is 7

For example:

Input Result

197	7
-197	7

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 a=abs(a)
3 print(a%10)
```

Feedback


Input Expected Got

197	7	7
-197	7	7

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 4

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Complete the program to convert days into years, month and days. (Ignoring leap year and considering 1 month is 30 days)

Sample Test Cases

Test Case 1

Input

375

Output

YEARS: 1 MONTH: 0 DAYS: 10

Test Case 2

Input

200

Output

YEARS: 0 MONTH: 6 DAYS: 20

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 years=a//365
3 remaining=a%365
4 months=remaining//30
5 remaining=remaining%30
6 days=remaining
7 print(f"YEARS: {years} MONTH: {months} DAYS: {days}")
```

Feedback


Input	Expected	Got
375	YEARS: 1 MONTH: 0 DAYS: 10	YEARS: 1 MONTH: 0 DAYS: 10

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 5

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Write a program to find whether the given input number is Even.
If the given number is even, the function should return 2 else it should return 1.
Note: The number passed to the program can either be negative, positive or zero. Zero should be treated as Even.

For example:

Input Result

100 2

1001 1

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 if(a%2==0):
3     print("2")
4 else:
5     print("1")
```

Feedback

Input Expected Got

100 2 2

1001 1 1


0 2 2

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Note:

Dont use if-else. Operators alone must be used .

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

For example:

Input Result

18 False
40

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 b=int(input())
3 print((a>=18)and(b>40))
```

Feedback

Input Expected Got

19 True True
45

18 False False
40


18 True True
42

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 7

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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.

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 b=int(input())
3 cal=(a*75)+(b*112)
4 print(f"The total weight of all these widgets and gizmos is {cal} grams.")
```

Feedback


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 8

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Write a program that returns the last digit of the given number. Last digit is being referred to the least significant digit i.e. the digit in the ones (units) place in the given number.

The last digit should be returned as a positive number.

For example,

if the given number is 197, the last digit is 7

if the given number is -197, the last digit is 7

For example:

Input Result

197 7

-197 7

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 a=abs(a)
3 print(a%10)
```

Feedback

Input Expected Got

197 7 7


-197 7 7

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 9

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Rohit wants to add the last digits of two given numbers.

For example,

If the given numbers are 267 and 154, the output should be 11.

Below is the explanation:

Last digit of the 267 is 7

Last digit of the 154 is 4

Sum of 7 and 4 = 11

Write a program to help Rohit achieve this for any given two numbers.

Note: Tile sign of the input numbers should be ignored.

i.e.

if the input numbers are 267 and 154, the sum of last two digits should be 11

if the input numbers are 267 and -154, the slim of last two digits should be 11

if the input numbers are -267 and 154, the sum of last two digits should be 11

if the input numbers are -267 and -154, the sum of last two digits should be 11

For example:

Input Result

267 11
154

267 11
-154

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 b=int(input())
3 a=abs(a)
4 b=abs(b)
5 print((a%10)+(b%10))
```

Feedback

Input Expected Got

267 11 11
154


267 11 11
-154

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 10

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Write a python program that takes a integer between 0 and 15 as input and displays the number of '1' s in its binary form.
(Hint:use python bitwise operator.

Sample Input

3

Sample Output:

2

Explanation:

The binary representation of 3 is 011, hence there are 2 ones in it. so the output is 2.

For example:

Input Result

3 2

Answer:(penalty regime: 0 %)

1	a=int(input())
2	b=bin(a).count('1')
3	print(b)

Feedback

Input Expected Got

3	2	2
5	2	2
15	4	4

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Finish review

[Skip Quiz navigation](#)

Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#) [Question 6 This page](#) [Question 7 This page](#) [Question 8 This page](#) [Question 9 This page](#) [Question 10 This page](#)
[Show one page at a time](#) [Finish review](#)

CS23336-Introduction to Python Programming

Started on Wednesday, 14 August 2024, 2:00 PM

State Finished


Completed on Friday, 16 August 2024, 1:17 PM

Time taken 1 day 23 hours

Marks 10.00/10.00

Grade **100.00** out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

The Chinese zodiac assigns animals to years in a 12 year cycle. One 12 year cycle is shown in the table below. The pattern repeats from there, with 2012 being another year of the dragon, and 1999 being another year of the hare.

Year	Animal
2000	Dragon
2001	Snake
2002	Horse
2003	Sheep
2004	Monkey
2005	Rooster
2006	Dog
2007	Pig
2008	Rat
2009	Ox
2010	Tiger
2011	Hare

Write a program that reads a year from the user and displays the animal associated with that year. Your program should work correctly for any year greater than or equal to zero, not just the ones listed in the table.

Sample Input 1
2010

Sample Output 1
2010 is the year of the Tiger.

Sample Input 2
2020

Sample Output 2
2020 is the year of the Rat.

Answer:(penalty regime: 0 %)

<pre>1 a=int(input()) 2 if(a%12==8): 3 print(f"{a} is the year of the Dragon.") 4 elif(a%12==9): 5 print(f"{a} is the year of the Snake.")</pre>	
--	--

```

6 = elif(a%12==10):
7     print(f"{a} is the year of the Horse.")
8 = elif(a%12==11):
9     print(f"{a} is the year of the Sheep.")
10 = elif(a%12==0):
11     print(f"{a} is the year of the Monkey.")
12 = elif(a%12==1):
13     print(f"{a} is the year of the Rooster.")
14 = elif(a%12==2):
15     print(f"{a} is the year of the Dog.")
16 = elif(a%12==3):
17     print(f"{a} is the year of the Pig.")
18 = elif(a%12==4):
19     print(f"{a} is the year of the Rat.")
20 = elif(a%12==5):
21     print(f"{a} is the year of the Ox.")
22 = elif(a%12==6):
23     print(f"{a} is the year of the Tiger.")
24 = else:
25     print(f"{a} is the year of the Hare.")

```

Feedback

Input	Expected	Got
2010	2010 is the year of the Tiger.	2010 is the year of the Tiger.
2020	2020 is the year of the Rat.	2020 is the year of the Rat.

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 2

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

Write a program to determine the type of berth when the seat / berth number in the train is given.

RailwaySeat



Input Format:

Input consists of a single integer. Assume that the range of input is between 1 and 72.

Output Format:

Output consists of a single string. [Upper or Middle or Lower or Side Lower or Side Upper]

Sample Input 1:

9

Sample Output 1:

Lower Berth

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 if(a%8==1 or a%8==4):
3     print("Lower Berth")
4 elif(a%8==2 or a%2==5):
5     print("Middle Berth")
6 elif (a%8==3 or a%8==6):
7     print("Upper Berth")
8 elif(a%7==0):
9     print("Side Lower Berth")
10 else:
11     print("Side Upper Berth")
```


Feedback

Input	Expected	Got
9	Lower Berth	Lower Berth
72	Side Upper Berth	Side Upper Berth

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 3

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Most years have 365 days. However, the time required for the Earth to orbit the Sun is actually slightly more than that. As a result, an extra day, February 29, is included in some years to correct for this difference. Such years are referred to as leap years. The rules for determining whether or not a year is a leap year follow:

- Any year that is divisible by 400 is a leap year.
- Of the remaining years, any year that is divisible by 100 is not a leap year.
- Of the remaining years, any year that is divisible by 4 is a leap year.
- All other years are not leap years.

Write a program that reads a year from the user and displays a message indicating whether or not it is a leap year.

Sample Input 1

1900

Sample Output 1

1900 is not a leap year.

Sample Input 2

2000

Sample Output 2

2000 is a leap year.

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 if(a%400==0 or a%100!=0):
3     if(a%4==0):
4         print(f"{a} is a leap year.")
5 else:
6     print(f"{a} is not a leap year.")
```


Feedback

Input	Expected	Got
1900	1900 is not a leap year.	1900 is not a leap year.
2000	2000 is a leap year.	2000 is a leap year.
2100	2100 is not a leap year.	2100 is not a leap year.
2020	2020 is a leap year.	2020 is a leap year.

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 4

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Write a program to calculate and print the Electricity bill where the unit consumed by the user is given from test case. It prints the total amount the customer has to pay. The charge are as follows:

Unit	Charge / Unit
Upto 199	@1.20
200 and above but less than 400	@1.50

400 and above but less than 600	@1.80
600 and above	@2.00

If bill exceeds Rs.400 then a surcharge of 15% will be charged and the minimum bill should be of Rs.100/-

Sample Test Cases

Test Case 1

Input

50

Output

100.00

Test Case 2

Input

300

Output

517.50

For example:

Input Result

100.00 120.00

500 1035.00

Answer:(penalty regime: 0 %)

```
1 a=float(input())
2 if(a<200):
3     chrg=(a*1.20)
4 elif(a<400):
5     chrg=(a*1.50)
6 elif(a<600):
7     chrg=a*1.80
8 else:
9     chrg=a*2.00
10
11 if chrg>400:
12     chrg*=1.15
13 if chrg<100:
14     chrg=100
15 print("%.2f"%chrg)
```

Feedback

Input	Expected	Got
50	100.00	100.00
100.00 120.00		120.00
500	1035.00	1035.00
700	1610.00	1610.00

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 5

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

Given an integer N, check whether N the given number can be made a perfect square after adding 1 to it.

Input Format:

Single integer input.

Output Format:

Yes or No.

Example Input:

24

Output:

Yes

Example Input:

26

Output:

No

For example:

Input Result

24	Yes
----	-----

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 b=a+1
3 c=int(b**0.5)
4 if c**2==b:
5     print("Yes")
6 else:
7     print("No")
```

Feedback

Input Expected Got


24	Yes	Yes
26	No	No

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

A certain type of steel is used to test and give grade according to the following conditions.

- 1. Hardness of the steel must be greater than 50
- 2. Carbon content of the steel must be less than 0.7
- 3. Tensile strength must be greater than 5600

The grades awarded are as follows:

- Grade is 10 if all three conditions are met
- Grade is 9 if conditions (1) and (2) are met
- Grade is 8 if conditions (2) and (3) are met
- Grade is 7 if conditions (1) and (3) are met
- Grade is 6 if only one condition is met
- Grade is 5 if none of the three conditions are met

Write a program to display the grade of the steel, based on the values of hardness, carbon content and tensile strength of the steel, given by the user.

Input

53
0.6
5602

Output:

10

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 b=float(input())
3 c=int(input())
4 if(a>50 and b<0.7 and c>5600):
5     print("10")
6 elif(a>50 and b<0.7):
7     print("9")
8 elif(b<0.7 and c>5600 ):
9     print("8")
10 elif(a>50 and c>5600):
11     print("7")
12 elif(a>50 or b<0.7 or c>5600):
13     print("6")
14 else:
15     print("5")
16
```

Feedback


Input Expected Got

53		
0.6	10	10
5602		
45		
0	6	6
4500		

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 7

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Write a program that accepts 5 inputs and returns the count of how many of those 5 are odd.

For example,

If the five inputs are 12, 17, 19, 14, and 115, there are three odd numbers 17, 19 and 115. So, the program must return 3.

Similarly,

If the five inputs are 15, 0, -12, 19, and 28, there are two odd numbers 15 and 19. So, the program must return 2.

Observe that zero is considered an even number.

For example:

Input Result

12	
17	
19	3
14	
115	

15	
0	
-12	2
19	
28	

Answer:(penalty regime: 0 %)

```
1 count=0
2 for i in range(5):
3     n=int(input())
4     if n%2!=0:
5         count+=1
6 print(count)
```



Feedback

Input Expected Got


12		
17		
19	3	3
14		
115		
15		
0		
-12	2	2
19		
28		

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 8

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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 %)

<pre>1 a=int(input()) 2 b=input() 3 c=int(input()) 4 if(b=='+'): 5 print(a+c) 6 elif(b=='-'): 7 print(a-c) 8 elif(b=='*'): 9 print(a*c) 10 elif(b=='/'): 11 print(a/c)</pre>	
--	--



Feedback


Input Expected Got

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

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 9

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

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 %)

```
1 a=int(input())
2 b=int(input())
3 c=a//2
4 if(b>=c):
5     print("IN")
6 else:
7     print("OUT")
```

Feedback

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 10

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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 a=int(input())
2 b=int(input())
3 c=int(input())
4 if(a==b==c):
5     print("That's a equilateral triangle")
6 elif (a!=b)and(b!=c)and(c!=a):
7     print("That's a scalene triangle")
8 else:
9     print("That's a isosceles triangle")
```




Feedback

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.

Finish review

[Skip Quiz navigation](#)

Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#) [Question 6 This page](#) [Question 7 This page](#) [Question 8 This page](#) [Question 9 This page](#) [Question 10 This page](#)
[Show one page at a time](#) Finish review

CS23336-Introduction to Python Programming

Started on Tuesday, 27 August 2024, 10:00 PM

State Finished


Completed on Wednesday, 28 August 2024, 1:40 PM

Time taken 15 hours 40 mins

Marks 10.00/10.00

Grade **100.00** out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Write a program to find the count of the number of prime numbers in a specified range.

The starting and ending number of the range will be provided as input to the program.

Assumption: 2 <=starting number of the range<= ending number of the range<=7919

Example1: If the starting and ending number or the range is given as 2 and 20, the program must return 8, because there are 8 prime numbers in the specified range from 2 to 20. namely (2. 3. 5, 7, 11, 13, 17, 19)

Example2: If the starting and ending number of the range is given as 700 and 725, the program must return 3, because there are 3 prime numbers in the specified range from 700 to 725, namely (701, 709, 719)

For example:

Input Result

2	
20	8

700	
725	3

Answer:(penalty regime: 0 %)

```
1 a=int(input())
2 b=int(input())
3 count=0
4 for i in range(a,b+1):
5     if i>1:
6         for j in range(2,i):
7             if(i%j)==0:
8                 break
9         else:
10            count+=1
11 print(count)
```

Feedback


Input Expected Got

2		
20	8	8
700		
725	3	3

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Write a program to find the count of non-repeated 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 .

Some examples are as below.

If the given number is 292, the program should return 1 because there is only 1 non-repeated digit '9' in this number

If the given number is 1015, the program should return 2 because there are 2 non-repeated digits in this number, '0', and '5'.

If the given number is 108, the program should return 3 because there are 3 non-repeated digits in this number, '1', '0', and '8'.

If the given number is 22, the function should return 0 because there are NO non-repeated digits in this number.

For example:

Input Result

292	1
1015	2
108	3
22	0

Answer:(penalty regime: 0 %)

```

1 a=input()
2 count=0
3 for digit in a:
4     if a.count(digit)==1:
5         count+=1
6 print(count)

```

Feedback

Input Expected Got


292	1	1
1015	2	2
108	3	3
22	0	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

Question text

Write python program to print the following pattern based on input size.

Input:

3

Output:

```
1
2 3
4 5 6
```

For example:

Input Result

```
1
2 3
4 5 6
7 8 9 10
```

Answer:(penalty regime: 0 %)

```
1 n=int(input())
2 a=1
3 for i in range(1,n+1):
4     print(' '*i,end='')
5     for j in range(i):
6         print(a,end=' ')
7         a+=1
8     print()
9
10
```

Feedback

Input Expected Got


	1	1
3	2 3	2 3
	4 5 6	4 5 6
	1	1
4	2 3	2 3
	4 5 6	4 5 6
	7 8 9 10	7 8 9 10

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 4

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

An e-commerce company plans to give their customers a special discount for Christmas. They are planning to offer a flat discount. The discount value is calculated as the sum of all the prime digits in the total bill amount.

Write an algorithm to find the discount value for the given total bill amount.

Input

The input consists of an integer order value, representing the total bill amount.

Output

Print an integer representing the discount value for the given total bill amount.

Example Input

578

Output

12

Explanation:

Since 5 and 7 are the prime digits,then sum of 5+7=12

Answer:(penalty regime: 0 %)

```
1 n=input()
2 add=0
3 for digit in n:
4     digit=int(digit)
5     if digit>1:
6         prime=True
7         i=2
8         while i*i<=digit:
9             if digit%i==0:
10                prime=False
11                break
12                i+=1
13            if prime:
14                add+=digit
15 print(add)
```

Feedback

Input Expected Got


578	12	12
456	5	5
7032	12	12

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 5

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Let’s print a chessboard!

Write a program that takes input:

Integer N(represents the rows and columns of a chessboard) and also the starting character of the chessboard

Output Format

Print the chessboard as per the given examples

Sample Input / Output

Input:

2
W

Output:

WB
BW

Answer:(penalty regime: 0 %)

```
1 n=int(input())
2 a=input()
3 if a.upper()=='W':
4     b='B'
5 else:
6     b='W'
7
8 for i in range(n):
9     for j in range(n):
10         if (i+j)%2==0:
11             print(a,end='')
12         else:
13             print(b,end='')
14     print()
```

Feedback


Input Expected Got

2	WB	WB
W	BW	BW
3	BWB	BWB
B	WBW	WBW
	BWB	BWB

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

An automorphic number is a number whose square ends with the number itself.
For example, 5 is an automorphic number because 5*5 =25. The last digit is 5 which same as the given number.
If it is an automorphic number display “Automorphic” else display “Not Automorphic”.

Input Format:

Take a Integer from Keyboard

Output Format:

Print Automorphic if given number is Automorphic number, otherwise Not Automorphic

Example input:

5

Output:

Automorphic

Example input:

25

Output:

Automorphic

Example input:

7

Output:

Not Automorphic

Answer:(penalty regime: 0 %)

<pre>1 n=int(input()) 2 s=n*n 3 l=len(str(n)) 4 if s%(10**l)==n: 5 print("Automorphic") 6 else: 7 print("Not Automorphic")</pre>	
--	--

Feedback

Input	Expected	Got
5	Automorphic	Automorphic
625	Automorphic	Automorphic
7	Not Automorphic	Not Automorphic

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 7

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

Given an integer N, check whether N the given number can be made a perfect square after adding to it.

Input Format:

Single integer input.

Output Format:

Yes or No.

Example Input:

24

Output:

Yes

Example Input:

26

Output:

No

For example:

Input Result

24	Yes
----	-----

Answer:(penalty regime: 0 %)

<pre>1 n=int(input()) 2 m=1 3 while True: 4 s=m*m 5 if s>=n: 6 x=s-n 7 if x>0: 8 print("Yes") 9 break 10 m+=1 11 if m*m-n>m: 12 print("No")</pre>	
---	--

13	break
----	-------

Feedback

Input Expected Got


24	Yes	Yes
26	No	No

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 8

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Write a program to find the count of the number of prime numbers in a specified range.

The starting and ending number of the range will be provided as input to the program.

Assumption: 2 <=starting number of the range<= ending number of the range<=7919

Example1: If the starting and ending number or the range is given as 2 and 20, the program must return 8, because there are 8 prime numbers in the specified range from 2 to 20. namely (2. 3. 5, 7, 11, 13, 17, 19)

Example2: If the starting and ending number of the range is given as 700 and 725, the program must return 3, because there are 3 prime numbers in the specified range from 700 to 725, namely (701, 709, 719)

For example:

Input Result

2 8
20

700 3
725

Answer:(penalty regime: 0 %)

<pre>1 a=int(input()) 2 b=int(input()) 3 count=0 4 for i in range(a,b+1): 5 if i>1: 6 for j in range(2,i): 7 if (i%j)==0: 8 break 9 else: 10 count+=1 11 print(count)</pre>	
---	--



Feedback

Input Expected Got

2	8	8
20		

700	3	3
725		

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 9

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

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	
3	
4	YES
2	
6	

Answer:(penalty regime: 0 %)

<pre>1 x1=int(input()) 2 v1=int(input()) 3 x2=int(input()) 4 v2=int(input()) 5 k=int(input()) 6 7 if (x1<x2 and v1<=v2)or(x2<x1 and v2<=v1): 8 print("NO") 9 else: 10 meet=False</pre>	
--	--

```

11  for i in range(k):
12      x1+=v1
13      x2+=v2
14  if x1==x2:
15      meet=True
16      break
17  if meet:
18      print("YES")
19  else:
20      print("NO")

```

Feedback

Input Expected Got

0		
3		
4	YES	YES
2		
6		

0		
3		
2	NO	NO
4		
8		

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 10

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

Write a program that given an integer ‘n’, prints the number of integers that are less than or equal to ‘n’ and co-prime to ‘n’

Two integers a and b are said to be relatively prime or co-prime if the only positive integer that evenly divides both of them is 1. That is, the only common positive factor of the two numbers is 1. This is equivalent to their greatest common divisor being 1.

Input Format:

One line containing the value of 'n', where $1 \leq n \leq 10,000$

Output Format:

One line containing the number of integers that are co-prime to n and less than or equal to 'n'

Sample Test Cases

Test Case 1

Input

10

Output

4

Test Case 2

Input

23

Output

22

Test Case 3

Input

11

Output

10

Answer:(penalty regime: 0 %)

```
1 def gcd(a,b):
2     while b:
3         a,b=b,a%b
4     return a
5 n=int(input())
6 count=0
7 for i in range(1,n+1):
8     if gcd(i,n)==1:
9         count+=1
10 print(count)
```

Feedback

Input Expected Got

10	4	4
23	22	22
11	10	10

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.
[Finish review](#)
[Skip Quiz navigation](#)

Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#) [Question 6 This page](#) [Question 7 This page](#) [Question 8 This page](#) [Question 9 This page](#) [Question 10 This page](#)
[Show one page at a time](#)[Finish review](#)

CS23336-Introduction to Python Programming

Started on

Wednesday, 28 August 2024, 2:02 PM

State

Finished

Completed on

Wednesday, 28 August 2024, 2:51 PM

Time taken

48 mins 55 secs

Marks


5.00/5.00

Grade

100.00 out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00

Flag question

Question text

Write a function that returns the value of $a+aa+aaa+aaaa$ with a given digit as the value of a .

Suppose the following input is supplied to the program:

9

Then, the output should be:

9+99+999+9999=11106

Sample Input Format:

9

Sample Output format:

11106

For example:

Test	Result
<pre>print(Summation(8))</pre>	9872

Answer:(penalty regime: 0 %)

Reset answer

```
1 def Summation(n):
2     a1=int(str(n))
3     a2=int(str(n)*2)
4     a3=int(str(n)*3)
5     a4=int(str(n)*4)
6     return a1+a2+a3+a4
```


Test	Expected	Got
<pre>print(Summation(8))</pre>	9872	9872
<pre>print(Summation(10))</pre>	10203040	10203040

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

A strobogrammatic number is a number that looks the same when rotated 180 degrees (looked at upside down).

Write a program to determine if a number is strobogrammatic. The number is represented as a string.

Example 1:

Input:

69

Output:

true

Example 2:

Input:

88

Output:

true

Example 3:

Input:

962

Output:

false

Example 4:

Input:

1

Output:

true

For example:

Test	Result
<pre>print(Strobogrammatic(69))</pre>	true
<pre>print(Strobogrammatic(962))</pre>	false

Answer:(penalty regime: 0 %)

Reset answer

```
1 def Strobogrammatic(n):
2     n=str(n)
3     r={'0':'0','1':'1','6':'9','8':'8','9':'6'}
4     for i in range(len(n)//2+1):
5         if n[i] not in r or r[n[i]]!=n[-i-1]:
6             return "false"
7     return "true"
```

Feedback

Test	Expected	Got
print(Strobogrammatic(69))	true	true
print(Strobogrammatic(88))	true	true
print(Strobogrammatic(962))	false	false

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 3

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

complete function to implement coin change making problem i.e. finding the minimum number of coins of certain denominations that add up to given amount of money.

The only available coins are of values 1, 2, 3, 4

Input Format:

Integer input from stdin.

Output Format:

return the minimum number of coins required to meet the given target.

Example Input:

16

Output:

4

Explanation:

We need only 4 coins of value 4 each

Example Input:

25

Output:

7

Explanation:

We need 6 coins of 4 value, and 1 coin of 1 value

Answer:(penalty regime: 0 %)

Reset answer

```
1 def coinChange(n):
2     coins=[1,2,3,4]
3     coins.sort(reverse=True)
4     count=0
5     for coin in coins:
6         count+=n//coin
7         n%=coin
8     return count
9
10
11
```

Feedback


Test	Expected Got
print(coinChange(16)) 4	4

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 4

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

An e-commerce company plans to give their customers a special discount for Christmas. They are planning to offer a flat discount. The discount value is calculated as the sum of all the prime digits in the total bill amount.

Write an algorithm to find the discount value for the given total bill amount.

Constraints

1 <= orderValue< 10e100000

Input

The input consists of an integer orderValue, representing the total bill amount.

Output

Print an integer representing the discount value for the given total bill amount.

Example Input

578

Output

12

For example:

Test	Result
------	--------

print(christmasDiscount(578))	12
-------------------------------	----

Answer:(penalty regime: 0 %)

Reset answer

```
1 def christmasDiscount(n):
2     dis=0
3     for digit in str(n):
4         digit=int(digit)
5         if digit in [2,3,5,7]:
6             dis+=digit
7     return dis
```

Feedback

Test	Expected Got
------	--------------


print(christmasDiscount(578))	12
-------------------------------	----

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 5

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

A number is considered to be ugly if its only prime factors are 2, 3 or 5.

[1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, ...] is the sequence of ugly numbers.

Task:

complete the function which takes a number n as input and checks if it's an ugly number.

return ugly if it is ugly, else return not ugly

Hint:

An ugly number U can be expressed as: $U = 2^a * 3^b * 5^c$, where a, b and c are nonnegative integers.

For example:

Test	Result
------	--------

print(checkUgly(6)) ugly

print(checkUgly(21)) not ugly

Answer:(penalty regime: 0 %)

Reset answer

```
1 def checkUgly(n):
2     if n<=0:
3         return "not ugly"
4     for p in [2,3,5]:
5         while n%p==0:
6             n=n//p
7     if n==1:
8         return "ugly"
9     else:
10        return "not ugly"
11
```

Feedback

Test	Expected	Got
print(checkUgly(6))	ugly	ugly
print(checkUgly(21))	not ugly	not ugly

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.
[Finish review](#)
[Skip Quiz navigation](#)

Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#)
[Show one page at a time](#)[Finish review](#)

CS23336-Introduction to Python Programming

Started on Wednesday, 28 August 2024, 2:52 PM

State Finished


Completed on Wednesday, 28 August 2024, 7:49 PM

Time taken 4 hours 57 mins

Marks 5.00/5.00

Grade 100.00 out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

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 Recursive funtion 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 %)

Reset answer

```
1 - def gcd(a,b):
2 -     if b==0:
3 -         return a
4 -     else:
5 -         return gcd(b,a%b)
```


Feedback

Test	Expected Got	
print(gcd(8, 12))	4	4
print(gcd(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
 Flag question

Question text

Given an integer number and you have to count the digits using recursion using Python program. In this program, you will be reading an integer number and counting the total digits, using a function countDigits() which will take a number as an argument and return the count after recursion process.
Input Format: The first and only line of the input contains a single integer n
Output Format: Output a single line denoting the number of digits in n.

For example:

Test	Result
print(countDigits(800))	3

Answer:(penalty regime: 0 %)

Reset answer

```
1 def countDigits(n):
2     n=str(n)
3     return len(n)
```


Feedback

Test	Expected	Got
print(countDigits(12345))	5	5
print(countDigits(800))	3	3

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 3

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

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 isPalindrome(s):
2     # Base case: The empty string is a palindrome. So is a string containing only 1 character.
3     if len(s) <= 1:
4         return True
5     elif s[0]==s[-1] and isPalindrome(s[1:-1]):
6         return True
7     else:
8         return False
9     # Recursive case: The string is a palindrome only if the first and last characters match, and
10    # the rest of the string is a palindrome
11
12
13 # Check whether or not a string entered by the user is a palindrome
14 # Read the string from the user
15 line=input()
16
17 # Check its status and display the result
18 if isPalindrome(line):
19     print("That was a palindrome!")
20
21 else:
22     print("That is not a palindrome.")
23
24
```

Feedback


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

 Flag question

Question text

Complete the recursive function to return Binary Equivalent of an Integer using Recursion.

Sample Test Cases

Test Case 1

Input

10

Output

1010

Test Case 2

Input

257

Output

100000001

For example:

Test	Result
print(binayNumber(10))	1010
print(binayNumber(257))	100000001

Answer:(penalty regime: 0 %)

Reset answer

```
1 - def binayNumber(n):
2   return bin(n)[2:]
3
```

Feedback

Test	Expected	Got
print(binayNumber(10))	1010	1010
print(binayNumber(257))	100000001	100000001

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 5

Question text

Complete a Recursive Function to find if a given number N can be expressed as a sum of two prime numbers.

Note: YOU MUST OPTIMIZE the logic to find whether a number is prime or not, as very large prime numbers are provided as input. If the logic is not optimized your program will NOT get executed within the given time limit.

Input Format:

First line contains number N.

Output Format:

Return either yes or no.

Boundary Conditions / Constraints:

3 <= N <= 10^9

Example Input/Output 1:

Input:

20

Output:

yes

Input:

23

Ouput:

no

Explanation:

20 can be expressed as 17+3

23 cannot be expressed as sum of two primes

For example:

Test	Result
print(checkPrimeSum(20))	yes
print(checkPrimeSum(23))	no

Answer:(penalty regime: 0 %)

Reset answer

```
1 def checkPrimeSum(n):
2     def prime(num):
3         if num<2:
4             return False
5         for i in range(2,int(num*0.5)+1):
6             if num%i==0:
7                 return False
8         return True
9     for i in range(2,n):
10        if prime(i) and prime(n-i):
11            return 'yes'
12        for i in range(2,n//2+1):
```



```
13     if prime(i) and prime(n-i):
14         return 'yes'
15     return 'no'
16
17
```

Feedback

Test

Expected Got

print(checkPrimeSum(20))	yes	yes
--------------------------	-----	-----

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

[Finish review](#)

[Skip Quiz navigation](#)

Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#)
[Show one page at a time](#)[Finish review](#)

CS23336-Introduction to Python Programming

Started on Wednesday, 28 August 2024, 8:35 PM

State Finished


Completed on Friday, 30 August 2024, 12:37 PM

Time taken 1 day 16 hours

Marks 10.00/10.00

Grade **100.00** out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Given a string S which is of the format USERNAME@DOMAIN.EXTENSION, the program must print the EXTENSION, DOMAIN, USERNAME in the reverse order.

Input Format:

The first line contains S.

Output Format:

The first line contains EXTENSION.
The second line contains DOMAIN.
The third line contains USERNAME.

Boundary Condition:

1 <= Length of S <= 100

Example Input/Output 1:

Input:

abcd@gmail.com

Output:

com
gmail
abcd

For example:

Input	Result
arvijayakumar@rajalakshmi.edu.in	edu.in rajalakshmi arvijayakumar

Answer:(penalty regime: 0 %)

<pre>1 a=input() 2 un, domain=a.split('@') 3 dp=domain.split('.') 4 if len(dp)>=2: 5 dn=dp[0] 6 de='.'.join(dp[1:]) 7 print(de) 8 print(dn) 9 print(un)</pre>	
--	--

Feedback


Input	Expected	Got
abcd@gmail.com	com gmail abcd	com gmail abcd
arvijayakumar@rajalakshmi.edu.in	edu.in rajalakshmi arvijayakumar	edu.in rajalakshmi arvijayakumar

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

The program must accept **N** series of keystrokes as string values as the input. The character ^ represents undo action to clear the last entered keystroke. The program must print the string typed after applying the undo operations as the output. If there are no characters in the string then print **-1** as the output.

Boundary Condition(s):

1 <= N <= 100
1 <= Length of each string <= 100

Input Format:

The first line contains the integer N.
The next N lines contain a string on each line.

Output Format:

The first N lines contain the string after applying the undo operations.

Example Input/Output 1:

Input:

Hey ^ goooo^^glee^
lucke^y ^charr^ms
ora^^nge^^^

Output:

Hey google
luckycharms
-1

Answer:(penalty regime: 0 %)

```
1 def pk(N, ks):
2     results=[]
3     for keystroke in ks:
4         stack=[]
5         for char in keystroke:
6             if char == '^':
7                 if stack:
8                     stack.pop()
9             else:
10                stack.append(char)
11            result=''.join(stack) if stack else '-1'
12            results.append(result)
13        return results
14 N=int(input())
15 ks=[input().strip() for j in range(N)]
16 results=pk(N,ks)
17 for result in results:
18     print(result)
```

Feedback


Input	Expected	Got
3 Hey ^ goooo^^glee^ lucke^y ^charr^ms ora^^nge^^^	Hey google luckycharms -1	Hey google luckycharms -1

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 3

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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 %)

```
1 def palin(s):
2     filter=''.join(char.lower()for char in s if char.isalnum())
3     if filter==filter[::-1]:
4         print('1')
5     else:
6         print('0')
7 s=input()
8 palin(s)
```

Feedback


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

 Flag question

Question text

Given a **non-empty** string s and an abbreviation abbr, return whether the string matches with the given abbreviation.

A string such as "word" contains only the following valid abbreviations:

["word", "1ord", "w1rd", "wo1d", "wor1", "2rd", "w2d", "wo2", "1o1d", "1or1", "w1r1", "1o2", "2r1", "3d", "w3", "4"]

Notice that only the above abbreviations are valid abbreviations of the string "word". Any other string is not a valid abbreviation of "word".

Note:

Assume s contains only lowercase letters and abbr contains only lowercase letters and digits.

Example 1:

Input

internationalization
i12iz4n

Output

true

Explanation

Given **s** = "internationalization", **abbr** = "i12iz4n":

Return true.

Example 2:

Input

apple
a2e

Output

false

Explanation

Given **s** = "apple", **abbr** = "a2e":

Return false.

Answer:(penalty regime: 0 %)

1	def vwa(s,abbr):	
2	i,j=0,0	
3	while i<len(s) and j<len(abbr):	
4	if abbr[j].isdigit():	
5	if abbr[j]=='0':	
6	return False	
7	num=0	

```
8 while j<len(abbr) and abbr[j].isdigit():
9     num=num*10+int(abbr[j])
10    j+=1
11    i+=num
12 else:
13     if i>=len(s) or abbr[j]!=s[i]:
14         return False
15     i+=1
16     j+=1
17 return i==len(s) and j==len(abbr)
18 s=input()
19 abbr=input()
20 x=vwa(s,abbr)
21 print('true' if x else 'false')
```

Feedback

Input	Expected Got	
internationalization il2iz4n	true	true
apple a2e	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

Question text

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

Feedback

Input Expected Got

hello	olleh	olleh
Hannah	hannaH	hannaH

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 6

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

A pangram is a sentence where every letter of the English alphabet appears at least once.

Given a string sentence containing only lowercase English letters, return true if sentence is a pangram, or false otherwise.

Example 1:

Input:

thequickbrownfoxjumpsoverthelazydog

Output:

true

Explanation: sentence contains at least one of every letter of the English alphabet.

Example 2:

Input:

arvijayakumar

Output: false

Constraints:

1 <= sentence.length <= 1000

sentence consists of lowercase English letters.

For example:

Test	Result
print(checkPangram('thequickbrownfoxjumpsoverthelazydog'))	true
print(checkPangram('arvijayakumar'))	false

Answer:(penalty regime: 0 %)

Reset answer


```
1 def checkPangram(s):
2     l="abcdefghijklmnopqrstuvwxyz"
3     for i in l:
4         if i not in s.lower():
5             return "false"
6     return "true"
```

Feedback

Test	Expected	Got
print(checkPangram('thequickbrownfoxjumpsoverthelazydog'))	true	true
print(checkPangram('arvijayakumar'))	false	false

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 7

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

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 %)

1	a=input()	
2	x=['break','case','continue','default','defer','else','for','func','goto','if','map','range','return','struct','type','var']	
3	if a in x:	
4	print(f"{a} is a keyword")	
5	else:	
6	print(f"{a} is not a keyword")	

Feedback


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 8

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Given a string s containing just the characters '(', ')', '{', '}', '[' and ']', determine if the input string is valid.

An input string is valid if:

Open brackets must be closed by the same type of brackets.

Open brackets must be closed in the correct order.

Constraints:

1 <= s.length <= 10^4

s consists of parentheses only '()[]{}'.

For example:

Test	Result
print(ValidParenthesis("()"))	true
print(ValidParenthesis("()[]{}"))	true

```
print(ValidParenthesis("[]"))      false
```

Answer:(penalty regime: 0 %)

Reset answer

```
1 def ValidParenthesis(s):
2     stack=[]
3     mp={'(':')','[':']','{':'}'
4     for char in s:
5         if char in mp.values():
6             stack.append(char)
7         elif char in mp:
8             if not stack or stack[-1]!=mp[char]:
9                 return "false"
10            stack.pop()
11    return "true" if not stack else 'false'
```

Feedback


Test	Expected	Got
print(ValidParenthesis(""))	true	true
print(ValidParenthesis("{}[]{}"))	true	true
print(ValidParenthesis("[]"))	false	false

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 9

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Assume that the given string has enough memory.

Don't use any extra space(IN-PLACE)

Sample Input 1

a2b4c6

Sample Output 1

aabbbbcccccc

Answer:(penalty regime: 0 %)

```
1 def ds(a):
```

```
2 result=[]
3 i=0
4 while i<len(a):
5     char=a[i]
6     count=""
7     i+=1
8     while i<len(a) and a[i].isdigit():
9         count+=a[i]
10        i+=1
11    ct=int(count)
12    result.append(char*ct)
13    return ''.join(result)
14 a=input()
15 x=ds(a)
16 print(x)
17
```

Feedback

Input	Expected	Got
a2b4c6	aabbbbcccccc	aabbbbcccccc
a12b3d4	aaaaaaaaaabbddddd	aaaaaaaaaabbddddd

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 10

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

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

Sample Input 1

this test123string

123

Sample Output 1

8

Answer:(penalty regime: 0 %)

```
1 def find(s1,s2):
2     try:
3         return s1.index(s2)
4     except ValueError:
5         return -1
6 s1=input()
7 s2=input()
8 print(find(s1,s2))
```



Feedback

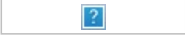
Input	Expected Got
thistest123string 123	8

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.
[Finish review](#)
[Skip Quiz navigation](#)

Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#) [Question 6 This page](#) [Question 7 This page](#) [Question 8 This page](#) [Question 9 This page](#) [Question 10 This page](#)
[Show one page at a time](#)[Finish review](#)

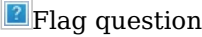


CS23336-Introduction to Python Programming

Started on	Friday, 18 October 2024, 3:30 PM
State	Finished
Completed on	Friday, 18 October 2024, 8:34 PM
Time taken	5 hours 4 mins
Marks	10.00/10.00
Grade	100.00 out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00



Question text

Given an array A of sorted integers and another non negative integer k, find if there exists 2 indices i and j such that $A[i] - A[j] = k$, $i \neq j$.

Input Format

- First line is number of test cases T. Following T lines contain:
- N, followed by N integers of the array
- The non-negative integer k

Output format

Print 1 if such a pair exists and 0 if it doesn't.

Example

Input

1
3
1
3
5
4

Output:

1

Input

1
3
1
3
5
99

Output

0

For example:

Input Result

1
3
1 1
3
5
4

1
3
1 0
3
5
99

Answer:(penalty regime: 0 %)

```
1 T=int(input())
2 for test in range(T):
3     n=int(input())
4     a=[int(input()) for _ in range(n)]
5     k=int(input())
6     res=0
7     for i in range(n):
8         for j in range(n):
9             if i!=j:
10                d=a[i]-a[j]
11                if d==k:
12                    res=1
13 print(res)
```

Feedback

Input Expected Got

1
3
1 1 1
3
5
4


1
3
1 0 0
3
5
99

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Given two arrays of positive integers, for each element in the second array, find the total number of elements in the first array which are *less than or equal to* that element. Store the values determined in an array.

For example, if the first array is $[1, 2, 3]$ and the second array is $[2, 4]$, then there are 2 elements in the first array *less than or equal to* 2. There are 3 elements in the first array which are *less than or equal to* 4. We can store these answers in an array, $answer = [2, 3]$.

Program Description

The program must return an array of m positive integers, one for each $maxes[i]$ representing the total number of elements $nums[j]$ satisfying $nums[j] \leq maxes[i]$ where $0 \leq j < n$ and $0 \leq i < m$, in the given order.

The program has the following:

$nums[nums[0], \dots, nums[n-1]]$: first array of positive integers

$maxes[maxes[0], \dots, maxes[m-1]]$: second array of positive integers

Constraints

- $2 \leq n, m \leq 10^5$
- $1 \leq nums[j] \leq 10^9$, where $0 \leq j < n$.
- $1 \leq maxes[i] \leq 10^9$, where $0 \leq i < m$.

Input Format For Custom Testing

Input from stdin will be processed as follows and passed to the program.

The first line contains an integer n , the number of elements in $nums$.

The next n lines each contain an integer describing $nums[j]$ where $0 \leq j < n$.

The next line contains an integer m , the number of elements in $maxes$.

The next m lines each contain an integer describing $maxes[i]$ where $0 \leq i < m$.

Sample Case 0

Sample Input 0

```
4
1
4
2
4
2
3
5
```

Sample Output 0

```
2
4
```

Explanation 0

We are given $n = 4$, $nums = [1, 4, 2, 4]$, $m = 2$, and $maxes = [3, 5]$.

1. For $maxes[0] = 3$, we have 2 elements in $nums$ ($nums[0] = 1$ and $nums[2] = 2$) that are $\leq maxes[0]$.

2. For $maxes[1] = 5$, we have 4 elements in $nums$ ($nums[0] = 1$, $nums[1] = 4$, $nums[2] = 2$, and $nums[3] = 4$) that are $\leq maxes[1]$.

Thus, the program returns the array $[2, 4]$ as the answer.

Sample Case 1

Sample Input 1

```
5
2
10
5
4
```


8
4
3
1
7
8

Sample Output 1

1
0
3
4

Explanation 1

We are given, $n = 5$, $nums = [2, 10, 5, 4, 8]$, $m = 4$, and $maxes = [3, 1, 7, 8]$.

- For $maxes[0] = 3$, we have 1 element in $nums$ ($nums[0] = 2$) that is $\leq maxes[0]$.
- For $maxes[1] = 1$, there are 0 elements in $nums$ that are $\leq maxes[1]$.
- For $maxes[2] = 7$, we have 3 elements in $nums$ ($nums[0] = 2$, $nums[2] = 5$, and $nums[3] = 4$) that are $\leq maxes[2]$.
- For $maxes[3] = 8$, we have 4 elements in $nums$ ($nums[0] = 2$, $nums[2] = 5$, $nums[3] = 4$, and $nums[4] = 8$) that are $\leq maxes[3]$.

Thus, the program returns the array $[1, 0, 3, 4]$ as the answer.

Answer:(penalty regime: 0 %)

```
1 n=int(input())
2 nums=[int(input()) for _ in range(n)]
3 m=int(input())
4 maxes=[int(input()) for _ in range(m)]
5 res=[]
6 for max1 in maxes:
7     count=0
8     for num in nums:
9         if num<=max1:
10             count+=1
11     res.append(count)
12 for count in res:
13     print(count)
14
```

Feedback


Input Expected Got

4		
1		
4		
2	2	2
4	4	4
2		
3		
5		
5		
2		
10		
5		
4	1	1
8	0	0
4	3	3
3	4	4
1		
7		
8		

Passed all tests!
Correct

Question 3

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Assume you have an array of length n initialized with all 0 's and are given k update operations.

Each operation is represented as a triplet: **[startIndex, endIndex, inc]** which increments each element of subarray **A[startIndex ... endIndex]** (startIndex and endIndex inclusive) with **inc**.

Return the modified array after all k operations were executed.

Example:

Input:

5
3
1 3 2
2 4 3
0 2 -2

Output:

-2 0 3 5 3

Explanation:

Initial state:
length = 5, updates = [[1,3,2],[2,4,3],[0,2,-2]]
[0,0,0,0,0]
After applying operation [1,3,2]:
[0,2,2,2,0]
After applying operation [2,4,3]:
[0,2,5,5,3]
After applying operation [0,2,-2]:
[-2,0,3,5,3]

Answer:(penalty regime: 0 %)

<pre>1 n=int(input()) 2 k=int(input()) 3 arr=[0]*(n+1) 4 for _ in range(k): 5 s,e,inc=map(int,input().split()) 6 arr[s]+=inc</pre>	
--	--

```

8 =         if arr[i+1] != inc
9 = for i in range(1,n):
10     arr[i] += arr[i-1]
11 print(' '.join(map(str,arr[:n])))

```

Feedback

Input Expected Got

```

5
3
1 3 2 -2 0 3 5 3 -2 0 3 5 3
2 4 3
0 2 -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

Question text

Given a matrix mat where every row is sorted in **strictly increasing** order, return the **smallest common element** in all rows.

If there is no common element, return -1.

Example 1:

Input:

```

4 5
1 2 3 4 5
2 4 5 8 10
3 5 7 9 11
1 3 5 7 9

```

Output:

5

Constraints:

- $1 \leq \text{mat.length}, \text{mat}[i].\text{length} \leq 500$
- $1 \leq \text{mat}[i][j] \leq 10^4$
- $\text{mat}[i]$ is sorted in strictly increasing order.

Answer:(penalty regime: 0 %)

```
1 rows,col=map(int,input().split())
2 matrix=[list(map(int,input().split())) for _ in range(rows)]
3
4 count={}
5 for elem in matrix[0]:
6     count[elem]=1
7 for i in range(1,rows):
8     for elem in matrix[i]:
9         if elem in count and count[elem]==i + 1 - 1:
10             count[elem]+=1
11 smallestcommonelement=1
12 for elem in matrix[0]:
13     if count.get(elem)==rows:
14         smallestcommonelement=elem
15         break
16 print(smallestcommonelement)
17
18
```


Feedback

Input	Expected	Got
4 5		
1 2 3 4 5		
2 4 5 8 10 5	5	
3 5 7 9 11		
1 3 5 7 9		

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 5

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

The program must accept **N** integers and an integer **K** as the input. The program must print every K integers in descending order as the output.

-

Note: If $N \% K \neq 0$, then sort the final $N \% K$ integers in descending order.

Boundary Condition(s):

$1 \leq N \leq 10^4$
 $-99999 \leq \text{Array Element Value} \leq 99999$

Input Format:

The first line contains the values of N and K separated by a space.
The second line contains N integers separated by space(s).

Output Format:

The first line contains N integers.

Example Input/Output 1:

Input:

7 3
48 541 23 68 13 41 6

Output:

541 48 23 68 41 13 6

Explanation:

The first three integers are 48 541 23, after sorting in descending order the integers are **541 48 23**.
The second three integers are 68 13 41, after sorting in descending order the integers are **68 41 13**.
The last integer is **6**.
The integers are **541 48 23 68 41 13 6**
Hence the output is **541 48 23 68 41 13 6**.

Answer:(penalty regime: 0 %)

```
1 n,k=map(int,input().split())
2 arr=list(map(int,input().split()))
3 for i in range(0,n,k):
4     chunk=arr[i:i+k]
5     chunk.sort(reverse=True)
6     print(*chunk,end=' ')
```

Feedback


Input	Expected	Got
7 3 48 541 23 68 13 41 6	541 48 23 68 41 13 6	541 48 23 68 41 13 6

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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

```
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
```

Feedback


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 7

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

An array is monotonic if it is either **monotone increasing** or **monotone decreasing**.

An array A is monotone increasing if for all $i \leq j$, $A[i] \leq A[j]$. An array A is monotone decreasing if for all $i \leq j$, $A[i] \geq A[j]$.

Write a program if n array is monotonic or not. Print "True" if is monotonic or "False" if it is not. Array can be monotone increasing or decreasing.

Input Format:

First line n-get number of elements

Next n Lines is the array of elements

Output Format:

True ,if array is monotone increasing or decreasing.

otherwise False is printed

Sample Input1

4

5

6

7

8

Sample Output1

True

Sample Input2

4

6

5

4

3

Sample Output2

True

Sample Input 3

4

6

7

8

7

Sample Output3

False

For example:

Input Result

4
6
5 True
4
3

Answer:(penalty regime: 0 %)

```
1 n=int(input())
2 arr=[]
3 for _ in range(n):
4     arr.append(int(input()))
5 def ismonotonic(array):
6     inc=dec=True
7     for i in range(1,len(array)):
8         if array[i]<array[i-1]:
9             inc=False
10        if array[i]>array[i-1]:
11            dec=False
12    return "True" if inc or dec else "False"
13 print(ismonotonic(arr))
14
```

Feedback

Input Expected Got

4		
6		
5	True	True
4		
3		
4		
3		
5	False	False
7		
4		
4		
1		
6	False	False
9		
2		
4		
9		
6	True	True
4		
2		
3		
2	False	False
1		
4		

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 8

Correct
Mark 1.00 out of 1.00

Question text

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	1 2 3 4
2	
3	
4	
6	
1	
1	
2	1 2 3
2	
3	
3	

Answer:(penalty regime: 0 %)

1	n=int(input())	
2	array=[int(input()) for _ in range(n)]	

```
3 ele=ele*(array)
4 print(''.join(map(str,ele)))
```

Feedback

Input Expected Got

```
5
1
2
2      1 2 3 4      1 2 3 4
3
4


6
1
1
2      1 2 3      1 2 3
2
3
3
```

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 9

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Determine the factors of a number (i.e., all positive integer values that evenly divide into a number) and then return the pth element of the list, sorted ascending. If there is no pth element, return 0.

Example

n = 20

p = 3

The factors of 20 in ascending order are {1, 2, 4, 5, 10, 20}. Using 1-based indexing, if p = 3, then 4 is returned. If p > 6, 0 would be returned.

Constraints

$1 \leq n \leq 10^{15}$

$1 \leq p \leq 10^9$

The first line contains an integer n, the number to factor.

The second line contains an integer p, the 1-based index of the factor to return.

Sample Case 0

Sample Input 0

10
3

Sample Output 0

5

Explanation 0

Factoring n = 10 results in {1, 2, 5, 10}. Return the p = 3rd factor, 5, as the answer.

Sample Case 1

Sample Input 1

10
5

Sample Output 1

0

Explanation 1

Factoring n = 10 results in {1, 2, 5, 10}. There are only 4 factors and p = 5, therefore 0 is returned as the answer.

Sample Case 2

Sample Input 2

1
1

Sample Output 2

1

Explanation 2

Factoring n = 1 results in {1}. The p = 1st factor of 1 is returned as the answer.

For example:

Input Result

10 5
3

10 0
5

1 1
1

Answer:(penalty regime: 0 %)

<pre>1 n=int(input()) 2 p=int(input()) 3 def factor(num): 4 fact=[] 5 for i in range(1,num+1): 6 if num%i==0: 7 fact.append(i) 8 return fact 9 fact1=factor(n) 10 if p<=len(fact1): 11 print(fact1[p-1]) 12 else: 13 print(0) 14</pre>	
---	--



Feedback

Input Expected Got

10	5	5
3		


10	0	0
5		

1	1	1
1		

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 10

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Complete the program to count frequency of each element of an array. Frequency of a particular element will be printed once.

Sample Test Cases

Test Case 1

Input

7
23
45
23
56
45
23
40

Output

23 occurs 3 times

45 occurs 2 times

56 occurs 1 times

40 occurs 1 times

Answer:(penalty regime: 0 %)

```
1 n=int(input())
2 ele=[]
3 for _ in range(n):
4     ele.append(int(input()))
5 f={}
6 for n in ele:
7     if n in f:
8         f[n]+=1
9     else:
10        f[n]=1
11 for n,count in f.items():
12     print(f"{n} occurs {count} times")
```

Feedback

Input	Expected	Got
7		
23		
45	23 occurs 3 times	23 occurs 3 times
23	45 occurs 2 times	45 occurs 2 times
56	56 occurs 1 times	56 occurs 1 times
45	40 occurs 1 times	40 occurs 1 times
23		
40		

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.
[Finish review](#)
[Skip Quiz navigation](#)

Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#) [Question 6 This page](#) [Question 7 This page](#) [Question 8 This page](#) [Question 9 This page](#) [Question 10 This page](#)
[Show one page at a time](#)[Finish review](#)

CS23336-Introduction to Python Programming

Started on Saturday, 19 October 2024, 8:38 PM

State Finished


Completed on Saturday, 19 October 2024, 10:52 PM

Time taken 2 hours 14 mins

Marks 10.00/10.00

Grade **100.00** out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Given a tuple and a positive integer k, the task is to find the count of distinct pairs in the tuple whose sum is equal to **K**.

Examples:

Input: t = (5, 6, 5, 7, 7, 8), K = 13
Output: 2
Explanation:
Pairs with sum K(= 13) are {(5, 8), (6, 7), (6, 7)}.
Therefore, distinct pairs with sum K(= 13) are { (5, 8), (6, 7) }.
Therefore, the required output is 2.

For example:

Input	Result
-------	--------

1,2,1,2,5 3	1
----------------	---

1,2 0	0
----------	---

Answer:(penalty regime: 0 %)

```
1 def fun(t,k):
2     s=set()
3     p=set()
4     for n in t:
5         c=k-n
6         if c in s:
7             p.add(tuple(sorted((n,c))))
8             s.add(n)
9     return len(p)
10 t=tuple(map(int,input().split(',')))
11 k=int(input())
12 print(fun(t,k))
```

Feedback

Input Expected Got

5,6,5,7,7,8 2 2
13

1,2,1,2,5 1 1
3

1,2 0 0
0

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 out of 1.00

Flag question

Question text

You are given an integer tuple `nums` containing distinct numbers. Your task is to perform a sequence of operations on this tuple until it becomes empty. The operations are defined as follows:

- 1. If the first element of the tuple has the smallest value in the entire tuple, remove it.
- 2. Otherwise, move the first element to the end of the tuple.

You need to return an integer denoting the number of operations required to make the tuple empty.

Constraints

- The input tuple `nums` contains distinct integers.
- The operations must be performed using tuples and sets to maintain immutability and efficiency.
- Your function should accept the tuple `nums` as input and return the total number of operations as an integer.

Example:

Input: `nums = (3, 4, -1)`
Output: 5

Explanation:
Operation 1: `[3, 4, -1]` -> First element is not the smallest, move to the end -> `[4, -1, 3]`
Operation 2: `[4, -1, 3]` -> First element is not the smallest, move to the end -> `[-1, 3, 4]`
Operation 3: `[-1, 3, 4]` -> First element is the smallest, remove it -> `[3, 4]`
Operation 4: `[3, 4]` -> First element is the smallest, remove it -> `[4]`
Operation 5: `[4]` -> First element is the smallest, remove it -> `[]`
Total operations: 5

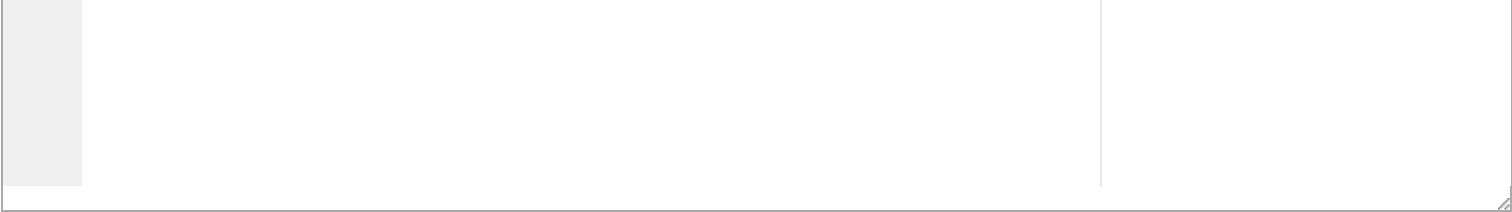
For example:

Test	Result
<pre>print(count_operations((3, 4, -1)))</pre>	5

Answer:(penalty regime: 0 %)

Reset answer

```
1 def count_operations(nums: tuple) -> int:
2     # Your implementation here
3     op=0
4     nums=list(nums)
5     while nums:
6         if nums[0]==min(nums):
7             nums.pop(0)
8         else:
9             nums.append(nums.pop(0))
10        op+=1
11    return op
```



Feedback


Test	Expected Got	
print(count_operations((3, 4, -1)))	5	5
print(count_operations((1, 2, 3, 4, 5)))	5	5
print(count_operations((5, 4, 3, 2, 1)))	15	15
print(count_operations((42,)))	1	1
print(count_operations((-2, 3, -5, 4, 1)))	11	11

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 3

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

There is a malfunctioning keyboard where some letter keys do not work. All other keys on the keyboard work properly.
Given a string text of words separated by a single space (no leading or trailing spaces) and a string brokenLetters of all distinct letter keys that are broken, return the number of words in text you can fully type using this keyboard.

Example 1:

Input: text = "hello world", brokenLetters = "ad"

Output:

1

Explanation: We cannot type "world" because the 'd' key is broken.

For example:

Input	Result
hello world ad	1

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ak

Answer:(penalty regime: 0 %)

<pre>1- def function(a:str,b:str)->int: 2- a=a.lower() 3- b=b.lower() 4- w=a.split() 5- b1=set(b) 6- count=0 7- for i in w: 8- if not set(i)&b1: 9- count+=1</pre>	
---	--


```

10     return count
11
12     a=input()
13     b=input()
14     print(function(a,b))

```

Feedback

Input	Expected Got	
hello world ad	1	1
Welcome to REC e	1	1
Faculty Upskilling in Python Programming ak	2	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

Question text

Write a program to eliminate the common elements in the given 2 arrays and print only the non-repeating elements and the total number of such non-repeating elements.

Input Format:

The first line contains space-separated values, denoting the size of the two arrays in integer format respectively.

The next two lines contain the space-separated integer arrays to be compared.

[Sample](#) Input:

```

5 4
1 2 8 6 5
2 6 8 10

```

[Sample](#) Output:

```

1 5 10
3

```

[Sample](#) Input:

```

5 5
1 2 3 4 5
1 2 3 4 5

```

[Sample](#) Output:

NO SUCH ELEMENTS

For example:

Input	Result
5 4 1 2 8 6 5 2 6 8 10	1 5 10 3
5 5 1 2 3 4 5 1 2 3 4 5	NO SUCH ELEMENTS

Answer:(penalty regime: 0 %)

```
1 s1,s2=map(int,input().split())
2 a1=list(map(int,input().split()))
3 a2=list(map(int,input().split()))
4 c=set(a1+a2)
5 ce=set(a1)&set(a2)
6 n=sorted(c-ce)
7 if n:
8     print(*n)
9     print(len(n))
10 else:
11     print("NO SUCH ELEMENTS")
```

Feedback


Input	Expected	Got
5 4 1 2 8 6 5 2 6 8 10	1 5 10 3	1 5 10 3
3 3 10 10 10 10 11 12	11 12 2	11 12 2
5 5 1 2 3 4 5 1 2 3 4 5	NO SUCH ELEMENTS	NO SUCH ELEMENTS

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 5

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Given an array of strings words, return the words that can be typed using letters of the alphabet on only one row of American keyboard like the image below.

In the **American keyboard**:

- the first row consists of the characters "qwertyuiop",

- the second row consists of the characters "asdfghjkl", and
- the third row consists of the characters "zxcvbnm".



Example 1:

Input: words = ["Hello","Alaska","Dad","Peace"]
Output: ["Alaska","Dad"]

Example 2:

Input: words = ["omk"]
Output: []

Example 3:

Input: words = ["adsdf","sfd"]
Output: ["adsdf","sfd"]

For example:

Input Result

```
4
Hello
Alaska
Dad
Peace
```

```
2
adsdf
afd
```

Answer:(penalty regime: 0 %)

```
1 def function(word,rows):
2     l=word.lower()
3     for row in rows:
4         if all(char in row for char in l):
5             return True
6     return False
7 def find(words):
8     rows=["qwertyuiop","asdfghjkl","zxcvbnm"]
9     res=[]
10    for word in words:
11        if function(word,rows):
12            res.append(word)
13    return res
14 n=int(input())
15 words=[]
16 for _ in range(n):
17     word=input()
18     words.append(word)
19 res1=find(words)
20 if res1:
21     for word in res1:
22         print(word)
23 else:
24     print("No words")
```

Feedback

Input Expected Got

```
4
Hello
Alaska
Dad
Peace
```

```
1
omk
No words
No words
```

2
adsfd
afd

adsfd
afd


adsfd
afd

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Coders here is a simple task for you, Given string str. Your task is to check whether it is a binary string or not by using python set.

Examples:

Input: str = "01010101010"

Output: Yes

Input: str = "REC101"

Output: No

For example:

Input	Result
01010101010	Yes
010101 10101	No

Answer:(penalty regime: 0 %)

```
1 def bin1(s):
2     s=set(s)
3     if s.issubset({'0','1'}):
4         return 'Yes'
5     else:
6         return 'No'
7     print(bin1(input()))
```


Feedback

Input	Expected	Got
01010101010	Yes	Yes
REC123	No	No

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 7

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

The **DNA sequence** is composed of a series of nucleotides abbreviated as 'A', 'C', 'G', and 'T'.

- For example, "ACGAATTCCG" is a **DNA sequence**.

When studying **DNA**, it is useful to identify repeated sequences within the DNA.

Given a string *s* that represents a **DNA sequence**, return all the **10-letter-long** sequences (substrings) that occur more than once in a DNA molecule. You may return the answer in **any order**.

Example 1:

Input: *s* = "AAAAACCCCCAAAAACCCCCAAAAAGGGTTT"
Output: ["AAAAACCCCC", "CCCCAAAAA"]

Example 2:

Input: *s* = "AAAAAAAAAAAA"
Output: ["AAAAAAAAA"]

For example:

Input	Result
AAAAACCCCCAAAAACCCCCAAAAAGGGTTT	AAAAACCCCC CCCCAAAAA

Answer:(penalty regime: 0 %)

```
1 def dna(s):
2     seq={}
3     res=[]
4     for i in range(len(s)-9):
5         s1=s[i:i+10]
6         if s1 in seq:
7             seq[s1]+=1
8         else:
9             seq[s1]=1
10    for s1,c in seq.items():
11        if c>1:
12            res.append(s1)
13    return res
14 res1=dna(input())
15 for s1 in res1:
16     print(s1)
17
18
```

Feedback

Input	Expected	Got
AAAAACCCCCAAAAACCCCCAAAAAGGGTTT	AAAAACCCCC CCCCCAAAA	AAAAACCCCC CCCCCAAAA
AAAAAAAAAAAA	AAAAAAAAA	AAAAAAAAA

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 8

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

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

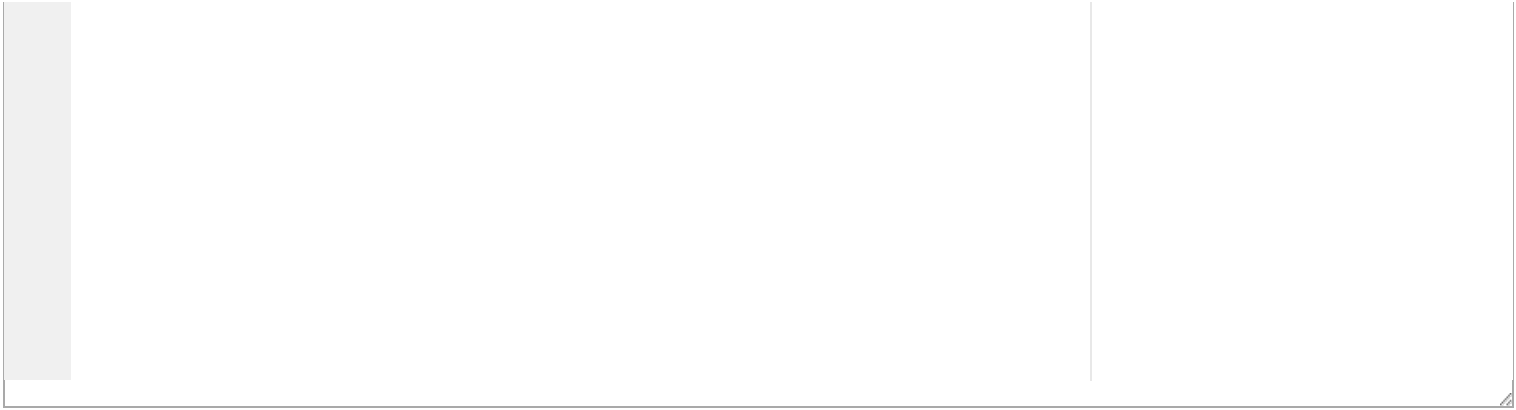


For example:

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

Answer:(penalty regime: 0 %)

1	s1=set(input().strip().split())	
2	s2=set(input().strip().split())	
3	s3=set(input().strip().split())	
4	if s3.issubset(s1) and s3.issubset(s2):	
5	print('yes')	
6	print("set3 is subset of set1 and set2")	
7	else:	
8	print('No')	



Feedback


Test	Input	Expected	Got
1	mango apple mango orange mango	yes set3 is subset of set1 and set2 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 9

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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 1 2 3 4
2
3
4

Answer:(penalty regime: 0 %)

```
1 n=int(input())
2 a=[]
3 for _ in range(n):
4     b=int(input())
5     a.append(b)
6 a=set(a)
7 print(*a)
```

Feedback

Input Expected Got

5
1
2 1 2 3 4 1 2 3 4
2
3
4

6
1
1
2 1 2 3 1 2 3
2
3
3

5
11
22 11 22 11 22
11
22
11

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 10

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Given an array of integers `nums` containing $n + 1$ integers where each integer is in the range $[1, n]$ inclusive. There is only **one repeated number** in `nums`, return *this repeated number*. Solve the problem using set.

Example 1:

Input: `nums = [1,3,4,2,2]`

Output: 2

Example 2:

Input: `nums = [3,1,3,4,2]`

Output: 3

For example:

Input	Result
1 3 4 4 2 4	

Answer:(penalty regime: 0 %)

```
1 def dup(n):
2     s=set()
3     for i in n:
4         if i in s:
5             return i
6         s.add(i)
7 a=input()
8 n=list(map(int,a.split()))
9 print(dup(n))
```

Feedback

Input	Expected	Got
1 3 4 4 2	4	4
1 2 2 3 4 5 6 7 2	2	

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

[Finish review](#)
[Skip Quiz navigation](#)

Quiz navigation

CS23336-Introduction to Python Programming

Started on Saturday, 19 October 2024, 11:10 PM

State Finished


Completed on Tuesday, 22 October 2024, 10:03 PM

Time taken 2 days 22 hours

Marks 10.00/10.00

Grade **100.00** out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Give a dictionary with value lists, sort the keys by summation of values in value list.

Input : test_dict = {'Gfg' : [6, 7, 4], 'best' : [7, 6, 5]}

Output : {'Gfg': 17, 'best': 18}

Explanation : Sorted by sum, and replaced.

Input : test_dict = {'Gfg' : [8,8], 'best' : [5,5]}

Output : {'best': 10, 'Gfg': 16}

Explanation : Sorted by sum, and replaced.

Sample Input:

2
Gfg 6 7 4
Best 7 6 5

Sample Output

Gfg 17
Best 18

For example:

Input	Result
2 Gfg 6 7 4 Best 7 6 5	Gfg 17 Best 18

Answer:(penalty regime: 0 %)

```
1 def dic(n,t):
2     sum1={}
3     for k,v in t.items():
4         sum1[k]=sum(v)
5     sdict=dict(sorted(sum1.items(),key=lambda x:x[1]))
6     for k,v in sdict.items():
7         print(f"{k} {v}")
8 n=int(input())
9 t={}
10 for _ in range(n):
11     e=input().split()
```

```
13 k=0
14 t[k]=v
15 dic(n,t)
16
```

Feedback


Input	Expected	Got
2 Gfg 6 7 4 Best 7 6 5	Gfg 17 Best 18	Gfg 17 Best 18
2 Gfg 6 6 Best 5 5	Best 10 Gfg 12	Best 10 Gfg 12

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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.

Constraints:

2 <= s.length <= 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 - def recon():
2     s=input()
3     w=s.split()
4     sw=sorted(w,key= lambda w1:int(''.join(filter(str.isdigit,w1))) )
5     o=' '.join(''.join(filter(str.isalpha,w1)) for w1 in sw)
6     return o
7     print(recon())
```

Feedback


Input	Expected	Got
is2 sentence4 This1 a3 This	This is a sentence	This is a sentence

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 3

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Objective:

Develop a Python program that takes an input string from the user and counts the number of occurrences of each vowel (a, e, i, o, u) in the string. The program should be case-insensitive, meaning it should treat uppercase and lowercase vowels as the same.

Description:

Vowels play a significant role in the English language and other alphabet-based languages. Counting vowels in a given string is a fundamental task that can be applied in various text processing applications, including speech recognition, linguistic research, and text analysis. The objective of this problem is to create a Python script that accurately counts and displays the number of times each vowel appears in a user-provided string.

Program Requirements:

Input:

First line reading String as input, The string can contain any characters, including letters, numbers, and special

characters.

Output:

Display the number of occurrences of each vowel in the string.

The output should list each vowel followed by its count.

Example:

Consider the following example for better understanding:

- **Input:** "Python Programming"
- **Output**

a = 1
e = 0
i = 1
o = 2
u = 0

For example:

Input	Result
Hello World	a = 0 e = 1 i = 0 o = 2 u = 0
Python	a = 0 e = 0 i = 0 o = 1 u = 0

Answer:(penalty regime: 0 %)

```
1 def vowels(s):
2     vowel={'a':0,'e':0,'i':0,'o':0,'u':0}
3     s=s.lower()
4     for char in s:
5         if char in vowel:
6             vowel[char]+=1
7     return vowel
8 s=input()
9 count=vowels(s)
10 for _ in 'aeiou':
11     print(f"{_} = {count[_]}")
```

Feedback

Input	Expected	Got
Hello World	a = 0	a = 0
	e = 1	e = 1
	i = 0	i = 0
	o = 2	o = 2
	u = 0	u = 0
AEIOU aeio u	a = 2	a = 2
	e = 2	e = 2
	i = 2	i = 2
	o = 2	o = 2
	u = 2	u = 2


	a = 0	a = 0
	e = 0	e = 0
Python	i = 0	i = 0
	o = 1	o = 1
	u = 0	u = 0
	a = 1	a = 1
	e = 1	e = 1
abcdefghijklmnopqrstuvwxyz	i = 1	i = 1
	o = 1	o = 1
	u = 1	u = 1
	a = 1	a = 1
	e = 1	e = 1
12345!@#\$\$%AEIOU	i = 1	i = 1
	o = 1	o = 1
	u = 1	u = 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

Question text

Create a student dictionary for n students with the student name as key and their test mark assignment mark and lab mark as values. Do the following computations and display the result.

- 1.Identify the student with the highest average score
- 2.Identify the student who as the highest Assignment marks
- 3.Identify the student with the Lowest lab marks
- 4.Identify the student with the lowest average score

Note:
If more than one student has the same score display all the student names

Sample input:

```

4
James 67 89 56
Lalith 89 45 45
Ram 89 89 89
Sita 70 70 70

```

Sample Output:

```

Ram
James Ram
Lalith
Lalith

```

For example:

Input	Result
4	
James 67 89 56	Ram
Lalith 89 45 45	James Ram
Ram 89 89 89	Lalith
Sita 70 70 70	Lalith

Answer:(penalty regime: 0 %)

```
1 st={}
2 n=int(input())
3 for _ in range(n):
4     data=input().split()
5     name=data[0]
6     test=int(data[1])
7     ass=int(data[2])
8     lab=int(data[3])
9     st[name]=(test,ass,lab)
10
11 havg=float('-inf')
12 lavg=float('inf')
13 hass=float('-inf')
14 llab=float('inf')
15
16 havgst=[]
17 lavgst=[]
18 hassst=[]
19 llabst=[]
20
21 for name,marks in st.items():
22     test,ass,lab=marks
23
24     avgscore=(test+ass+lab)/3
25
26     if avgscore>havg:
27         havg=avgscore
28         havgst=[name]
29     elif avgscore==havg:
30         havgst.append(name)
31
32     if ass>hass:
33         hass=ass
34         hassst=[name]
35     elif ass==hass:
36         hassst.append(name)
37
38     if lab<llab:
39         llab=lab
40         llabst=[name]
41     elif lab==llab:
42         llabst.append(name)
43
44     if avgscore<lavg:
45         lavg=avgscore
46         lavgst=[name]
47     elif avgscore==lavg:
48         lavgst.append(name)
49
50 havgst.sort()
51 hassst.sort()
52 llabst.sort()
```

Feedback

Input	Expected	Got
4		
James 67 89 56	Ram	Ram
Lalith 89 45 45	James Ram	James Ram
Ram 89 89 89	Lalith	Lalith
Sita 70 70 70	Lalith	Lalith


3ShadhanAShadhanA
Raja 95 67 90ShadhanAShadhanA
Aarav 89 90 90Aarav RajaAarav Raja
ShadhanA 95 95 91 RajaRaja

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 5

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

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.

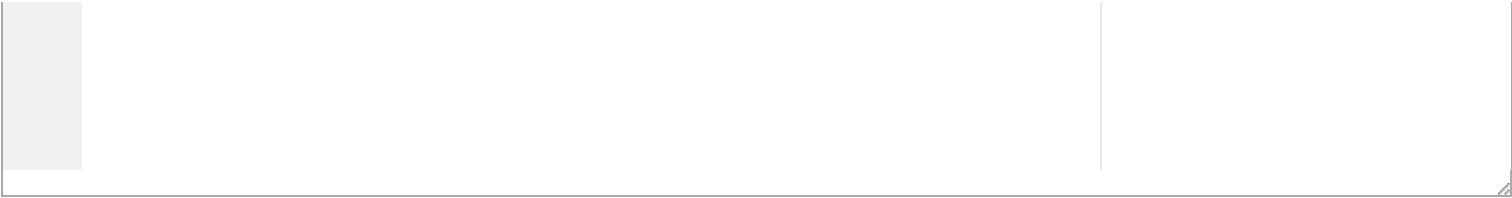
For example:

Input	Result
-------	--------

REC	REC is worth 5 points.
-----	------------------------

Answer:(penalty regime: 0 %)

<pre>1 = def cal(word): 2 points={'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, 6 'K':5, 7 'J':8,'X':8, 8 'Q':10,'Z':1} 9 word=word.upper() 10 score=sum(points.get(l,0) for l in word) 11 return score 12 word=input() 13 score1=cal(word) 14 print(f"{word} is worth {score1} points.")</pre>	
---	--



Feedback

Input	Expected	Got
GOD	GOD is worth 5 points.	GOD is worth 5 points.
REC	REC is worth 5 points.	REC is worth 5 points.

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 6

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

You are given a string word. A letter is called **special** if it appears both in lowercase and uppercase in word.

Your task is to return the number of **special** letters in word.

Constraints

- The input string word will contain only alphabetic characters (both lowercase and uppercase).
- The solution must utilize a dictionary to determine the number of special letters.
- The function should handle various edge cases, such as strings without any special letters, strings with only lowercase or uppercase letters, and mixed strings.

Examples

Example 1:

Input: word = "aaAbcBC"

Output: 3

Explanation:

The special characters in `word` are 'a', 'b', and 'c'.

Example 2:

Input: word = "abc"

Output: 0

Explanation:

No character in `word` appears in uppercase.

For example:

Test	Result
print(count_special_letters("AaBbCcDdEe"))	5

Answer:(penalty regime: 0 %)

Reset answer

```
1- def count_special_letters(word: str) -> int:
2-     # Your implementation here
3-     count={}
4-     for char in word:
5-         l=char.lower()
6-         if l in count:
7-             count[l].add(char)
```

```
9     else:
10         count[l]={char}
11         count1=0
12         for _set in count.values():
13             if len(_set)>1:
14                 count1+=1
15         return count1
```

Feedback

Test	Expected	Got
print(count_special_letters("AaBbCcDdEe"))	5	5
print(count_special_letters("ABCDE"))	0	0
print(count_special_letters("abcde"))	0	0

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 7

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

A company wants to send its quotation secretly to its client. The company decided to encrypt the amount they are sending to their client with some special symbols so that the equation amount will not be revealed to any external person. They used the special symbols !, @, #, \$, %, ^, &, *, >, < for 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 respectively. Write a python code to help the company to convert the amount to special symbols.

(Value rounded off to 2 decimal points)

Input

n: Float data type which reads amount to send

Output

s: : String data type which displays symbols

Sample Testcase 1

Input

10000

Output

@!!!!!!

Sample Testcase2

1234.56

Output

@#\$.%^&

For example:

Input Result

1345.23 @\$%^.#\$

15000.59 @^!!!!.^<

156789 @^&*><.!!

Answer:(penalty regime: 0 %)

```
1 def fun(a):
2     s={'0':'!', '1':'@', '2':'#', '3':'$', '4':'%', '5':'^', '6':'&', '7':'*', '8':'>', '9':'<'}
3     a=round(a,2)
4     astr=f"{a:.2f}"
5     str1=''
6     for char in astr:
7         if char in s:
8             str1+=s[char]
9         else:
10            str1+=char
11    return str1
12 n=float(input())
13 print(fun(n))
```

Feedback


Input	Expected	Got
1345.23 @\$%^.#\$	@\$%^.#\$	
15000.59 @^!!!!.^<	@^!!!!.^<	
1234 @\$%!!.!	@#\$%!!.!	
156789 @^&*><.!!	@^&*><.!!	

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 8

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Given a number, convert it into corresponding alphabet.

Input	Output
1	A
26	Z
27	AA
676	YZ

Input Format

Input is an integer

Output Format

Print the alphabets

Constraints

1 <= num <= 4294967295

Sample Input 1

26

Sample Output 1

Z

For example:

Test	Result
print(excelNumber(26))	Z

Answer:(penalty regime: 0 %)

Reset answer

```
1 def excelNumber(n):
2     res=[]
3     while n>0:
4         n-=1
5         rem=n%26
6         res.append(chr(rem+ord('A')))
7         n//=26
8     return ''.join(res[::-1])
9
```

Feedback

Test	Expected	Got
print(excelNumber(26))	Z	Z
print(excelNumber(27))	AA	AA

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 9

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

Given an array of names of candidates in an election. A candidate name in the array represents a vote cast to the candidate. Print the name of candidates received Max vote. If there is tie, print a lexicographically smaller name.

Examples:

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

Output : John

We have four Candidates with name as 'John', 'Johnny', 'jamie', 'jackie'. The candidates John and Johnny get maximum votes. Since John is alphabetically smaller, we print it. Use dictionary to solve the above problem

Sample Input:

```
10  
John  
John  
Johnny  
Jamie  
Jamie  
Johnny  
Jack  
Johnny  
Johnny  
Jackie
```

Sample Output:

```
Johnny
```

Answer:(penalty regime: 0 %)

```
1 def find(v):
2     count={}
3     for v1 in v:
4         if v1 in count:
5             count[v1]+=1
6         else:
7             count[v1]=1
8     mv=max(count.values())
9     c=[c1 for c1, co in count.items() if co==mv]
10    return min(c)
11 n=int(input())
12 v=[]
13 for _ in range(n):
14     v.append(input().capitalize())
15 print(find(v))
```

Feedback

Input Expected Got

10
John
John
Johnny
Jamie
Jamie Johny Johny
Johnny
Jack
Johnny
Johnny
Jackie


6
Ida
Ida
Ida Ida Ida
Kiruba
Kiruba
Kiruba

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 10

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

A sentence is a string of single-space separated words where each word consists only of lowercase letters.A word is uncommon if it appears exactly once in one of the sentences, and does not appear in the other sentence.

Given two sentences s1 and s2, return a list of all the uncommon words. You may return the answer in any order.

Example 1:

Input: s1 = "this apple is sweet", s2 = "this apple is sour"

Output: ["sweet","sour"]

Example 2:

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

Output: ["banana"]

Constraints:

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

s1 and s2 consist of lowercase English letters and spaces.

s1 and s2 do not have leading or trailing spaces.

All the words in s1 and s2 are separated by a single space.

Note:

Use dictionary to solve the problem

For example:

Input	Result
this apple is sweet	
this apple is sour	sweet sour

Answer:(penalty regime: 0 %)

```
1 def words(s1,s2):
2     w1=s1.split()
3     w2=s2.split()
4     uncommon=[]
5     for w in w1:
6         if w1.count(w)==1 and w not in w2:
7             uncommon.append(w)
8     for w in w2:
9         if w2.count(w)==1 and w not in w1:
10            uncommon.append(w)
11     return uncommon
12 s1=input()
13 s2=input()
14 print(*words(s1,s2))
```

Feedback

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

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Finish review

[Skip Quiz navigation](#)


Quiz navigation

CS23336-Introduction to Python Programming

Started on	Wednesday, 30 October 2024, 6:30 PM
State	Finished
Completed on	Sunday, 3 November 2024, 7:17 PM
Time taken	4 days
Marks	10.00/10.00
Grade	100.00 out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00

☐  Flag question

Question text

Given an array of integers `nums` which is sorted in ascending order, and an integer `target`, write a function to search `target` in `nums`. If `target` exists, then return its index. Otherwise, return `-1`.

You must write an algorithm with $O(\log n)$ runtime complexity.

Example 1:

Input: `nums = [-1,0,3,5,9,12]`, `target = 9`
Output: `4`
Explanation: 9 exists in `nums` and its index is 4

Example 2:

Input: `nums = [-1,0,3,5,9,12]`, `target = 2`
Output: `-1`
Explanation: 2 does not exist in `nums` so return `-1`

Constraints:

- $1 \leq \text{nums.length} \leq 10^4$
- $-10^4 < \text{nums}[i], \text{target} < 10^4$
- All the integers in `nums` are **unique**.
- `nums` is sorted in ascending order.

For example:

Test	Result
<code>print(search([-1,0,3,5,9,12],9))</code>	<code>4</code>

Answer:(penalty regime: 0 %)

Reset answer

1 * def search(nums, target):
2 l,r=0,len(nums)-1
3 * while l<=r:
4 m=l+(r-l)//2
5 * if nums[m]==target:
6 return m
7 * elif nums[m]<target:
8 l=m+1
9 * else:
10 r=m-1
11 return -1
12

Feedback


Test	Expected Got
<code>print(search([-1,0,3,5,9,12],9))</code>	<code>4</code>
<code>print(search([-1,0,3,5,9,12],2))</code>	<code>-1</code>

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 out of 1.00

☐  Flag question

Question text

An list contains N numbers and you want to determine whether two of the numbers sum to a given number K. For example, if the input is 8, 4, 1, 6 and K is 10, the answer is yes (4 and 6). A number may be used twice.

Input Format

The first line contains a single integer n , the length of list
The second line contains n space-separated integers, list[i].
The third line contains integer k.

Output Format

Print Yes or No.

Sample Input

7
0 1 2 4 6 5 3
1

Sample Output

Yes

For example:

Input	Result
5 8 9 12 15 3 11	Yes
6 2 9 21 32 43 43 1 4	No

Answer:(penalty regime: 0 %)

```
1 def fun(n,arr,k):
2     seen=set()
3     for num in arr:
4         if (k-num)in seen:
5             return "Yes"
6         seen.add(num)
7     return "No"
8 n=int(input())
9 arr=list(map(int,input().split()))
10 k=int(input())
11 print(fun(n,arr,k))
```

Feedback

Input	Expected	Got
5 8 9 12 15 3 11	Yes	Yes
6 2 9 21 32 43 43 1 4	No	No


6
13 42 31 4 8 9 Yes Yes
17

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 3

Correct
Mark 1.00 out of 1.00

☐  Flag question

Question text

Two string values S1, S2 are passed as the input. The program must print first N characters present in S1 which are also present in S2.

Input Format:

The first line contains S1.
The second line contains S2.
The third line contains N.

Output Format:

The first line contains the N characters present in S1 which are also present in S2.

Boundary Conditions:

2 <= N <= 10
2 <= Length of S1, S2 <= 1000

Example Input/Output 1:

Input:

abcbde
cdefghbb
3

Output:

bcd

Note:

b occurs twice in common but must be printed only once.

Answer:(penalty regime: 0 %)

```
1 * def fun(s1,s2,n):
2     res=[]
3     seen=set()
4 *     for char in s1:
5 *         if char in s2 and char not in seen:
6             res.append(char)
7             seen.add(char)
8 *         if len(res)==n:
9             break
10    return ''.join(res)
11 s1=input()
12 s2=input()
13 n=int(input())
14 print(fun(s1,s2,n))
```

Feedback

Input Expected Got


abcbde
cdefghbb bcd bcd
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

Question text

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 %)

```
1 * def isPalindrome(word):  
2     i=0  
3     j=len(word)-1  
4 *     while i<j:  
5 *         if word[i]!=word[j]:  
6             return False  
7         i+=1  
8         j-=1  
9     return True  
10 words=input().lower().split(" ")  
11 * for word in words:  
12 *     if not isPalindrome(word):  
13         print(word,end=" ")  
14
```

Feedback


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.

Question 5

Correct
Mark 1.00 out of 1.00

☐  Flag question

Question text

You are given an $m \times n$ integer matrix `matrix` with the following two properties:

- Each row is sorted in non-decreasing order.
- The first integer of each row is greater than the last integer of the previous row.

Given an integer `target`, return `True` *if target is in matrix* or `False` *otherwise*.

You must write a solution in $O(\log(m * n))$ time complexity.

Example 1:



Input: matrix = [[1,3,5,7],[10,11,16,20],[23,30,34,60]], target = 3
Output: True

Example 2:



Input: matrix = [[1,3,5,7],[10,11,16,20],[23,30,34,60]], target = 13
Output: False

For example:

Test	Result
print(searchMatrix([[1,3,5,7],[10,11,16,20],[23,30,34,60]], 13))	False
print(searchMatrix([[1,3,5,7],[10,11,16,20],[23,30,34,60]], 3))	True

Answer:(penalty regime: 0 %)

Reset answer

```
1 def searchMatrix(m,t):
2     if not m or not m[0]:
3         return False
4     r,c=len(m),len(m[0])
5     l,r=0,r*c-1
6     while l<=r:
7         mid=(l+r)//2
8         mid1=m[mid//c][mid%c]
9         if mid1==t:
10            return True
11        elif mid1<t:
12            l=mid+1
13        else:
14            r=mid-1
15    return False
```

Feedback

Test	Expected	Got
print(searchMatrix([[1,3,5,7],[10,11,16,20],[23,30,34,60]], 13))	False	False
print(searchMatrix([[1,3,5,7],[10,11,16,20],[23,30,34,60]], 3))	True	True

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00

☐ Flag question

Question text

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:

RLRRLRLRL

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", "LLLR", "LR", each substring contains same number of 'L' and 'R'.

Example 3:

Input:
LLLLRRRR

Output:
1
Explanation: s can be split into "LLLLRRRR".

Constraints:

1 <= s.length <= 1000
s[i] is either 'L' or 'R'.
s is a balanced string.

For example:

Test	Result
print(BalancedStrings('RLRRLRLRL'))	4
print(BalancedStrings('RLLLLRRRLR'))	3

Answer:(penalty regime: 0 %)

Reset answer

```
1 def BalancedStrings(s):
2     b=0
3     c=0
4     for char in s:
5         if char=='L':
6             b+=1
7         else:
8             b-=1
9         if b==0:
10             c+=1
11     return c
```

Feedback

Test	Expected Got
print(BalancedStrings('RLRRLRLRL'))	4
print(BalancedStrings('RLLLLRRRLR'))	3

Passed all tests!
Correct
Marks for this submission: 1.00/1.00.

Question 7

Correct
Mark 1.00 out of 1.00
☐ Flag question

Question text

Given an list, find peak element in it. A peak element is an element that is greater than its neighbors.
An element a[i] is a peak element if
A[i-1] <= A[i] >= a[i+1] for middle elements. [0<i<n-1]

A[i-1] <= A[i] for last element [i=n-1]

A[i]>=A[i+1] for first element [i=0]

Input Format

The first line contains a single integer n , the length of A .
The second line contains n space-separated integers,A[i].

Output Format

Print peak numbers separated by space.

Sample Input

5
8 9 10 2 6

Sample Output

10 6

For example:

Input Result

4 12 8
12 3 6 8

Answer:(penalty regime: 0 %)


```
1 def find(n,arr):
2     peaks=[]
3     for i in range(n):
4         if i==0:
5             if n==1 or arr[i]>=arr[i+1]:
6                 peaks.append(arr[i])
7             elif i==n-1:
8                 if arr[i]>=arr[i-1]:
9                     peaks.append(arr[i])
10            else:
11                if arr[i]>=arr[i-1] and arr[i]>=arr[i+1]:
12                    peaks.append(arr[i])
13        return peaks
14 n=int(input())
15 arr=list(map(int,input().split()))
16 peaks=find(n,arr)
17 print(" ".join(map(str,peaks)))
```

Feedback

Input	Expected	Got
7 15 7 10 8 9 4 6	15 10 9 6	15 10 9 6
4 12 3 6 8	12 8	12 8

Passed all tests!
Correct
Marks for this submission: 1.00/1.00.

Question 8

Correct
Mark 1.00 out of 1.00
☐  Flag question

Question text

Given two Strings s1 and s2, remove all the characters from s1 which is present in s2.

Constraints

1<= string length <= 200

Sample Input 1

experience

enc

Sample Output 1

xpri

Answer:(penalty regime: 0 %)

```
1 def remove(s1,s2):
2     res=''
3     for char in s1:
4         if char not in s2:
5             res+=char
6     return res
7
8 s1=input()
9 s2=input()
10 print(remove(s1,s2))
```

Feedback

Input Expected Got

experience	xpri	xpri
enc		

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 9

Correct

Mark 1.00 out of 1.00

☐ Flag question

Question text

Given an array `nums` containing `n` distinct numbers in the range `[0, n]`, return *the only number in the range that is missing from the array*.

Example 1:

Input: `nums = [3,0,1]`
Output: `2`
Explanation: `n = 3` since there are 3 numbers, so all numbers are in the range `[0,3]`. `2` is the missing number in the range since it does not appear in `nums`.

Example 2:

Input: `nums = [0,1]`
Output: `2`
Explanation: `n = 2` since there are 2 numbers, so all numbers are in the range `[0,2]`. `2` is the missing number in the range since it does not appear in `nums`.

Example 3:

Input: `nums = [9,6,4,2,3,5,7,0,1]`
Output: `8`
Explanation: `n = 9` since there are 9 numbers, so all numbers are in the range `[0,9]`. `8` is the missing number in the range since it does not appear in `nums`.

For example:

Test	Result
<code>print(missingNumber([3,0,1]))</code>	<code>2</code>
<code>print(missingNumber([0,1]))</code>	<code>2</code>

Answer:(penalty regime: 0 %)

Reset answer

```
1 def missingNumber(nums):
2     n=len(nums)
3     s=n*(n+1)//2
```

```
4 s1=sum(nums)
5 return s-s1
6
```


Feedback

Test	Expected Got	
print(missingNumber([3,0,1]))	2	2
print(missingNumber([0,1]))	2	2
print(missingNumber([9,6,4,2,3,5,7,0,1]))	8	8

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 10

Correct
Mark 1.00 out of 1.00
☐  Flag question

Question text

Write a Python program for binary search.

For example:

Input	Result
1,2,3,5,8 6	False
3,5,9,45,42 42	True

Answer:(penalty regime: 0 %)

```
1 def search(arr,t):
2     arr.sort()
3     l,r=0,len(arr)-1
4     while l<=r:
5         m=(l+r)//2
6         if arr[m]==t:
7             return True
8         elif arr[m]<t:
9             l=m+1
10        else:
11            r=m-1
12        return False
13 arr=list(map(int,input().split(' ')))
14 t=int(input())
15 print(search(arr,t))
```

Feedback

Input	Expected Got	
1,2,3,5,8 6	False	False
3,5,9,45,42 42	True	True

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Save the state of the flags

Finish review

[Skip Quiz navigation](#)

Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#) [Question 6 This page](#) [Question 7 This page](#) [Question 8 This page](#) [Question 9 This page](#) [Question 10 This page](#)
[Show one page at a time](#)

Finish review

CS23336-Introduction to Python Programming

Started on

Thursday, 7 November 2024, 10:29 PM

State

Finished

Completed on

Sunday, 10 November 2024, 11:26 PM

Time taken

3 days

Marks

10.00/10.00

Grade

100.00 out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00

?

Flag question

Question text

The problem is that we want to reverse a array in $O(N)$ linear time complexity and we want the algorithm to be in-place as well!
For example: input is [1,2,3,4,5] then the output is [5,4,3,2,1]
Input
5
1 2 3 4 5
Output
5 4 3 2 1

For example:

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

Answer:(penalty regime: 0 %)

```
1 n=int(input())
2 arr=list(map(int,input().split()))
3 l,r=0,n-1
4 while l<=r:
5     arr[l],arr[r]=arr[r],arr[l]
6     l+=1
7     r-=1
8 print(' '.join(map(str,arr)))
```


Feedback

Input	Expected	Got
5 1 2 3 4 5	5 4 3 2 1	5 4 3 2 1
10 0 2 4 6 8 1 3 5 7 9	9 7 5 3 1 8 6 4 2 0	9 7 5 3 1 8 6 4 2 0

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Given an array of integers `nums`, sort the array in **increasing** order based on the frequency of the values. If multiple values have the same frequency, sort them in **decreasing** order.
Print the *sorted array*.

Example 1:

Input:
6
1 1 2 2 2 3

Output:
3 1 1 2 2 2

Explanation: '3' has a frequency of 1, '1' has a frequency of 2, and '2' has a frequency of 3.

Example 2:

Input:
5
2 3 1 3 2

Output:
1 3 3 2 2
Explanation: '2' and '3' both have a frequency of 2, so they are sorted in decreasing order.

Example 3:

Input:
9
-1 1 -6 4 5 -6 1 4 1
Output:
5 -1 4 4 -6 -6 1 1 1

Constraints:

- 1 <= `nums.length` <= 100
- -100 <= `nums[i]` <= 100

For example:

Input	Result
6 1 1 2 2 2 3	3 1 1 2 2 2
5 2 3 1 3 2	1 3 3 2 2

Answer:(penalty regime: 0 %)

```
1 def fun(arr):
2     f={}
3     for n in arr:
4         if n in f:
5             f[n]+=1
6         else:
7             f[n]=1
8     a=sorted(arr,key=lambda x: (f[x],-x))
9     print(*a)
10 n=int(input())
11 arr=list(map(int,input().split()))
12 fun(arr)
```



Feedback

Input	Expected	Got
<div>6</div> <div>1 1 2 2 2 3</div>	<div>3 1 1 2 2 2</div>	<div>3 1 1 2 2 2</div>
<div>5</div> <div>2 3 1 3 2</div>	<div>1 3 3 2 2</div>	<div>1 3 3 2 2</div>
<div>9</div> <div>-1 1 -6 4 5 -6 1 4 1</div>	<div>5 -1 4 4 -6 -6 1 1 15</div>	<div>-1 4 4 -6 -6 1 1 1</div>

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 3

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

Given an array of integers `arr`, replace each element with its rank.

The rank represents how large the element is. The rank has the following rules:

- Rank is an integer starting from 1.
- The larger the element, the larger the rank. If two elements are equal, their rank must be the same.
- Rank should be as small as possible.

Example 1:

Input: `arr = [40,10,20,30]`
Output: `[4,1,2,3]`
Explanation: 40 is the largest element. 10 is the smallest. 20 is the second smallest. 30 is the third smallest.

Example 2:

Input: `arr = [100,100,100]`
Output: `[1,1,1]`
Explanation: Same elements share the same rank.

Example 3:

Input: `arr = [37,12,28,9,100,56,80,5,12]`
Output: `[5,3,4,2,8,6,7,1,3]`

Constraints:

- $0 \leq arr.length \leq 10^5$
- $-10^9 \leq arr[i] \leq 10^9$

For example:

Test	Result
------	--------

```
print(arrayRankTransform([40,10,20,30])) [4, 1, 2, 3]
```

Answer:(penalty regime: 0 %)

Reset answer

```
1 def arrayRankTransform(arr):
2     s=sorted(set(arr))
3     r={value:i+1 for i,value in enumerate(s)}
4     return [r[x]for x in arr]
5
```

Feedback

Test	Expected	Got
print(arrayRankTransform([40,10,20,30]))	[4, 1, 2, 3]	[4, 1, 2, 3]
print(arrayRankTransform([100,100,100]))	[1, 1, 1]	[1, 1, 1]
print(arrayRankTransform([37,12,28,9,100,56,80,5,12]))	[5, 3, 4, 2, 8, 6, 7, 1, 3]	[5, 3, 4, 2, 8, 6, 7, 1, 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

Question text

Write a Python program to sort a list of elements using the merge sort algorithm.

For example:

Input Result

5 3 4 5 6 8
6 5 4 3 8

Answer:(penalty regime: 0 %)

```
1 def merge(arr,l,m,r):
2     l1=arr[l:m+1]
3     r1=arr[m+1:r+1]
4     i=0
5     j=0
6     k=l
7     while i<len(l1) and j<len(r1):
8         if l1[i]<=r1[j]:
9             arr[k]=l1[i]
10            i+=1
11        else:
12            arr[k]=r1[j]
13            j+=1
```


```
14         k+=1
15     while i<len(l1):
16         arr[k]=l1[i]
17         i+=1
18         k+=1
19     while j<len(r1):
20         arr[k]=r1[j]
21         j+=1
22         k+=1
23 def merge1(arr,l,r):
24     if l<r:
25         m=(l+r)//2
26         merge1(arr,l,m)
27         merge1(arr,m+1,r)
28         merge(arr,l,m,r)
29 n=int(input())
30 arr=list(map(int,input().split()))
31 merge1(arr,0,len(arr)-1)
32 print(" ".join(map(str,arr)))
```

Feedback

Input	Expected	Got
5 6 5 4 3 8	3 4 5 6 8	3 4 5 6 8
9 14 46 43 27 57 41 45 21 70	14 21 27 41 43 45 46 57 70	14 21 27 41 43 45 46 57 70
4 86 43 23 49	23 43 49 86	23 43 49 86

Passed all tests!
Correct
Marks for this submission: 1.00/1.00.

Question 5

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Bubble Sort is the simplest sorting algorithm that works by repeatedly swapping the adjacent elements if they are in wrong order. You read an list of numbers. You need to arrange the elements in ascending order and print the result. The sorting should be done using bubble sort.

Input Format: The first line reads the number of elements in the array. The second line reads the array elements one by one.

Output Format: The output should be a sorted list.

For example:

Input	Result
6 3 4 8 7 1 2	1 2 3 4 7 8
5 4 5 2 3 1	1 2 3 4 5

Answer:(penalty regime: 0 %)

```
1 def bubble(arr):
2     n=len(arr)
3     for i in range(n):
```



```

4 =         for j in range(0,n-i-1):
5 =             if arr[j]>arr[j+1]:
6 =                 arr[j],arr[j+1]=arr[j+1],arr[j]
7 n=int(input())
8 arr=list(map(int,input().split()))
9 bubble(arr)
10 print(" ".join(map(str,arr)))

```


Feedback

Input	Expected	Got
6 3 4 8 7 1 2	1 2 3 4 7 8	1 2 3 4 7 8
6 9 18 1 3 4 6	1 3 4 6 9 18	1 3 4 6 9 18
5 4 5 2 3 1	1 2 3 4 5	1 2 3 4 5

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Objective:

Develop a Python program to find the k-th maximum value in a given list of integers. The program should handle various edge cases, including lists with duplicate values, empty lists, and invalid values of k. The k-th maximum value refers to the k-th largest distinct element in the list.

Background:

Finding the k-th maximum value in a list is a common problem in computer science, often encountered in fields like data analysis, competitive programming, and software development. This problem requires an understanding of sorting algorithms, data structures, and efficient problem-solving techniques. By solving this problem, one gains insights into how to handle large datasets and optimize performance in practical applications.

Problem Description:

Given a list of integers, the task is to determine the k-th maximum value in the list. The program should meet the following requirements:

- Input:**
 - A list of integers, which can contain both positive and negative values.
 - An integer k, representing the position of the maximum value to find.
- Output:**
 - The k-th maximum value in the list.
 - If k is greater than the number of distinct elements in the list or if the list is empty, the program should return an appropriate message indicating the error.

Constraints:

- The list may contain duplicate values.
- The value of k should be a positive integer.
- The list may contain up to 10^6 elements, and each element can be as large as 10^9 in magnitude.

Examples:

Consider the following examples for better understanding:

1. Example 1:

- **Input:** list = [3, 1, 5, 4, 2], k = 2
- **Output:** 4
- **Explanation:** The distinct elements in the list are [1, 2, 3, 4, 5]. The 2nd maximum value is 4.

2. Example 2:

- **Input:** list = [7, 7, 7, 7, 7], k = 1
- **Output:** 7
- **Explanation:** The distinct elements in the list are [7]. The 1st maximum value is 7.

3. Example 3:

- **Input:** list = [2, 1, 2, 1, 2], k = 3
- **Output:** -1
- **Explanation:** The distinct elements in the list are [1, 2]. There is no 3rd maximum value.

For example:

Input	Result
5 3 1 5 4 2 2	4
6 7 7 7 7 7 7 1	7
10 2 1 2 1 2 1 2 1 2 1 -1 3	

Answer:(penalty regime: 0 %)

```
1 def fun(arr,k):
2     d=sorted(set(arr),reverse=True)
3     if k>len(d):
4         return -1
5     return d[k-1]
6 n=int(input())
7 arr=list(map(int,input().split()))
8 k=int(input())
9 print(fun(arr,k))
10
```

Feedback

Input	Expected	Got
5 3 1 5 4 2 2	4	4

6
7 7 7 7 7 7 7 7
1


10
2 1 2 1 2 1 2 1 2 1 -1 -1
3

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 7

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Given an integer array `nums` sorted in **non-decreasing** order, return *an array of **the squares of each number** sorted in non-decreasing order.*

Example 1:

Input: `nums = [-4,-1,0,3,10]`
Output: `[0,1,9,16,100]`
Explanation: After squaring, the array becomes `[16,1,0,9,100]`.
After sorting, it becomes `[0,1,9,16,100]`.

Example 2:

Input: `nums = [-7,-3,2,3,11]`
Output: `[4,9,9,49,121]`

Constraints:

- `1 <= nums.length <= 104`
- `-104 <= nums[i] <= 104`
- `nums` is sorted in **non-decreasing** order.

For example:

Test	Result
<code>print(sortedSquares([-4,-1,0,3,10]))</code>	<code>[0, 1, 9, 16, 100]</code>

Answer:(penalty regime: 0 %)

Reset answer

```
1 def sortedSquares(nums):
2     n=len(nums)
3     res=[0]*n
4     l,r=0,n-1
5     pos=n-1
6     while l<=r:
7         l1=nums[l]**2
8         r1=nums[r]**2
9         if l1>r1:
10             res[pos]=l1
11             l+=1
12         else:
13             res[pos]=r1
14             r-=1
15         pos-=1
16     return res
17
18
```

Feedback


Test	Expected	Got
print(sortedSquares([-4,-1,0,3,10]))	[0, 1, 9, 16, 100]	[0, 1, 9, 16, 100]
print(sortedSquares([-7,-3,2,3,11]))	[4, 9, 9, 49, 121]	[4, 9, 9, 49, 121]

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 8

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

To find the frequency of numbers in a list and display in sorted order.

Constraints:

1<=n, arr[i]<=100

Input:

1 68 79 4 90 68 1 4 5

output:

1 2
4 2
5 1
68 2
79 1
90 1

For example:

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

Answer:(penalty regime: 0 %)

```
1 def frequency(arr):
2     freq={}
3     for num in arr:
4         freq[num]=freq.get(num,0)+1
5     for num in sorted(freq):
6         print(num,freq[num])
7
8 d=list(map(int,input().split()))
9 frequency(d)
10
11
12
```



Feedback

Input	Expected Got	
4 3 5 3 4 5	3 2	3 2
	4 2	4 2
	5 2	5 2
12 4 4 4 2 3 5	2 1	2 1
	3 1	3 1
	4 3	4 3
	5 1	5 1
	12 1	12 1
5 4 5 4 6 5 7 3	3 1	3 1
	4 2	4 2
	5 3	5 3
	6 1	6 1
	7 1	7 1

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 9

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Given an listof integers, sort the array in ascending order using the *Bubble Sort* algorithm above. Once sorted, print the following three lines:

- 1. List is sorted in numSwaps swaps., where numSwaps is the number of swaps that took place.
- 2. First Element: firstElement, the *first* element in the sorted list.
- 3. Last Element: lastElement, the *last* element in the sorted list.

For example, given a worst-case but small array to sort: a=[6,4,1]. It took 3 swaps to sort the array. Output would be
Array is sorted in 3 swaps.

First Element: 1
Last Element: 6

Input Format

The first line contains an integer,n , the size of the list a .
The second line contains n, space-separated integers a[i].

Constraints

- 2<=n<=600
- 1<=a[i]<=2x10⁶.

Output Format

You must print the following three lines of output:

- 1. List is sorted in numSwaps swaps., where numSwaps is the number of swaps that took place.
- 2. First Element: firstElement, the *first* element in the sorted list.
- 3. Last Element: lastElement, the *last* element in the sorted list.

Sample Input 0

3
1 2 3

Sample Output 0

List is sorted in 0 swaps.
First Element: 1
Last Element: 3

For example:

Input	Result
3 3 2 1	List is sorted in 3 swaps. First Element: 1 Last Element: 3
5 1 9 2 8 4	List is sorted in 4 swaps. First Element: 1 Last Element: 9

Answer:(penalty regime: 0 %)

```
1 def bubble(arr):
2     n=len(arr)
3     num=0
4     for i in range(n):
5         swapped=False
6         for j in range(0,n-i-1):
7             if arr[j]>arr[j+1]:
8                 arr[j],arr[j+1]=arr[j+1],arr[j]
9                 num+=1
10            swapped=True
11        if not swapped:
12            break
13    return num,arr[0],arr[-1]
14 n=int(input())
15 arr=list(map(int,input().split()))
16 num,f,l=bubble(arr)
17 print(f"List is sorted in {num} swaps.")
18 print(f"First Element: {f}")
19 print(f>Last Element: {l}")
```


Feedback

Input	Expected	Got
3 3 2 1	List is sorted in 3 swaps. First Element: 1 Last Element: 3	List is sorted in 3 swaps. First Element: 1 Last Element: 3
5 1 9 2 8 4	List is sorted in 4 swaps. First Element: 1 Last Element: 9	List is sorted in 4 swaps. First Element: 1 Last Element: 9

Passed all tests!
Correct
Marks for this submission: 1.00/1.00.

Question 10

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Given an integer array `nums`, return *an integer array counts where counts[i] is the number of smaller elements to the right of nums[i]*.

Example 1:

Input: `nums = [5,2,6,1]`
Output: `[2,1,1,0]`
Explanation:
To the right of 5 there are **2** smaller elements (2 and 1).
To the right of 2 there is only **1** smaller element (1).
To the right of 6 there is **1** smaller element (1).
To the right of 1 there is **0** smaller element.

Example 2:

Input: `nums = [-1]`
Output: `[0]`

Example 3:

Input: `nums = [-1,-1]`
Output: `[0,0]`

Constraints:

- `1 <= nums.length <= 105`
- `-104 <= nums[i] <= 104`

For example:

Test	Result
<code>print(countSmaller([5,2,6,1]))</code>	<code>[2, 1, 1, 0]</code>
<code>print(countSmaller([-1]))</code>	<code>[0]</code>

Answer:(penalty regime: 0 %)

Reset answer

```
1 def countSmaller(n):
2     def merge(e):
3         m=len(e)//2
4         if m:
5             l,r=merge(e[:m]),merge(e[m:])
6             for i in range(len(e)-1,-1,-1):
7                 if not r or l and l[-1][1]>r[-1][1]:
8                     res[l[-1][0]]+=len(r)
9                     e[i]=l.pop()
10                else:
11                    e[i]=r.pop()
12            return e
13    res=[0]*len(n)
14    merge(list(enumerate(n)))
15    return res
16
17
18
19
```

Feedback

Test	Expected	Got
<code>print(countSmaller([5,2,6,1]))</code>	<code>[2, 1, 1, 0]</code>	<code>[2, 1, 1, 0]</code>
<code>print(countSmaller([50,20,60,10]))</code>	<code>[2, 1, 1, 0]</code>	<code>[2, 1, 1, 0]</code>
<code>print(countSmaller([-1]))</code>	<code>[0]</code>	<code>[0]</code>

```
print(countSmaller([-1, -1]))      [0, 0]      [0, 0]
```

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Finish review

[Skip Quiz navigation](#)

Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#) [Question 6 This page](#) [Question 7 This page](#) [Question 8 This page](#) [Question 9 This page](#) [Question 10 This page](#)

[Show one page at a time](#) Finish review

CS23336-Introduction to Python Programming

Started on

Monday, 11 November 2024, 9:11 AM

State

Finished

Completed on

Monday, 11 November 2024, 1:25 PM

Time taken

4 hours 13 mins


Marks

10.00/10.00

Grade

100.00 out of 100.00

Question 1

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Develop a Python program to read a specific line from a text file based on a given line number.

Description:

1. **Input:**
- A text file with multiple lines.

◦ A line number to read.
2. **Output:**
- The content of the specified line.

input1.txt:

Line one.
Line two.
Line three.
Line four.

For example:

Input	Result
input1.txt 3	Line three.

Answer:(penalty regime: 0 %)

1 input_file=input()
2 line_number=int(input())
3 def fun(input_file,line_number):
4 with open(input_file,'r') as file:
5 lines=file.readlines()
6 if 1<=line_number<=len(lines):
7 print(lines[line_number-1].strip())
8 fun(input_file,line_number)
9

Feedback

Input	Expected	Got
-------	----------	-----


input1.txt Line three. Line three.
3

input2.txt Line C. Line C.
3

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 2

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Create a Python program to find the longest word in a text file.

- **Input:**
 - A text file containing multiple lines of text.
- **Output:**
 - The longest word in the file.

For example:

Input	Result
input1.txt	Longest word: containing

Answer:(penalty regime: 0 %)

```
1 input_file=input()
2 def longest1(input_file):
3     with open(input_file,'r') as file:
4         longest=""
5         for line in file:
6             words=line.split()
7             for word in words:
8                 if len(word)>len(longest):
9                     longest=word
10            print("Longest word:",longest)
11 longest1(input_file)
12
```

Feedback

Input	Expected	Got
input1.txt	Longest word: containing	Longest word: containing
input2.txt	Longest word: thousand	Longest word: thousand
input3.txt	Longest word: supercalifragilisticexpialidocious	Longest word: supercalifragilisticexpialidocious

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 3

Question text

Write a Python program to reverse the contents of a specific line in a text file based on a given line number.

Description:

1. **Input:**
- A text file with multiple lines.
 - A line number to reverse.
2. **Output:**
- The updated file with the specified line's contents reversed in file "output.txt".

Example:

- **Input File Content:**

"Line one.
Line two.
Line three.
Line four."
3

Output:

Line one.
Line two.
eerht eniL.
Line four.

For example:

Test	Input	Result
with open('output.txt', 'r') as file: text = file.read() print(text)	input1.txt 3	Line one. Line two. eerht eniL. Line four.

Answer:(penalty regime: 0 %)

```
1 fi=input()
2 n=int(input())
3 with open(fi,'r') as f:
4     l=f.readlines()
5     l[n-1]=l[n-1][::-1]
6     l[n-1]=l[n-1][2:]+'.\\n'
7 with open('output.txt','w') as f:
8     f.writelines(l)
```


Feedback

Test	Input	Expected	Got
with open('output.txt', 'r') as file: text = file.read() print(text)	input1.txt 3	Line one. Line two. eerht eniL. Line four.	Line one. Line two. eerht eniL. Line four.
with open('output.txt', 'r') as file: text = file.read()	input2.txt	Line A. B eniL.	Line A. B eniL.

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 4

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Create a Python program to write to a specific line in a text file, replacing the existing content of that line.

Description:

1. Input:
- A text file with multiple lines.
 - A line number to write to.
 - New content for the specified line.
2. Output:
- The updated file with the specified line replaced by the new content in file "output.txt".

Example:

- Input File Content:

"Line one.
Line two.
Line three.
Line four."
2

Updated line two.

Output:

Line one.
Updated line two.
Line three.
Line four.

For example:

Test	Input	Result
with open('output.txt', 'r') as file: text = file.read() print(text)	input1.txt 2 Updated line two.	Line one. Updated line two. Line three. Line four.

Answer:(penalty regime: 0 %)

```
1 i=input()
2 n=int(input())
3 s=input()
4 with open(i,'r') as f:
5     l=f.readlines()
6     l[n-1]=s+'\n'
7 with open('output.txt','w') as f:
8     f.writelines(l)
```

Feedback

Test	Input	Expected	Got
with open('output.txt', 'r') as file: text = file.read() print(text)	input1.txt 2 Updated line two.	Line one. Updated line two. Line three. Line four.	Line one. Updated line two. Line three. Line four.
with open('output.txt', 'r') as file: text = file.read() print(text)	input2.txt 2 Line B Updated.	Line A. Line B Updated. Line C.	Line A. Line B Updated. Line C.

Passed all tests!


Correct

Marks for this submission: 1.00/1.00.

Question 5

Correct

Mark 1.00 out of 1.00

 Flag question

Question text

Develop a Python program to copy the contents of one file to another file.

Description:

- 1. **Input:**
 - Source file and destination file names.
- 2. **Output:**
 - The content of the source file copied to the destination file.

For example:

Test	Input	Result
with open('output1.txt', 'r') as file: text = file.read() print(text)	input1.txt output1.txt	This is the source file. It contains multiple lines of text. Here is another line.

Answer:(penalty regime: 0 %)

```
1 i=input()
2 o=input()
3 with open(i,'r') as f:
4     with open(o,'a') as f1:
5         f1.write(f.read())
```

Feedback

Test	Input	Expected	Got
with open('output1.txt', 'r') as file: text = file.read() print(text)	input1.txt output1.txt	This is the source file. It contains multiple lines of text. Here is another line.	This is the source file. It contains multiple lines of text. Here is another line.


with open('output2.txt', 'r') as file:	input2.txt	Hello, world!	Hello, world!
text = file.read()	output2.txt	Python programming is amazing.	Python programming is amazing.
print(text)		Let's copy this text to another file.	Let's copy this text to another file.

with open('output3.txt', 'r') as file:	input3.txt	Single line.	Single line.
text = file.read()	output3.txt		
print(text)			

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 6

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Develop a Python program to identify and print all palindrome words from a given text file.

Description:

- Input:**
 - A text file containing multiple words.
- Output:**
 - A list of palindrome words found in the file name as 'output.txt'.

For example:

Test	Input	Result
with open('output.txt', 'r') as file: text = file.read() print(text)	input1.txt	madam arora malayalam

Answer:(penalty regime: 0 %)

```

1 i=input()
2 with open(i,'r') as f:
3     l=f.read()
4     l=l.split()
5     s=''
6 for i in l:
7     if i==i[::-1]:
8         s+=i+'\n'
9 with open('output.txt','w') as f:
10     f.write(s)

```

Feedback

Test	Input	Expected	Got
with open('output.txt', 'r') as file: text = file.read() print(text)	input1.txt	madam arora malayalam	madam arora malayalam

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 7

Correct
Mark 1.00 out of 1.00
Flag question

Question text

Write a Python program to count the frequency of each word in a given text file.

Description:

- 1. **Input:**
 - String as input.
- 2. **Output:**
 - A list of words with their corresponding frequency count to be write in a file "output.txt"

Example:

- **Input File Content:**
apple orange apple banana apple orange

Output:

apple: 3
orange: 2
banana: 1

For example:

Test	Input	Result
with open('output.txt', 'r') as file: text = file.read() print(text)	apple orange apple banana apple orange	apple: 3 banana: 1 orange: 2

Answer:(penalty regime: 0 %)

```
1 n=input()
2 l=''.join([c for c in n if c.isalnum()or c.isspace()])
3 l=l.split()
4 l=sorted(l,key=str.lower)
5 d={}
6 for i in l:
7     d[i.lower()]=str(l.count(i))
8 s=''
9 for i in d:
10     s+=(i+' : '+d[i]+'\\n')
11 f=open('output.txt','w')
12 f.write(s)
13 f.close()
14
15
```

Feedback

Test	Input	Expected	Got
with open('output.txt', 'r') as file: text = file.read() print(text)	apple orange apple banana apple orange	apple: 3 banana: 1 orange: 2	apple: 3 banana: 1 orange: 2
with open('output.txt', 'r') as file: text = file.read() print(text)	Hello world! Hello everyone. Welcome to the world of programming.	everyone: 1 hello: 2 of: 1 programming: 1 the: 1 to: 1 welcome: 1 world: 2	everyone: 1 hello: 2 of: 1 programming: 1 the: 1 to: 1 welcome: 1 world: 2

```
with open('output.txt', 'r') as file:
    text = file.read()
    print(text)
```


One fish two fish Red fish blue fish

blue: 1	blue: 1
fish: 4	fish: 4
one: 1	one: 1
red: 1	red: 1
two: 1	two: 1

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 8

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Create a Python program to delete a specific line from a text file based on a given line number.

Description:

- 1. **Input:**
 - A text file with multiple lines.
 - A line number to delete.
- 2. **Output:**
 - The updated file with the specified line removed in file "output.txt".

Example:

- **Input File Content:**

"Line one.
Line two.
Line three.
Line four."
2

Updated line two.

Output:

Line one.
Line three.
Line four.

For example:

Test	Input	Result
with open('output.txt', 'r') as file: text = file.read() print(text)	input1.txt 2	Line one. Line three. Line four.

Answer:(penalty regime: 0 %)

```
1 i=input()
2 o='output.txt'
3 n=int(input())
4 with open(i,'r')as f:
5     l=f.readlines()
6     l.remove(l[n-1])
7 with open(o,'w') as f:
8     f.writelines(l)
```


Feedback


Test	Input	Expected	Got
with open('output.txt', 'r') as file: text = file.read() print(text)	input1.txt 2	Line one. Line three. Line four.	Line one. Line three. Line four.
with open('output.txt', 'r') as file: text = file.read() print(text)	input2.txt 3	Line A. Line B.	Line A. Line B.

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 9

Correct
Mark 1.00 out of 1.00

 Flag question

Question text

Develop a Python program to read a text file and count the total number of words in the file.

Description:

1. **Input:**
- A text file containing several lines of text.
 - File name you should get as input.
2. **Output:**
- The total number of words in the file.

For example:

Input	Result
input2.txt	Total words: 14
input3.txt	Total words: 15

Answer:(penalty regime: 0 %)

```
1 import re
2 i=input()
3 with open(i,'r') as f:
4     l=f.readlines()
5     l1=[]
6     for i in l:
7         x=i.split()
8         l1.extend(x)
9     print('Total words:',len(l1))
10
```

Feedback

Input	Expected	Got
input1.txt	Total words: 6	Total words: 6


input2.txt Total words: 14 Total words: 14

input3.txt Total words: 15 Total words: 15

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Question 10

Correct
Mark 1.00 out of 1.00
 Flag question

Question text

Write a Python program to append a new line at a specific position in a text file, shifting existing lines down.

Description:

1. **Input:**
 - A text file with multiple lines.
 - A line number to insert the new line at.
 - New content for the new line.
2. **Output:**
 - The updated file with the new line inserted at the specified position, shifting the existing lines down in file "output.txt".

Example:

- **Input File Content:**

Line one.
Line two.
Line three.
Line four."
3

Inserted line..

Output:

Line one.
Line two.
Inserted line.
Line three.
Line four.

For example:

Test	Input	Result
with open('output.txt', 'r') as file: text = file.read() print(text)	input1.txt 3 Inserted line.	Line one. Line two. Inserted line. Line three. Line four.

Answer:(penalty regime: 0 %)

```
1 i=input()
2 n=int(input())
3 s=input()
4 s+='\n'
5 with open(i,'r') as f:
6     l=f.readlines()
7 if n-1==len(l):
8     l[-1]+='\n'
9 l.insert(n-1,s)
10
11 with open('output.txt','w') as f:
12     f.writelines(l)
```



Feedback

Test	Input	Expected	Got
with open('output.txt', 'r') as file: input1.txt text = file.read() print(text)	3 Inserted line.	Line one. Line two. Inserted line. Line three. Line four.	Line one. Line two. Inserted line. Line three. Line four.
with open('output.txt', 'r') as file: input2.txt text = file.read() print(text)	4 Inserted line D.	Line A. Line B. Line C. Inserted line D.	Line A. Line B. Line C. Inserted line D. Inserted line D.

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

Finish review

[Skip Quiz navigation](#)

Quiz navigation

[Question 1 This page](#) [Question 2 This page](#) [Question 3 This page](#) [Question 4 This page](#) [Question 5 This page](#) [Question 6 This page](#) [Question 7 This page](#) [Question 8 This page](#) [Question 9 This page](#) [Question 10 This page](#)

[Show one page at a time](#) Finish review