RAJALAKSHMI ENGINEERING COLLEGE

RAJALAKSHMI NAGAR, THANDALAM – 602 105

RAJALAKSHMI
ENGINEERING COLLEGE

GE23231
PROGRAMMING USING PYTHON

Record Note Book

Name:	**LOGESH V**
Register. No:	**230501023**
Year:	**I**
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Department:	**CHEMICAL ENGINEERING**
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Grade	**100.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

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

Sample Input:

10

10.9

Sample Output:

10,<class 'int'>

10.9,<class 'float'>

For example:

Input	Result
10 10.9	10,<class 'int'> 10.9,<class 'float'>

Answer: (penalty regime: 0 %)

```
a=int(input())
b=float(input())
print(a,type(a),sep=',')
print('%.1f'%b,type(b),sep=',')
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

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 %)

```
basicsalary=int(input())
print(basicsalary*1.6)
```

	Input	Expected	Got	
✓	10000	16000	16000.0	✓
✓	20000	32000	32000.0	✓
✓	28000	44800	44800.0	✓
✓	5000	8000	8000.0	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

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

Sample Input:

8.00

Sample Output:

2.828

For example:

Input	Result
14.00	3.742

Answer: (penalty regime: 0 %)

```
a=float(input())
b=a**0.5
print('%0.3f'%b)
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

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 60000	30.43 is the gain percent.

Answer: (penalty regime: 0 %)

```
x=int(input())
y=int(input())
z=int(input())
w=x+y
v=z-w
u=(v/w)*100
print('%.2f'%u,'is the gain percent.')

```

	Input	Expected	Got	
✓	10000 250 15000	46.34 is the gain percent.	46.34 is the gain percent.	✓
✓	45500 500 60000	30.43 is the gain percent.	30.43 is the gain percent.	✓

	Input	Expected	Got	
✓	5000 0 7000	40.00 is the gain percent.	40.00 is the gain percent.	✓
✓	12500 5000 18000	2.86 is the gain percent.	2.86 is the gain percent.	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

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

Sample Input

10

20

Sample Output

Your total refund will be $6.00.

For example:

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

Answer: (penalty regime: 0 %)

```
a=float(input())
b=float(input())
c=(a*.10)+(b*.25)
print('Your total refund will be $%.2f.'%c)
```

	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 **6**

Correct

Mark 1.00 out of 1.00

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

Hint:

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

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

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

Sample Input:

450

Sample Output:

weekdays 10.38

weekend 0.38

For example:

Input	Result
450	weekdays 10.38 weekend 0.38

Answer: (penalty regime: 0 %)

```
salary=int(input())
weekend_salary=abs((salary-500)/130)
weekday_salary=weekend_salary+10
print('weekdays',f'{weekday_salary:.2f}')
print("weekend",f"{weekend_salary:.2f}")

```

	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	✓

	Input	Expected	Got	
✓	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.

◄ Week1_Quiz

Jump to...

Operators ►

Started on	Friday, 15 March 2024, 9:54 AM
State	Finished
Completed on	Friday, 15 March 2024, 10:12 AM
Time taken	18 mins 18 secs
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Which of the following functions is a built-in function in python language?

a. scanf()

b. printf()

c. print() ✓

d. val()

Your answer is correct.

The correct answer is:
print()

Question **2**

Correct

Mark 1.00 out of 1.00

Which of the following declarations is incorrect in python language?

a. xyzp = 5,000,000

b. x,y,z,p = 5000, 6000, 7000, 8000 ✓

c. x y z p = 5000 6000 7000 8000

d. x_y_z_p = 5,000,000

Your answer is correct.

The correct answer is:
x,y,z,p = 5000, 6000, 7000, 8000

Question **3**

Correct

Mark 1.00 out of 1.00

What do we use to define a block of code in Python language?

- a. Key
- b. Indentation ✓
- c. Parenthesis
- d. Curly brace

Your answer is correct.

The correct answer is:
Indentation

Question **4**

Correct

Mark 1.00 out of 1.00

What will be the output of the following code snippet?

```
a = 3
b = 1
print(a, b)
a, b = b, a
 print(a, b)
```

- a. 1 3
  3 1
- b. 3 1
  3 1
- c. 3 1 ✓
  1 3
- d. No output

Your answer is correct.

The correct answer is:
3 1

1 3

Question **5**

Correct

Mark 1.00 out of 1.00

Who developed the Python language?

a. Bill Gates

b. Dennis Ritchie

c. Guido Van Rossum ✓

d. Von Neumann

Your answer is correct.

The correct answer is:
Guido Van Rossum

Question **6**

Correct

Mark 1.00 out of 1.00

What will be the output of the following code snippet?

```
print(type(5 / 2))
```

a. int

b. obj

c. float ✓

d. str

Your answer is correct.

The correct answer is:
float

Question **7**

Correct

Mark 1.00 out of 1.00

Which one of the following is the correct extension of the Python file?

a. .cpp

b. .python

c. .py ✓

d. .p

Your answer is correct.

The correct answer is:
.py

Question **8**

Correct

Mark 1.00 out of 1.00

Type the code to get float input from the keyboard. (No need to assign to a variable)

Answer: float(input()) ✓

The correct answer is: float(input())

Question **9**

Correct

Mark 1.00 out of 1.00

What will be the output of the following python Code-

```
mystring="India is my country"
print(type(mystring))
```

a. <class 'str'> ✓

b. class str

c. str

d. 'str'

Your answer is correct.

The correct answer is:
<class 'str'>

Question **10**

Correct

Mark 1.00 out of 1.00

What will be the datatype of the var in the below code snippet?

```
var = 10
print(type(var))
var = "Hello"
print(type(var))
```

- a. No output
- b. int and int
- c. int and str ✓
- d. float and str

Your answer is correct.

The correct answer is:
int and str

◄ Basics of Python

Jump to...

Week1_Coding ►

Started on	Friday, 15 March 2024, 10:32 AM
State	Finished
Completed on	Thursday, 28 March 2024, 9:26 AM
Time taken	12 days 22 hours
Overdue	10 days 22 hours
Marks	19.00/19.00
Grade	**100.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

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 40	False

Answer: (penalty regime: 0 %)

```
age = int(input())
weight = int(input())
print(age >= 18 and weight > 40)
```

	Input	Expected	Got	
✓	19 45	True	True	✓
✓	18 40	False	False	✓
✓	18 42	True	True	✓
✓	16 45	False	False	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

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

Hint:

Use ASCII values of C and D.

Input Format:

An integer x, 0<=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 %)

```
X = int(input())
print(chr(67 + X))
```

	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

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 %)

```
no=abs(int(input()))
last_digit=no%10
print(last_digit)
```

	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

Pretend that you have just opened a new savings account that earns 4 percent interest per year. The interest that you earn is paid at the end of the year, and is added to the balance of the savings account. Write a program that begins by reading the amount of money deposited into the account from the user. Then your program should compute and display the amount in the savings account after 1, 2, and 3 years. Display each amount so that it is rounded to 2 decimal places. Sample Input: 10000 Sample Output: Balance as of end of Year 1: $10400.00. Balance as of end of Year 2: $10816.00. Balance as of end of Year 3: $11248.64.

For example:

Input	Result
10000	Balance as of end of Year 1: $10400.00. Balance as of end of Year 2: $10816.00. Balance as of end of Year 3: $11248.64.

Answer: (penalty regime: 0 %)

```
deposit_amount=float(input())
balance_year_1=deposit_amount * 1.04
balance_year_2=balance_year_1 * 1.04
balance_year_3=balance_year_2 * 1.04
print("Balance as of end of Year 1: ${:.2f}.".format(balance_year_1))
print("Balance as of end of Year 2: ${:.2f}.".format(balance_year_2))
print("Balance as of end of Year 3: ${:.2f}.".format(balance_year_3))
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

The program that you create for this exercise will begin by reading the cost of a meal ordered at a restaurant from the user. Then your program will compute the tax and tip for the meal. Use your local tax rate (5 percent) when computing the amount of tax owing. Compute the tip as 18 percent of the meal amount (without the tax). The output from your program should include the tax amount, the tip amount, and the grand total for the meal including both the tax and the tip. Format the output so that all of the values are displayed using two decimal places.

Sample Input

100

Sample Output

The tax is 5.00 and the tip is 18.00, making the total 123.00

For example:

Input	Result
100	The tax is 5.00 and the tip is 18.00, making the total 123.00

Answer: (penalty regime: 0 %)

```
meal_cost = float(input())
tax_rate = 0.05
tip_rate = 0.18

tax_amount = meal_cost * tax_rate
tip_amount = (meal_cost * tip_rate) # Tip should be calculated on meal cost without tax
total_amount = meal_cost + tax_amount + tip_amount

print("The tax is {:.2f} and the tip is {:.2f}, making the total {:.2f}".format(tax_amount, tip_amount, t
```

	Input	Expected	Got	
✓	100	The tax is 5.00 and the tip is 18.00, making the total 123.00	The tax is 5.00 and the tip is 18.00, making the total 123.00	✓
✓	250	The tax is 12.50 and the tip is 45.00, making the total 307.50	The tax is 12.50 and the tip is 45.00, making the total 307.50	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **6**

Correct

Mark 1.00 out of 1.00

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

IF Lokpaul wins print true, otherwise false.

Sample Input

10

Sample Output

True

Explanation:

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

For example:

Input	Result
101	False

Answer: (penalty regime: 0 %)

```
num = int(input())
if num % 2 == 0 and 0 < num <= 100:
    print("True")
else:
    print("False")
```

	Input	Expected	Got	
✓	56	True	True	✓
✓	101	False	False	✓
✓	-1	False	False	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **7**

Correct

Mark 1.00 out of 1.00

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 %)

```
num = int(input())
if 0 <= num <= 15:
    count = 0
    while num > 0:
        count += num & 1
        num >>= 1
    print(count)
```

	Input	Expected	Got	
✓	3	2	2	✓
✓	5	2	2	✓
✓	15	4	4	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **8**

Correct

Mark 1.00 out of 1.00

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

Input format:

Line 1 has the total number of weapons

Line 2 has the total number of Soldiers.

Output Format:

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

Sample Input:

32

43

Sample Output:'

False

For example:

Input	Result
32 43	False

Answer: (penalty regime: 0 %)

```
a=int(input())
b=int(input())
print(a%3==0 and b%2==0)

```

	Input	Expected	Got	
✓	32 43	False	False	✓
✓	273 7890	True	True	✓
✓	800 4590	False	False	✓

	Input	Expected	Got	
✓	6789 32996	True	True	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **9**

Correct

Mark 10.00 out of 10.00

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

Sample Input:

10

20

Sample Output:

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

Answer: (penalty regime: 0 %)

```
a=int(input())
b=int(input())
c=a*75
d=b*112
total=c+d
print('The total weight of all these widgets and gizmos is',total,'grams.')
```

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

Passed all tests! ✓

Correct

Marks for this submission: 10.00/10.00.

Question **10**

Correct

Mark 1.00 out of 1.00

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

Input Given:

N-No of friends

P1,P2,P3 AND P4-No of chocolates

OUTPUT:

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

SAMPLE INPUT AND OUTPUT:

5

25

12

10

9

OUTPUT

True False True False

For example:

Input	Result
5 25 23 20 10	True False True True

Answer: (penalty regime: 0 %)

```
N=int(input())
P1=int(input())
P2=int(input())
P3=int(input())
P4=int(input())
print(P1%N==0,P2%N==0,P3%N==0,P4%N==0)
```

	Input	Expected	Got	
✓	5 25 23 20 10	True False True True	True False True True	✓
✓	4 23 24 21 12	False True False True	False True False True	✓
✓	8 64 8 16 32	True True True True	True True True True	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ Week2_MCQ

Jump to...

Selection control structures ►

Started on	Tuesday, 26 March 2024, 10:04 PM
State	Finished
Completed on	Tuesday, 26 March 2024, 10:25 PM
Time taken	20 mins 59 secs
Grade	**14.00** out of 15.00 (**93.33**%)

Question **1**

Correct

Mark 1.00 out of 1.00

Which of the following type of Python operator will only print True or False in output when we use it in our program?

a. Comparison Operator ✓

b. Arithmetic Operator

c. Assignment Operator

d. Membership Operator

Your answer is correct.

The correct answers are:

Membership Operator,

Comparison Operator

Question **2**

Correct

Mark 1.00 out of 1.00

What is the output of the following code

```
x = ["apple", "banana", "cherry"]
 #display the data type of x:
print(type(x))
```

a. ✓
<class 'list'>

b. **<class 'complex'>**

c. **<class 'int'>**

d. **<class 'float'>**

Your answer is correct.

The correct answer is:

<class 'list'>

Question **3**

Correct

Mark 1.00 out of 1.00

What is the output of the following code: print 11//2?

a. 5

b. Error ✓

c. 5.5

d. 5.0

Your answer is correct.

The correct answer is:
Error

Question **4**

Correct

Mark 1.00 out of 1.00

What is the output of the following expression?

```
z=2
z**=3
print(z)
```

a. 0

b. Error

c. 8 ✓

d. 3

Your answer is correct.

The correct answer is:
8

Question **5**

Correct

Mark 1.00 out of 1.00

What is the output of the following assignment operator?

```
y = 10
x = y += 2
print(x)
```

- a. Syntax Error ✓
- b. 14
- c. 12
- d. 10

Your answer is correct.

The correct answer is:
Syntax Error

Question **6**

Correct

Mark 1.00 out of 1.00

What is the value of the expression

```
print(100 / 25)
print(100//25)
```

- a. 4.0 ✓
  4
- b. 4.0
  4.0
- c. 4
  4
- d. 4.0
  4.00

Your answer is correct.

The correct answer is:
4.0

4

Question **7**

Incorrect

Mark 0.00 out of 1.00

What is the value of the expression `1+2**3*4+12*((100+4)*10-200//10)` ?

a. 12273

b. -24568

c. -23679

d. 12493 ✗

Your answer is incorrect.

The correct answer is:

12273

Question **8**

Correct

Mark 1.00 out of 1.00

State the output of the following code.

```
num1 = '10'
num2 = '20'
sum = num1 + num2
print(sum)
```

a. 30

b. 1020

c. Error ✓

d. 10

Your answer is correct.

The correct answer is:
Error

Question **9**

Correct

Mark 1.00 out of 1.00

What will be the value of x in the following Python expression, if the result of that expression is 2?

x>>2

- a. 1
- b. 4
- c. 2
- d. 8 ✓

Your answer is correct.

The correct answer is:
8

Question **10**

Correct

Mark 1.00 out of 1.00

Which of the following is not a valid variable name in Python?

- a. **5var** ✓
- b. **_var**
- c. **var11**
- d. **var_name**

Your answer is correct.

The correct answer is:

5var

Question **11**

Correct

Mark 1.00 out of 1.00

What is the output of the following code

```
x = ["apple", "banana"]
y = ["apple", "banana"]
z = x
 print(x is z)
print(x is y)
print(x == y)
```

a. **True** ✓
False
True

b. **True**
False
False

c. **False**
False
True

d. **True**
True
True

Your answer is correct.

The correct answer is:
True
False
True

Question **12**

Correct

Mark 1.00 out of 1.00

Which of the following statements assigns the value 35 to the variable x in Python:

a. **x := 35**

b. **x = 35** ✓

c. **int x = 35**

d. **x ← 35**

Your answer is correct.

The correct answer is:

x = 35

Question **13**

Correct

Mark 1.00 out of 1.00

What is the output of the following code

```
x = 4
    y = 10

print(x % y)
```

- a. 10
- b. 1
- c. 6
- d. 4 ✓

Your answer is correct.

The correct answer is:
4

Question **14**

Correct

Mark 1.00 out of 1.00

What is the order of precedence in python?

1. **Multiplication**
2. **Division**
3. **Parentheses**
4. **Addition**
5. **Exponentiation**

a. **1,2,3,4,5**

b. **1,5,2,4,3**

3,1,2,4,5

c. **3,1,2,4,5**

d. **3,5,1,2,4** ✓

Your answer is correct.

The correct answer is:

3,5,1,2,4

Question **15**

Correct

Mark 1.00 out of 1.00

What is the output of the following code

```
print(bool(0), bool(3.14159), bool(-3), bool(1.0+1j))
```

a. • False True False True

b. • True True False True

c. • False True True True ✓

d. • True True False True

Your answer is correct.

The correct answer is:

- False True True True

◄ Operators

Jump to...

Week2_Coding ►

Started on	Wednesday, 3 April 2024, 8:51 PM
State	Finished
Completed on	Friday, 5 April 2024, 10:03 AM
Time taken	1 day 13 hours
Marks	9.00/10.00
Grade	**90.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

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

Sample Input 1

i

Sample Output 1

It's a vowel.

Sample Input 2

y

Sample Output 2

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

Sample Input3

c

Sample Output 3

It's a consonant.

For example:

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

Answer: (penalty regime: 0 %)

```
letter=input()
if letter in "aeiou":
    message="It's a vowel."
elif letter == "y" :
    message="Sometimes it's a vowel... Sometimes it's a consonant."
else:
    message= "It's a consonant."
print(message)
```

	Input	Expected	Got	
✓	i	It's a vowel.	It's a vowel.	✓
✓	y	Sometimes it's a vowel... Sometimes it's a consonant.	Sometimes it's a vowel... Sometimes it's a consonant.	✓
✓	c	It's a consonant.	It's a consonant.	✓

	Input	Expected	Got	
✓	e	It's a vowel.	It's a vowel.	✓
✓	r	It's a consonant.	It's a consonant.	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

IN / OUT

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

Input Format:

Input consists of 2 integers.

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

Output Format:

Output consists of the string “IN” or “OUT”.

Sample Input and Output:

Input

8

3

Output

OUT

For example:

Input	Result
8 3	OUT

Answer: (penalty regime: 0 %)

```
a=int(input())
b=int(input())
if (a//2<=b):
    print("IN")
else:
    print("OUT")
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

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 %)

```
year=int(input())
remainder=year % 12
if remainder == 0 :
    animal = "Monkey"
elif remainder == 1:
    animal = "Rooster"
elif remainder == 2:
    animal = "Dog"
elif remainder == 3:
    animal = "Pig"
elif remainder == 4:
    animal = "Rat"
elif remainder == 5:
    animal = "Ox"
elif remainder == 6:
    animal = "Tiger"
elif remainder == 7:
    animal = "Hare"
elif remainder == 8:
    animal = "Dragon"
elif remainder == 9:
    animal = "Snake"
elif remainder ==10:
    animal = "Horse"
elif remainder ==11:
    animal = "Sheep"
print(f"{year} is the year of the {animal}.")
```

	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 **4**

Correct

Mark 1.00 out of 1.00

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

Marks in Maths >= 65

Marks in Physics >= 55

Marks in Chemistry >= 50

Or

Total in all three subjects >= 180

Sample Test Cases

Test Case 1

Input

70

60

80

Output

The candidate is eligible

Test Case 2

Input

50

80

80

Output

The candidate is eligible

Test Case 3

Input

50

60

40

Output

The candidate is not eligible

For example:

Input	Result
70 60 80	The candidate is eligible

Answer: (penalty regime: 0 %)

```
mark1 = int(input())
mark2 =int(input())
mark3 = int(input())
if (mark1>= 65 and mark2 >= 60 and mark3 >= 50):
    message="The candidate is eligible"
elif (mark1 <= 65 and mark2 >= 70 and mark3 >= 80 ):
    message='The candidate is eligible'
else:
    message="The candidate is not eligible"
print (message)
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Incorrect

Mark 0.00 out of 1.00

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 %)

```
a = int(input())
if(a%400):
    print(a,"is not a leap year.")
else:
    print(a,"is a leap year.")
```

	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 not a leap year.	✗

Your code must pass all tests to earn any marks. Try again.

Show differences

Incorrect

Marks for this submission: 0.00/1.00.

Question **6**

Correct

Mark 1.00 out of 1.00

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

Sample Input 1

February

Sample Output 1

February has 28 or 29 days in it.

Sample Input 2

March

Sample Output 2

March has 31 days in it.

Sample Input 3

April

Sample Output 3

April has 30 days in it.

For example:

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

Answer: (penalty regime: 0 %)

```
mon =input()
if(mon in ("January,March,May,July,August,Octobar,December")):
    print(mon,"has 31 days in it.")
elif (mon in ("April,June,September,November")):
    print (mon,"has 30 days in it.")
elif (mon in ("February")):
    print (mon,"has 28 or 29 days in it.")
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **7**

Correct

Mark 1.00 out of 1.00

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
5	-1

Answer: (penalty regime: 0 %)

```
n=abs(int(input()))
if(n%10==n):
    print('-1')
elif(n%10!=n):
    a=n//10
    dig=a%10
    print(abs(dig))
```

	Input	Expected	Got	
✓	197	9	9	✓
✓	-197	9	9	✓
✓	5	-1	-1	✓
✓	123456	5	5	✓
✓	8	-1	-1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **8**

Correct

Mark 1.00 out of 1.00

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

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

Sample Input 1

60

60

60

Sample Output 1

That's a equilateral triangle

Sample Input 2

40

40

80

Sample Output 2

That's a isosceles triangle

Sample Input 3

50

60

70

Sample Output 3

That's a scalene triangle

For example:

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

Answer: (penalty regime: 0 %)

```
a=int(input())
b=int(input())
c=int(input())
if a == b and b == c :
    print("That's a equilateral triangle")
elif a == b or b == c or a == c :
    print ("That's a isosceles triangle")
else:
    print("That's a scalene triangle")
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **9**

Correct

Mark 1.00 out of 1.00

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 %)

```
units=float(input())
if units <= 199 :
    b=units * 1.20
elif units < 400 :
    b=units*1.50
elif units < 600:
    b=units*1.80
else:
    b=units*2.00

if b > 400:
    b+=b*0.15

if b < 100:
    b=100
print(b)
```

	Input	Expected	Got	
✓	50	100.00	100	✓
✓	100.00	120.00	120.0	✓
✓	500	1035.00	1035.0	✓
✓	700	1610.00	1610.0	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **10**

Correct

Mark 1.00 out of 1.00

Three numbers form a Pythagorean triple if the sum of squares of two numbers is equal to the square of the third.

For example, 3, 5 and 4 form a Pythagorean triple, since 3*3 + 4*4 = 25 = 5*5

You are given three integers, a, b, and c. They need not be given in increasing order. If they form a Pythagorean triple, then print "yes", otherwise, print "no". Please note that the output message is in small letters.

Sample Input

3

5

4

Sample Output

yes

Sample Test Cases

Test Case 1

Input

3

5

4

Output

yes

Test Case 2

Input

5

8

2

Output

no

Answer: (penalty regime: 0 %)

```
a=int(input())
b=int(input())
c=int(input())
if a*a + b*b == c*c or a*a + c*c ==b*b or b*b +c*c == a*a :
    print ("yes")
else:
    print ("no")
```

	Input	Expected	Got	
✓	3 5 4	yes	yes	✓
✓	5 8 2	no	no	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ Week3_mcq

Jump to...

Iteration control structures ►

Started on	Friday, 5 April 2024, 10:14 AM
State	Finished
Completed on	Friday, 5 April 2024, 10:43 AM
Time taken	28 mins 52 secs
Grade	**10.00** out of 15.00 (**66.67**%)

Question **1**

Incorrect

Mark 0.00 out of 1.00

Can we write if/else into one line in python?

a. Yes

b. No ✕

Your answer is incorrect.

The correct answer is:
Yes

Question **2**

Incorrect

Mark 0.00 out of 1.00

What is the output of the following code.

```
a=90
if a>100:
    if(a<=90 and a==90):
        print("REC")
    else:
        print("OPEN-ELECTIVE")
```

a. OPEN-ELECTIVE ✕

b. No output

c. REC

d. REC
OPEN-ELECTIVE

Your answer is incorrect.

The correct answer is:
No output

Question **3**

Correct

Mark 1.00 out of 1.00

What will be the output?

```
a=11
b=5
if (a%b==0):
    print ( "hello")
if (a//b==0):
    print ( "hi")
else:
    print ("python")
```

- a. hello
- b. hi
- c. python ✓

Your answer is correct.

The correct answer is:
python

Question **4**

Incorrect

Mark 0.00 out of 1.00

Which among the following codes have equivalent logic?

Code 1:

```
if(value3>1000 and value3<1006):
  if(value1=="ABC"):
    if(value2=="A"):
      value4=10
    else:
      value4=8
  elif(value1=="XYZ"):
    if(value2=="A"):
      value4=8
    else:
      value4=6
print(value4)
```

Code 2:

```
if(value3>=1001 and value3<=1005 and value1=="ABC"):
    if(value2=="A"):
        value4=10
    else:
        value4=8
elif(value3>1000 and value3<1006 and value1=="XYZ"):
     if(value2=="A"):
        value4=8
     else:
        value4=6
print(value4)
```

Code 3:

```
if(value3>1000 and value3<1006 or value1=="ABC"):
   if(value2=="A"):
      value4=10
   else:
      value4=8
elif(value3>1000 and value3<1006 or  value1=="XYZ"):
   if(value2=="A"):
      value4=8
   else:
      value4=6
print(value4)
```

a. Code 1, Code 2

b. Code 1, Code 3 ✕

c. Code 2, Code 3

Your answer is incorrect.

The correct answer is:
Code 1, Code 2

Question **5**

Correct

Mark 1.00 out of 1.00

What is the output of the given below program?

```
if 1 + 3 == 7:
    print("Hello")
else:
    print("Know Program")
```

- a. Error
- b. Compiled Successfully, No Output.
- c. Hello
- d. Know Program ✓

Your answer is correct.

The correct answer is:
Know Program

Question **6**

Correct

Mark 1.00 out of 1.00

What is the output of the following code snippet?

```
a = "Hi"
b = "Arjuna"
c = "Bhimaa"
print("Hi", a, b, c)
```

- a. Hi Arjuna Bhimaa
- b. Hi Arjuna Hi Bhimaa
- c. Hi Arjuna Bhimaa Hi
- d. Hi Hi Arjuna Bhimaa ✓

Your answer is correct.

The correct answer is:
Hi Hi Arjuna Bhimaa

Question **7**

Incorrect

Mark 0.00 out of 1.00

____ is an empty statement in Python.

- a. Jump
- b. None
- c. pass
- d. Empty ✕

Your answer is incorrect.

The correct answer is:
pass

Question **8**

Incorrect

Mark 0.00 out of 1.00

What should be the value of num1 and num2 to get the output as "1"?

```
if((num1/num2==5) and (num1+num2)>5):
    print("1")
elif((num1-num2)<=1 or (num1%num2)==0):
    print("2")
else:
    print("3")
```

- a. num1=-10,num2=2
- b. num1=0, num2=5
- c. num1=11, num2=2 ✕
- d. num1=5, num2=1

Your answer is incorrect.

The correct answer is:
num1=5, num2=1

Question **9**

Correct

Mark 1.00 out of 1.00

What is the output of the code given below?

```
a = -10
b = -200
c = 2000
d = 4000
if( a*b >=d):
    if(d>c):
        if(d%c!=0):
            print(11)
        else:
            print(22)
else:
    if(b/a >0):
        if(a<b or d%c!=0):
          print(33)
        else:
          print(44)
```

a. 44 ✓

b. 22

c. 11

d. 33

Your answer is correct.

The correct answer is:
44

Question **10**

Correct

Mark 1.00 out of 1.00

what will be the output for the following question?

```
a, b = 12, 5
if a + b:
    print('True')
else:
  print('False')
```

- a. False
- b. True ✓
- c. Error

Your answer is correct.

The correct answer is:
True

Question **11**

Correct

Mark 1.00 out of 1.00

Python supports _____ types of control structures.

- a. 3 ✓
- b. 2
- c. 1
- d. 4

Your answer is correct.

The correct answer is:
3

Question **12**

Correct

Mark 1.00 out of 1.00

choose a valid Python if statement :

- a. if (a >= 2)
- b. if (a => 22)
- c. if a>=2 : ✓

Your answer is correct.

The correct answer is:
if a>=2 :

Question **13**

Correct

Mark 1.00 out of 1.00

```
if true:
    print("Hello World")
```

- a. No output
- b. Hello World
- c. Name Error ✓

Your answer is correct.

The correct answer is:
Name Error

Question **14**

Correct

Mark 1.00 out of 1.00

What will be the output of the given code?

```
x,y=1,1
if(x ==y):
    print("equal")
if(x>y):
    print("1")
else:
    print("0")
```

a. 0

b. 1

c. equal

d. equal ✓
   0

Your answer is correct.

The correct answer is:
equal
0

Question **15**

Correct

Mark 1.00 out of 1.00

selection is implemented with the help of _____ statement

a. while loop

b. if..else ✓

c. for loop

Your answer is correct.

The correct answer is:
if..else

◄ Selection control structures

Jump to...

Week3_coding ►

Started on	Friday, 5 April 2024, 10:05 AM
State	Finished
Completed on	Sunday, 21 April 2024, 2:07 PM
Time taken	16 days 4 hours
Overdue	14 days 4 hours
Marks	10.00/10.00
Grade	**100.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

In mathematics, the factorial of a non-negative integer n, denoted by n!, is the product of all positive integers less than or equal to n. For example,

5! = 5 x 4 x 3 x 2 x 1 = 120

4! = 4 x 3 x 2 x 1 = 24

9! = 9 x 8 x 7 x 6 x 5 x 4 x 3 x 2 x 1 = 362880

Write a program to find the factorial of a given number.

The given number will be passed to the program as an input of type int.

The program is expected to calculate the factorial of the given number and return it as an int type.

Assumptions for this program:

The given input number will always be greater than or equal to 1.

Due to the range supported by int. the input numbers will range from 1 to 12.

For example:

Input	Result
5	120
4	24
9	362880

Answer: (penalty regime: 0 %)

```
n=int(input())
count=1
for i in range(1,n+1):
 count=count*i
print(count)
```

	Input	Expected	Got	
✓	5	120	120	✓
✓	4	24	24	✓
✓	9	362880	362880	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

A Number is said to be Disarium number when the sum of its digit raised to the power of their respective positions becomes equal to the number itself. Write a program to print number is Disarium or not.

Input Format:

Single Integer Input from stdin.

Output Format:

Yes or No.

Example Input:

175

Output:

Yes

Explanation

1^1 + 7^2 +5^3 = 175

Example Input:

123

Output:

No

For example:

Input	Result
175	Yes
123	No

Answer: (penalty regime: 0 %)

```
n=int(input())
no= n
num=0
while no>0:
    no//=10
    num+=1
sum_of_power = 0
no=n
while no>0:
    digit=no%10
    sum_of_power += digit**num
    num -= 1
    no //=10
if sum_of_power == n:
    print("Yes")
else:
    print("No")
```

	Input	Expected	Got	
✓	175	Yes	Yes	✓
✓	123	No	No	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

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

Sample Test Cases

Test Case 1

Input

4

Output

1234

Test Case 2

Input

6

Output

123456

Answer: (penalty regime: 0 %)

```
n=int(input())
term=0
s=0
for i in range(n):
    term=(term*10)+1
    s=s+term
print(s)
```

	Input	Expected	Got	
✓	4	1234	1234	✓
✓	6	123456	123456	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Write a program 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 %)

```
n=int(input())
c=0
digit=[0]*10
no=n
while no>0:
    d=no%10
    digit[d]+= 1
    no//=10
no=n
while no>0:
    d=no%10
    if digit[d] == 1:
        digit[d]=-1
        c+=1
    no//= 10
print(c)
```

	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 **5**

Correct

Mark 1.00 out of 1.00

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

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

NOTE: Fibonacci series looks like –

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

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

• first Fibonacci number is 0,

• second Fibonacci number is 1,

• third Fibonacci number is 1,

• fourth Fibonacci number is 2,

• fifth Fibonacci number is 3,

• sixth Fibonacci number is 5,

• seventh Fibonacci number is 8, and so on.

For example:

Input	Result
1	0
4	2
7	8

Answer: (penalty regime: 0 %)

```
n=int(input())
a,b= 0,1
if n== 1:
    no = a
elif n==2:
    no=b
else:
    for i in range(2,n):
        no= a+b
        a,b=b,no
print (no)
```

	Input	Expected	Got	
✓	1	0	0	✓
✓	4	2	2	✓
✓	7	8	8	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **6**

Correct

Mark 1.00 out of 1.00

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

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

For e.g.

If the given number is 292, the program should return 2 because there are only 2 unique digits '2' and '9' in this number

If the given number is 1015, the program should return 3 because there are 3 unique digits in this number, '1', '0', and '5'.

For example:

Input	Result
292	2
1015	3

Answer: (penalty regime: 0 %)

```
n=int(input())
unique=0
for i in range (10):
    digit= False
    no=n

    while no>0:
        if no%10==i:
            digit=True
            break
        no//=10
    if digit:
        unique+=1
print(unique)
```

	Input	Expected	Got	
✓	292	2	2	✓
✓	1015	3	3	✓
✓	123	3	3	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **7**

Correct

Mark 1.00 out of 1.00

Given a number N, find the next perfect square greater than N.

Input Format:

Integer input from stdin.

Output Format:

Perfect square greater than N.

Example Input:

10

Output:

16

Answer: (penalty regime: 0 %)

```
n=int(input())
next_perfect_square = 0
candidate=0
while next_perfect_square <= n:
    candidate+=1
    next_perfect_square=candidate*candidate
print(next_perfect_square)
```

	Input	Expected	Got	
✓	10	16	16	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **8**

Correct

Mark 1.00 out of 1.00

Given a positive integer N, check whether it can be represented as a product of single digit numbers.

Input Format:

Single Integer input.

Output Format:

Output displays Yes if condition satisfies else prints No.

Example Input:

14

Output:

Yes

Example Input:

13

Output:

No

Answer: (penalty regime: 0 %)

```
n=abs(int(input()))
if(n%7==0 or n%3==0 or n%5==0):
    print("Yes")
else:
    print("No")
```

	Input	Expected	Got	
✓	14	Yes	Yes	✓
✓	13	No	No	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **9**

Correct

Mark 1.00 out of 1.00

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 %)

```
N=int(input())
N+=1
s=0
while s*s<N:
     s+=1
if s*s==N:
    print("Yes")
else:
    print("No")
```

	Input	Expected	Got	
✓	24	Yes	Yes	✓
✓	26	No	No	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **10**

Correct

Mark 1.00 out of 1.00

Write a program that finds whether the given number N is Prime or not.

If the number is prime, the program should return 2 else it must return 1.

Assumption: 2 <= N <=5000, where N is the given number.

Example1: if the given number N is 7, the method must return 2

Example2: if the given number N is 10, the method must return 1

For example:

Input	Result
7	2
10	1

Answer: (penalty regime: 0 %)

```
n=int(input())
while(2<=n<=5000):
 if(n%2==0):
      print("1")
      break
 else:
    print("2")
    break
```

	Input	Expected	Got	
✓	7	2	2	✓
✓	10	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ Week4_mcq

Jump to...

Strings ►

Started on	Friday, 7 June 2024, 10:54 AM
State	Finished
Completed on	Friday, 7 June 2024, 11:02 AM
Time taken	7 mins 45 secs

Question **1**

Complete

Which is a counter-controlled in python?

- a. for
- b. switch
- c. do-while
- d. while

Question **2**

Complete

```
i=1
while True:
        if i%0o7==0:
                break
        print(i)
        i+=1
```

Predict the output of the following?

- a. 1 2 3 4 5 6 7
- b. 7
- c. 0 1 2 3 4 5 6 7
- d. 1 2 3 4 5 6

Question **3**

Complete

```
numbers = (8, 9, 11, 20)
a = 1
for num in numbers:
     a = a * num
print(a)
```

Predict the output of the program?

Answer: 15840

Question **4**

Complete

Which of the following is a loop in python?

- a. If-Else
- b. Break
- c. For
- d. Do-While

Question **5**

Complete

```
Predict the output of the following
i = 2
while i < 4:
    print(i)
    i += 1
```

- a. 2 3
- b. 1 2 3 4
- c. 2 3 4
- d. 3 4

Question **6**

Complete

While loop can execute a set of statements till

- a. The condition is False
- b. The condition is True
- c. The condition stops executing
- d. The condition starts executing

Question **7**

Complete

For loop follows which principle?

- a. Single responsibility
- b. Open/closed
- c. You Aren't Going to Need It(YAGNI)
- d. Don't Repeat Yourself (DRY)

Question **8**

Complete

```
num =0
while num < 5:
   num = num + 1
      print('num = ', num)
```

Predict the output of the following?

a. Prints no output

b. Runs correctly

c. Indentation Error

d. Runtime error

Question **9**

Complete

Which one of them is the correct syntax of for loop in python ?

a.
```
for[sequence] in [item]:
     loop body
```

b.
```
for [item] in [item]:
     loop body
```

c.
```
for [item] in [sequence]:
     loop body
```

d.
```
for[sequence] in [sequence]:
     loop body
```

Question **10**

Complete

```
How many times it will print the statement?
for i in range(102):
   print(i)
```

Answer: 101

Question **11**

Complete

```
numbers = (8, 9, 11, 20)
a = 1
for num in numbers:
     a = a * num
print(a)
```

Predict the output of the program?

Answer: 15840

Question **12**

Complete

The range() function returns a

- a. sequence of bytes
- b. sequence of lists
- c. sequence of set
- d. sequence of numbers

Question **13**

Complete

Syntax of range()

- a. (start, step, stop)
- b. (start, stop, step)
- c. (step, stop, start)
- d. (stop, step, start)

Question **14**

Complete

A for loop can iterate over a

- a. bool
- b. float
- c. list
- d. integer

Question **15**

Complete

```
i=1
while True:
        if i%0o7==0:
                break
        print(i)
        i+=1
```

Predict the output of the following?

- a. 1 2 3 4 5 6
- b. 1 2 3 4 5 6 7
- c. 0 1 2 3 4 5 6 7
- d. 7

◄ Iteration control structures

Jump to...

Week4_Coding ►

Started on	Thursday, 2 May 2024, 8:08 AM
State	Finished
Completed on	Saturday, 4 May 2024, 11:27 PM
Time taken	2 days 15 hours
Overdue	15 hours 19 mins
Marks	10.00/10.00
Grade	**100.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

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 %)

```
a=input()
b=input()
c=int(input())
d=''
e=''
for i in range(len(a)):
    if a[i] in b:
        d+=a[i]
for i in d:
    if i in e:
        pass
    else:
        e+=i
print(e[0:c])

```

	Input	Expected	Got	
✓	abcbde cdefghbb 3	bcd	bcd	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

String should contain only the words are not palindrome.

Sample Input 1

Malayalam is my mother tongue

Sample Output 1

is my mother tongue

Answer: (penalty regime: 0 %)

```
a=input()
b=a.split()
for i in b:
    t=i.lower()
    if (t[::-1]!=t):
        print(t,end=" ")
```

	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 **3**

Correct

Mark 1.00 out of 1.00

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

Answer: (penalty regime: 0 %)

```
a=input()
b=a.split(".",1)
c=a.split("@",1)
d=(c[1].split(".",1))
print(b[-1])
print(d[0])
print(c[0])
```

	Input	Expected	Got	
✓	abcd@gmail.com	com gmail abcd	com gmail abcd	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

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 %)

```
a=input()
b=input()
for i in a:
    if i not in b :
        print(i,end='')
```

	Input	Expected	Got	
✓	experience enc	xpri	xpri	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Assume that the given string has enough memory.

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

Sample Input 1

a2b4c6

Sample Output 1

aabbbbccccccc

Answer: (penalty regime: 0 %)

```
s=input()
a="";d=""
for i in s:
    if i.isalpha():
        a+=i
        d+=' '
    else:
        a+=' '
        d+=i
a=a.split()
d=d.split()
for i in range (len(a)):
    print(a[i]*int(d[i]),end="")
```

	Input	Expected	Got	
✓	a2b4c6	aabbbbccccccc	aabbbbccccccc	✓
✓	a12b3d4	aaaaaaaaaaaabbbdddd	aaaaaaaaaaaabbbdddd	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **6**

Correct

Mark 1.00 out of 1.00

In this exercise, you will create a program that reads words from the user until the user enters a blank line. After the user enters a blank line your program should display each word entered by the user exactly once. The words should be displayed in the same order that they were first entered. For example, if the user enters:

first

second

first

third

second

then your program should display:

first

second

third

Answer: (penalty regime: 0 %)

```
b=" "
try:

    while True:
        a=input()
        if a not in b:
            print(a)
            b+=a
except:
    pass
```

	Input	Expected	Got	
✓	first second first third second	first second third	first second third	✓
✓	rec cse it rec cse	rec cse it	rec cse it	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **7**

Correct

Mark 1.00 out of 1.00

Write a program that takes as input a string (sentence), and returns its second word in uppercase.

For example:

If input is “Wipro Technologies Bangalore” the function should return “TECHNOLOGIES”

If input is “Hello World” the function should return “WORLD”

If input is “Hello” the program should return “LESS”

NOTE 1: If input is a sentence with less than 2 words, the program should return the word “LESS”.

NOTE 2: The result should have no leading or trailing spaces.

For example:

Input	Result
Wipro Technologies Bangalore	TECHNOLOGIES
Hello World	WORLD
Hello	LESS

Answer: (penalty regime: 0 %)

```
s=input()
a=s.split()
c=len(a)
if (c>1):
    d=a[1]
    print(d.upper())
else:
    print("LESS")

```

	Input	Expected	Got	
✓	Wipro Technologies Bangalore	TECHNOLOGIES	TECHNOLOGIES	✓
✓	Hello World	WORLD	WORLD	✓
✓	Hello	LESS	LESS	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **8**

Correct

Mark 1.00 out of 1.00

Reverse a string **without affecting special characters**

Given a string **S**, containing special characters and all the alphabets, reverse the string without affecting the positions of the special characters.

Input:

A&B

Output:

B&A

Explanation: As we ignore '&' and

As we ignore '&' and then reverse, so answer is "B&A".

For example:

Input	Result
A&x#	x&A#

Answer: (penalty regime: 0 %)

```
s=input()
a=''
for i in s:
    if i.isalpha():
        a+=i
a=a[::-1]
k=0
for i in s:
    if i.isalpha():
        print(a[k],end="")
        k+=1
    else:
        print(i,end="")
```

	Input	Expected	Got	
✓	A&B	B&A	B&A	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **9**

Correct

Mark 1.00 out of 1.00

Write a program to check if two strings are balanced. For example, strings s1 and s2 are balanced if all the characters in the s1 are present in s2. The character's position doesn't matter. If balanced display as "true" ,otherwise "false".

For example:

Input	Result
Yn PYnative	True

Answer: (penalty regime: 0 %)

```
s1=input('')
s2=input('')
if s1 in s2:
    print('True')
else:
    print('False')
```

	Input	Expected	Got	
✓	Yn PYnative	True	True	✓
✓	Ynf PYnative	False	False	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **10**

Correct

Mark 1.00 out of 1.00

Write a python program to count all letters, digits, and special symbols respectively from a given string

For example:

Input	Result
rec@123	3 3 1

Answer: (penalty regime: 0 %)

```
s=(input())
v=0
n=0
c=0
for i in s:
    if("a"<=i<="z"or "A"<=i<="Z"):
        v+=1
    elif("1"<=i<="9"):
        n+=1
    else:
        c+=1
print(v)
print(n)
print(c)
```

	Input	Expected	Got	
✓	rec@123	3 3 1	3 3 1	✓
✓	P@#yn26at^&i5ve	8 3 4	8 3 4	✓
✓	abc@12&	3 2 2	3 2 2	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ Week5_MCQ

Jump to...

List ►

Started on	Thursday, 9 May 2024, 8:11 AM
State	Finished
Completed on	Thursday, 9 May 2024, 8:41 AM
Time taken	29 mins 59 secs
Grade	**8.00** out of 15.00 (**53.33**%)

Question **1**

Incorrect

Mark 0.00 out of 1.00

What is the output of the following code?

```
line =  "What will have so will"
L = line.split('a')
for i in L:
    print(i, end=' ')
```

a. ['Wh', 't will h', 've so will']

b. What will have so will

c. ['What', 'will', 'have', 'so', 'will'] ✗

d. Wh t will h ve so will

Your answer is incorrect.

The correct answer is:
Wh t will h ve so will

Question **2**

Correct

Mark 1.00 out of 1.00

What is the output of the following Code?

print(chr(69))

Answer: E ✓

The correct answer is: E

Question **3**

Correct

Mark 1.00 out of 1.00

What is the output of the following Code?

str1="vijay"

print(str1.capitalize())

Answer: vijay ✓

The correct answer is: Vijay

Question **4**

Correct

Mark 1.00 out of 1.00

What is the output of the following code?

```
print("rec. VIJAY".capitalize())
```

- a. Rec. vijay ✓
- b. rec. vijay
- c. Rec. Vijay
- d. REC. VIJAY

Your answer is correct.

The correct answer is:
Rec. vijay

Question **5**

Correct

Mark 1.00 out of 1.00

What is the output of the following?

```
my_string = 'arvijayakumar'
for i in range(len(my_string)):
        my_string[i].upper()
print (my_string)
```

- a. arvijayakumar ✓
- b. None
- c. ARVIJAYAKUMAR
- d. Error

Your answer is correct.

The correct answer is:
arvijayakumar

Question **6**

Incorrect

Mark 0.00 out of 1.00

What is the output of the following code ?

```
str = "Welcome"
str[2] = 'a'
print(str)
```

- a. Welcomea
- b. Error
- c. aWelcome
- d. Weacome ✗

Your answer is incorrect.

The correct answer is:
Error

Question **7**

Correct

Mark 1.00 out of 1.00

What is the index value of ‘i’ in string “Learning”

- a. 5 ✓
- b. 7
- c. 3
- d. 6

Your answer is correct.

The correct answer is:
5

Question **8**

Correct

Mark 1.00 out of 1.00

What is the output of the following code?

```
str1="vijay"
for i in range(len(str1),6):
    print(i)
```

- a. y
- b. None of the above
- c. 5 ✓
- d. vijay

Your answer is correct.

The correct answer is:
5

Question **9**

Incorrect

Mark 0.00 out of 1.00

What is the output of the following code?

```
line = "I'll come by then."
eline = ""
for i in line:
    eline += chr(ord(i)+3)
print(eline)
```

- a. L*oo frph e| wkhq1 ✗
- b. L*oo#frph#e|#wkhq1
- c. O*oo#Frph#E|#wKhq1
- d. l*oo@frph@e|$wkhq1

Your answer is incorrect.

The correct answer is:
L*oo#frph#e|#wkhq1

Question **10**

Correct

Mark 1.00 out of 1.00

What is the output of the following code ?

```
print('raining'. find('z'))
```

- a. ''
- b. -1 ✓
- c. Not Found
- d. Type error

Your answer is correct.

The correct answer is:
-1

Question **11**

Incorrect

Mark 0.00 out of 1.00

What is the output of the following code ?

```
a = '''A
B
C'''
print(a)
```

a. `Error`

b.
```
A
BC
```

c. `ABC` ✗

d.
```
A
B
C
```

Your answer is incorrect.

The correct answer is:

```
A
B
C
```

Question **12**

Incorrect

Mark 0.00 out of 1.00

What arithmetic operators cannot be used with strings in Python?

a. All of the mentioned ✗

b. -

c. *

d. +

Your answer is incorrect.

The correct answer is:

-

Question **13**

Incorrect

Mark 0.00 out of 1.00

Which of the following is False?

a. None of the mentioned ✗

b. lower() function in string is used to return a string by converting the whole given string into lowercase.

c. String is immutable.

d. capitalize() function in string is used to return a string by converting the whole given string into uppercase.

Your answer is incorrect.

The correct answer is:
capitalize() function in string is used to return a string by converting the whole given string into uppercase.

Question **14**

Incorrect

Mark 0.00 out of 1.00

What is the output of the following code ?

```
example = "snow world"
example[3] = 's'
print example
```

a. Error

b. snow world

c. snow

d. snos world ✗

Your answer is incorrect.

The correct answer is:
Error

Question **15**

Correct

Mark 1.00 out of 1.00

What is the output of the following code?

```
print('ab cd ef'.title())
```

a. Ab cd ef

b. None of the mentioned

c. Ab cd eF

d. Ab Cd Ef ✓

Your answer is correct.

The correct answer is:
Ab Cd Ef

◄ Strings

Jump to...

Week5_Coding ►

Started on	Monday, 13 May 2024, 9:07 PM
State	Finished
Completed on	Tuesday, 14 May 2024, 7:26 PM
Time taken	22 hours 18 mins
Marks	10.00/10.00
Grade	**100.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

Given an array of numbers, find the index of the smallest array element (the pivot), for which the sums of all elements to the left and to the right are equal. The array may not be reordered.

Example

arr=[1,2,3,4,6]

- the sum of the first three elements, 1+2+3=6. The value of the last element is 6.
- Using zero based indexing, arr[3]=4 is the pivot between the two subarrays.
- The index of the pivot is 3.

Constraints

- $3 \leq n \leq 10^5$
- $1 \leq arr[i] \leq 2 \times 10^4$, where $0 \leq i < n$
- It is guaranteed that a solution always exists.

The first line contains an integer n, the size of the array arr.

Each of the next n lines contains an integer, arr[i], where $0 \leq i < n$.

Sample Case 0

Sample Input 0

4

1

2

3

3

Sample Output 0

2

Explanation 0

- The sum of the first two elements, 1+2=3. The value of the last element is 3.
- Using zero based indexing, arr[2]=3 is the pivot between the two subarrays.
- The index of the pivot is 2.

Sample Case 1

Sample Input 1

3

1

2

1

Sample Output 1

1

Explanation 1

- The first and last elements are equal to 1.
- Using zero based indexing, arr[1]=2 is the pivot between the two subarrays.
- The index of the pivot is 1.

For example:

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

Answer: (penalty regime: 0 %)

```
n=int(input())
l=[]
for i in range (n):
    a=int(input())
    l.append(a)
for i in range(n):
    x=sum(l[:i])
    y=sum(l[i+1:])
    if (x==y):
        print(i)
        break
else:
    print('-1')
```

	Input	Expected	Got	
✓	4 1 2 3 3	2	2	✓
✓	3 1 2 1	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Consider a program to insert an element / item in the sorted array. Complete the logic by filling up required code in editable section. Consider an array of size 10. The eleventh item is the data is to be inserted.

Sample Test Cases

Test Case 1

Input

1
3
4
5
6
7
8
9
10
11
2

Output

ITEM to be inserted:2
After insertion array is:
1
2
3
4
5
6
7
8
9
10
11

Test Case 2

Input

11
22
33
55
66
77
88
99
110
120
44

Output

ITEM to be inserted:44
After insertion array is:
11
22
33
44

55
66
77
88
99
110
120

Answer: (penalty regime: 0 %)

```
n1=[]
for _ in range(10):
    n1.append(int(input()))
a=int(input())
print(f"ITEM to be inserted:{a}")
count=0
while count < len(n1) and n1[count]< a:
    count+=1
n1.insert(count,a)
print("After insertion array is:")
for element in n1:
    print(element)
```

	Input	Expected	Got	
✓	1 3 4 5 6 7 8 9 10 11 2	ITEM to be inserted:2 After insertion array is: 1 2 3 4 5 6 7 8 9 10 11	ITEM to be inserted:2 After insertion array is: 1 2 3 4 5 6 7 8 9 10 11	✓
✓	11 22 33 55 66 77 88 99 110 120 44	ITEM to be inserted:44 After insertion array is: 11 22 33 44 55 66 77 88 99 110 120	ITEM to be inserted:44 After insertion array is: 11 22 33 44 55 66 77 88 99 110 120	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Write a program to print all the locations at which a particular element (taken as input) is found in a list and also print the total number of times it occurs in the list. The location starts from 1.

For example, if there are 4 elements in the array:

5
6
5
7

If the element to search is 5 then the output will be:

5 is present at location 1
5 is present at location 3
5 is present 2 times in the array.

Sample Test Cases

Test Case 1

Input

4
5
6
5
7
5

Output

5 is present at location 1.
5 is present at location 3.
5 is present 2 times in the array.

Test Case 2

Input

5
67
80
45
97
100
50

Output

50 is not present in the array.

Answer: (penalty regime: 0 %)

```
n=int(input())
element =[]
for _ in range(n):
    element.append(int(input()))
a=int(input())
count=0
locations=[]
for index,element in enumerate(element):
    if element == a:
        locations.append(index +1)
        count +=1
```

```
        count +=1
if count >0:
    for location in locations:
        print(f"{a} is present at location {location}.")
    print(f"{a} is present {count} times in the array.")
else:
    print(f"{a} is not present in the array.")
```

	Input	Expected	Got	
✓	4 5 6 5 7 5	5 is present at location 1. 5 is present at location 3. 5 is present 2 times in the array.	5 is present at location 1. 5 is present at location 3. 5 is present 2 times in the array.	✓
✓	5 67 80 45 97 100 50	50 is not present in the array.	50 is not present in the array.	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Write a Python program to check if a given list is strictly increasing or not. Moreover, If removing only one element from the list results in a strictly increasing list, we still consider the list true

Input:

n : Number of elements

List1: List of values

Output

Print "True" if list is strictly increasing or decreasing else print "False"

Sample Test Case

Input

7

1

2

3

0

4

5

6

Output

True

Answer: (penalty regime: 0 %)

```
n=int(input())
l=[]
for i in range(n):
    l.append(int(input()))
c=0
for i in range (1,n):
    if (l[i-1]<l[i]):
        c+=1
print(c!=n-1)
```

	Input	Expected	Got	
✓	7 1 2 3 0 4 5 6	True	True	✓

	Input	Expected	Got	
✓	4 2 1 0 -1	True	True	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Determine the factors of a number (i.e., all positive integer values that evenly divide into a number) and then return the p^{th} element of the list, sorted ascending. If there is no p^{th} 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 = 3^{rd} 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 3	5
10 5	0

Input	Result
1 1	1

Answer: (penalty regime: 0 %)

```
n=int(input())
p=int(input())
a=[]
for i in range (1,n+1):
    if (n%i==0):
        a.append(i)
if (len(a)<p):
    print('0')
else:
    print(a[p-1])
```

	Input	Expected	Got	
✓	10 3	5	5	✓
✓	10 5	0	0	✓
✓	1 1	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **6**

Correct

Mark 1.00 out of 1.00

Output is a merged array without duplicates.

Input Format

N1 - no of elements in array 1

Array elements for array 1

N2 - no of elements in array 2

Array elements for array2

Output Format

Display the merged array

Sample Input 1

5

1

2

3

6

9

4

2

4

5

10

Sample Output 1

1 2 3 4 5 6 9 10

Answer: (penalty regime: 0 %)

```
n1=int(input())
l1=[]
for _ in range(n1):
    a=int(input())
    l1.append(a)
n2=int(input())
l2=[]
for _ in range (n2):
    b=int(input())
    l2.append(b)
c=list(set(l1+l2))
c.sort()
print(' '.join(map(str, c)))
```

	Input	Expected	Got	
✓	5 1 2 3 6 9 4 2 4 5 10	1 2 3 4 5 6 9 10	1 2 3 4 5 6 9 10	✓
✓	7 4 7 8 10 12 30 35 9 1 3 4 5 7 8 11 13 22	1 3 4 5 7 8 10 11 12 13 22 30 35	1 3 4 5 7 8 10 11 12 13 22 30 35	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **7**

Correct

Mark 1.00 out of 1.00

Write a Python program to Zip two given lists of lists.

Input:

m : row size

n: column size

list1 and list 2 : Two lists

Output

Zipped List : List which combined both list1 and list2

Sample test case

Sample input

2

2
1

3

5

7
2

4

6

8

Sample Output

[[1, 3, 2, 4], [5, 7, 6, 8]]

Answer: (penalty regime: 0 %)

```
m=int(input())
n=int(input())
list1 =[]
for _ in range(m):
    r=[int(input()) for _ in range(n)]
    list1.append(r)
list2=[]
for _ in range(m):
    r=[int(input()) for _ in range(n)]
    list2.append(r)
z=[]
for i in range(m):
    c=list1[i] + list2[i]
    z.append(c)
print(z)
```

	Input	Expected	Got	
✓	2 2 1 2 3 4 5 6 7 8	`[[1, 2, 5, 6], [3, 4, 7, 8]]`	`[[1, 2, 5, 6], [3, 4, 7, 8]]`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **8**

Correct

Mark 1.00 out of 1.00

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

Input Format:

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

Second line take n Integers which is inputs of array.

Output Format:

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

Example Input:

5

1

2

2

3

4

Output:

1 2 3 4

Example Input:

6

1

1

2

2

3

3

Output:

1 2 3

For example:

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

Answer: (penalty regime: 0 %)

```
n=int(input())
l=[]
for i in range(n):
    a=int(input())
    if a not in l:
        l.append(a)
```

```
        l.append(a)
for i in l:
    print(i,end=' ')
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **9**

Correct

Mark 1.00 out of 1.00

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 %)

```
n=int(input())
l=[]
s=[]
for i in range(n):
    a=int(input())
    s.append(a)
    if a not in l:
        l.append(a)
for i in l:
    print(i,'occurs',s.count(i),'times')
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **10**

Correct

Mark 1.00 out of 1.00

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 != j.

Input Format

1. First line is number of test cases T. Following T lines contain:
2. N, followed by N integers of the array
3. 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 3 5 4	1
1 3 1 3 5 99	0

Answer: (penalty regime: 0 %)

```
t=int(input())
for i in range(t):
    n=int(input())
    s=[]
    f=0
    for j in range(n):
```

```
        a=int(input())
        s.append(a)
    k=int(input())
    for l in range(n):
        for m in range(1+i,n):
            x=abs(s[l]-s[m])
            if(x==k):
                f=1
                break
        if(f==1):
            break
    if(f==1):
        print('1')
    else:
        print('0')
```

	Input	Expected	Got	
✓	1 3 1 3 5 4	1	1	✓
✓	1 3 1 3 5 99	0	0	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ Week6_MCQ

Jump to...

Tuples ►

Started on	Thursday, 9 May 2024, 9:51 PM
State	Finished
Completed on	Thursday, 9 May 2024, 10:07 PM
Time taken	16 mins 5 secs
Grade	**12.00** out of 15.00 (**80**%)

Question **1**

Correct

Mark 1.00 out of 1.00

To shuffle the list(say list1) what function do we use?

a. random.shuffle(list1) ✓

b. list1.shuffle()

c. random.shuffleList(list1)

Your answer is correct.

The correct answer is:
random.shuffle(list1)

Question **2**

Incorrect

Mark 0.00 out of 1.00

```
list1 = [1, 2, 3, 4,1,2,3,1]
list2 = list1.copy()
list1.clear()
print(list2)
```

Find the output?

a. [1, 2, 3, 4, 1, 2, 3, 1]

b. [ ]

c. [1, 1, 2, 2, 3, 3, 4,] ✗

d. [1, 2, 3, 4]

Your answer is incorrect.

The correct answer is:
[1, 2, 3, 4, 1, 2, 3, 1]

Question **3**

Incorrect

Mark 0.00 out of 1.00

In the given program if extend() is used instead of append() than what will be the output?

```
list1 = [1, 2, 3, 4]
list1.append([5,6,7,8])
print(list1)
```

a. [1,2,3,4]

b. [1,2,3,4,5,6,7,8]

c. [1,2,3,4,[5,6,7,8]] ✗

d. [1,2,3,4][5,6,7,8]

Your answer is incorrect.

The correct answer is:
[1,2,3,4,5,6,7,8]

Question **4**

Correct

Mark 1.00 out of 1.00

What will be the output after the following statements?
m = [75, 23, 64]
n = m[0] + m[1]
print👎

a. 98 ✓

b. 75

c. 64

d. 23

Your answer is correct.

The correct answer is:
98

Question **5**

Correct

Mark 1.00 out of 1.00

Write the output of the following :

```
def listchange(L):
L.append(45)
return
L1 = [1, 2, 3, 4]
listchange(L1)
print(L1)
```

Answer: [1, 2, 3, 4, 45] ✓

The correct answer is: [1, 2, 3, 4, 45]

Question **6**

Correct

Mark 1.00 out of 1.00

Which of the following can add only one value to a list?

a. extend()

b. add()

c. push()

d. append() ✓

Your answer is correct.

The correct answer is:
append()

Question **7**

Correct

Mark 1.00 out of 1.00

```
L=[0.5 * x for x in range(4)]
print(L)
```

Answer: [0.0, 0.5, 1.0, 1.5] ✓

The correct answer is: [0.0, 0.5, 1.0, 1.5]

Question **8**

Correct

Mark 1.00 out of 1.00

Choose a correct statement

a. List is data structure in python used to store the sequence of same types.

b. List is data structure in python used to store the sequence of various types. ✓

c. is used to represent the list

d. List are immutable

Your answer is correct.

The correct answer is:
List is data structure in python used to store the sequence of various types.

Question **9**

Correct

Mark 1.00 out of 1.00

What will be the output after the following statements?

```
m = [5, 10, 35]
del m[:]
print(m)
```

a. []

b. [5, 10, 35]

c. 5, 10, 35

d. [5, 35]

Your answer is correct.

The correct answer is:
[]

Question **10**

Correct

Mark 1.00 out of 1.00

Find the output?

```
list1 = [1, 2, 3, 4,1,2,3]
list1.reverse()
print(list1)
```

- a. [3, 2, 1, 4, 3, 2, 1] ✓
- b. [4, 3, 3, 2, 2, 1, 1]
- c. [1, 2, 3, 4, 1, 2, 3]
- d. [1, 1, 2, 2, 3, 3, 4]

Your answer is correct.

The correct answer is:
[3, 2, 1, 4, 3, 2, 1]

Question **11**

Correct

Mark 1.00 out of 1.00

What is the output when we execute list(“welcome”)

- a. a) [’w’, ‘e’, ‘l’, ‘c’, ‘o’, 'm', 'e'] ✓
- b. b) [‘welcome’]
- c. c)['emoclew']

Your answer is correct.

The correct answer is:
a) [’w’, ‘e’, ‘l’, ‘c’, ‘o’, 'm', 'e']

Question **12**

Incorrect

Mark 0.00 out of 1.00

Find the output?

list1 = [1, 2, 3, 4,1,2,3]

print(list1.pop())

- a. 2
- b. [ ]
- c. 1 ✗
- d. 3

Your answer is incorrect.

The correct answer is:
3

Question **13**

Correct

Mark 1.00 out of 1.00

What will be the output after the following statements?
m = [4, 8]
print(m * 3)

- a. [4, 8, 4, 8]
- b. [4, 8]
- c. [4, 8, 4, 8, 4, 8] ✓
- d. [4, 8] * 3

Your answer is correct.

The correct answer is:
[4, 8, 4, 8, 4, 8]

Question **14**

Correct

Mark 1.00 out of 1.00

L=["Amit","Sumit","Naina"]
L1=["Sunil"]
print(L + L1)

a. **['Amit' , 'Sumit' , 'Naina' , ['Sunil']]**

b. **List can not concatenate**

c. **['Amit' , 'Sumit' , 'Naina' , 'Sunil']** ✓

Your answer is correct.

The correct answer is:
['Amit' , 'Sumit' , 'Naina' , 'Sunil']

Question **15**

Correct

Mark 1.00 out of 1.00

What will be the output after the following statements?
m = ['July', 'September', 'December']
n = m[1]
print👎

a. December

b. July

c. ['July', 'September', 'December']

d. September ✓

Your answer is correct.

The correct answer is:
September

◄ List

Jump to...

Week6_Coding ►

Started on	Wednesday, 29 May 2024, 8:00 PM
State	Finished
Completed on	Thursday, 30 May 2024, 8:31 AM
Time taken	12 hours 31 mins
Marks	5.00/5.00
Grade	**100.00** out of 100.00

Question **1**

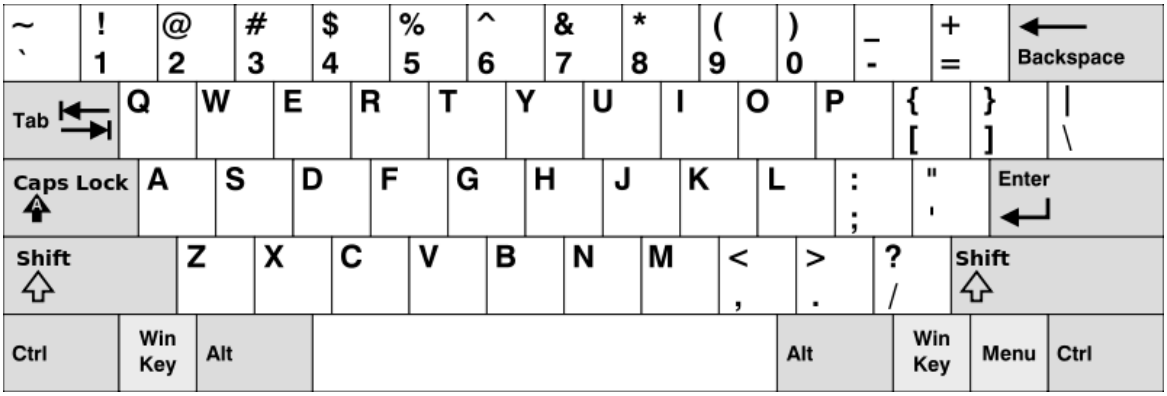
Correct

Mark 1.00 out of 1.00

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	Alaska Dad
2 adsfd afd	adsfd afd

Answer: (penalty regime: 0 %)

```
def find_words_in_one_row(words):
    r1=set("qwertyuiopQWERTYUIOP")
    r2=set("asdfghjklASDFGHJKL")
    r3=set("zxcvbnmZXCVBNM")

    result= []
    for word in words:
        word_set = set(word)
        if word_set <= r1 or word_set <= r2 or word_set <= r3 :
            result.append(word)

    return result
```

```
13
14 n=int(input())
15 words=[input().strip() for _ in range(n)]
16 output_words = find_words_in_one_row(words)
17
18 if output_words:
19     for word in output_words:
20         print(word)
21 else:
22     print("No words")
```

	Input	Expected	Got	
✓	4 Hello Alaska Dad Peace	Alaska Dad	Alaska Dad	✓
✓	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 **2**

Correct

Mark 1.00 out of 1.00

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
Faculty Upskilling in Python Programming ak	2

Answer: (penalty regime: 0 %)

```
a=input().lower().split()
b=input()
b=[str(b) for b in b]
l=[]
for i in a:
    for j in range(len(i)):
        for k in b:
            if i[j]==k:
                l.append(i)
for i in l:
     if i in a:
         a.remove(i)
print(len(a))
```

	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 **3**

Correct

Mark 1.00 out of 1.00

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 %)

```
def dup_num(n):
    seen = set()
    for i in nums:
        if i in seen:
            return i
        seen.add(i)

input_string = input()
nums = list(input_string.split())
print(dup_num(nums))
```

	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.

Question **4**

Correct

Mark 1.00 out of 1.00

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 %)

```
input_str=input()
unique_chars=set(input_str)
binary_chars={'0','1'}
result="Yes"if unique_chars <= binary_chars else "No"
print (result)
```

	Input	Expected	Got	
✓	01010101010	Yes	Yes	✓
✓	REC123	No	No	✓
✓	010101 10101	No	No	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Write a program to 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 %)

```
s1,s2 =map(int, input().split())

arr1 =list(map(int,input().split()))
arr2 =list(map(int,input().split()))

s1=set(arr1)
s2=set(arr2)

non_repeating_elements =list(s1.symmetric_difference(s2))

if non_repeating_elements:
    print(" ".join(map(str, sorted(non_repeating_elements))))
    print(len(non_repeating_elements))
else:
    print("NO SUCH ELEMENTS")
```

	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.

◄ Week7_MCQ

Jump to...

Dictionary ►

Started on	Friday, 7 June 2024, 10:25 AM
State	Finished
Completed on	Friday, 7 June 2024, 10:54 AM
Time taken	29 mins 4 secs
Grade	**12.00** out of 15.00 (**80**%)

Question **1**

Incorrect

Mark 0.00 out of 1.00

Which of the following options will not result in an error when performed on tuples in Python where tupl=(5,2,7,0,3)?

a. tupl.sort()

b. tupl[1]=2 ✗

c. tupl.append(2)

d. tupl1=tupl+tupl

Your answer is incorrect.

The correct answer is:
tupl1=tupl+tupl

Question **2**

Correct

Mark 1.00 out of 1.00

What will be printed when the following code executes?

```
a = ("Python Programming")
```

```
print type(a)
```

a. <class 'tuple'>

b. str

c. <class 'int'>

d. <class 'str'> ✓

Your answer is correct.

The correct answer is:
<class 'str'>

Question **3**

Correct

Mark 1.00 out of 1.00

What will be the output of following Python code?

```
list1=[1,3,4,2]

x=list1.pop(2)

print(set([x]))
```

a. {1,3,4}

b. {4} ✓

c. {1,3,2}

d. {2}

Your answer is correct.

The correct answer is:
{4}

Question **4**

Correct

Mark 1.00 out of 1.00

Write the Output of the following Code?

t = (15,83,83,52,60,45,52,85,100)

print(min(t)+max(t)+t.count(52))

a. 117 ✓

b. 100

c. Error

d. 2

Your answer is correct.

The correct answer is:
117

Question **5**

Incorrect

Mark 0.00 out of 1.00

Which of the following Python code will create a set?

(i) set1=set((0,9,0))
(ii) set1=set([0,2,9])
(iii) set1={}

- a. ii
- b. iii
- c. i,ii
- d. All of the above ✗

Your answer is incorrect.

The correct answer is:
i,ii

Question **6**

Correct

Mark 1.00 out of 1.00

What will be the output of the below Python code?

```
t1=(55,12,78,64,25)
t1.pop(12)
print(tuple1)
```

- a. Error ✓
- b. (55,78,64,25)
- c. 12
- d. (12)

Your answer is correct.

The correct answer is:
Error

Question **7**

Correct

Mark 1.00 out of 1.00

What is the output of the following union operation

```
set1 = {10, 20, 30, 40}
set2 = {50, 20, "10", 60}

set3 = set1.union(set2)
print(set3)
```

a. {40, '10', 50, 20, 60, 30}

b. {40, 10, 50, 20, 60, 30}

c. {40, 10, '10', 50, 20, 60, 30} ✓

d. SynatxError: Different types cannot be used with sets

Your answer is correct.

The correct answer is: {40, 10, '10', 50, 20, 60, 30}

Question **8**

Correct

Mark 1.00 out of 1.00

What is the output of the given below program?

t = (58, 47, 36, 25, 14, 3)

x = t[2:-1]

print(x)

a. (58,47,36,25)

b. Error

c. (36, 25, 14) ✓

d. (3,14,25)

Your answer is correct.

The correct answer is:
(36, 25, 14)

Question **9**

Correct

Mark 1.00 out of 1.00

What is the output of the following code

```
aSet = {1, 'rec', ('cse', 'ece'), True}
print(aSet)
```

a. {‘rec’, 1, (‘cse’, ‘ece’),True}

b. Error

c. {‘rec’, True, (‘cse’, ‘ece’)}

d. {‘rec’, 1, (‘cse’, ‘ece’)} ✓

Your answer is correct.

The correct answer is:
{‘rec’, 1, (‘cse’, ‘ece’)}

Question **10**

Correct

Mark 1.00 out of 1.00

What is the output of the following

```
set1 = {1, 2, 3, 4, 5}
set2 = {6, 7, 1, 3, 4, 8, 2, 5}

print(set1.issubset(set2))
print(set2.issuperset(set1))
```

a. True ✓

True

b. False

False

c. False

True

d. True

False

Your answer is correct.

The correct answer is:

True

True

Question **11**

Correct

Mark 1.00 out of 1.00

If a=(15,16,17,18,19,25), then a[1:-1] will be

Note :

a=(15,16,17,18,19,25)

print((a[1:-1]))

- a. (16,17,18,19) ✓
- b. (16,17,18)
- c. (25,19,18,17)
- d. Error

Your answer is correct.

The correct answer is:
(16,17,18,19)

Question **12**

Correct

Mark 1.00 out of 1.00

Find the output of the given Python program?

```
>>>t = (1, 2, 4, 3, 8, 9)
>>>[t[i] for i in range(0, len(t), 2)]
```

- a. [1, 2, 4, 3, 8, 9]
- b. [1, 4, 8] ✓
- c. [2, 3, 9]
- d. (1, 4, 8)

Your answer is correct.

The correct answer is:
[1, 4, 8]

Question **13**

Correct

Mark 1.00 out of 1.00

What is the output of the following

```
set1 = {10, 20, 30, 40, 50}
set2 = {60, 70, 10, 30, 40, 80, 20, 50}

print(set1.issubset(set2))
print(set2.issuperset(set1))
```

a. True
False

b. False
True

c. False
False

d. True ✓
True

Your answer is correct.

The correct answer is:
True

True

Question **14**

Correct

Mark 1.00 out of 1.00

What will set1|set2 do?

```
If set1={"a","b",3}
set2={3,7}
```

a. Elements of set2 will get appended to set1

b. Elements of set1 will get appended to set2

c. A new set will be created with the unique elements of set1 and set2.

d. A new set will be created with the elements of both set1 and set2 ✓

Your answer is correct.

The correct answer is:
A new set will be created with the elements of both set1 and set2

Question **15**

Incorrect

Mark 0.00 out of 1.00

What will be the output of following Python code?

```
set1={0,0,9}

print(set1)
```

a. {0,0,9}

b. {9}

c. It will throw an error as there are two 0 while creating the set. ✕

d. {0,9}

Your answer is incorrect.

The correct answer is:
{0,9}

◄ Set

Jump to...

Week7_Coding ►

Started on	Friday, 31 May 2024, 8:20 PM
State	Finished
Completed on	Friday, 31 May 2024, 8:29 PM
Time taken	9 mins 6 secs
Marks	5.00/5.00
Grade	**100.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

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 Lalith 89 45 45 Ram 89 89 89 Sita 70 70 70	Ram James Ram Lalith Lalith

Answer: (penalty regime: 0 %)

```
def compute_student_statistics(n, student_data):
    students = {}

    for data in student_data:
        parts = data.split()
        name, marks = parts[0], list(map(int, parts[1:]))
        students[name] = marks + [sum(marks) / 3]

    highest_avg, highest_assign, lowest_lab, lowest_avg = [], [], [], []
    highest_avg_score = highest_assign_score = float('-inf')
    lowest_lab_score = lowest_avg_score = float('inf')

    for name, marks in students.items():
        avg_score = marks[3]

        if avg_score > highest_avg_score:
            highest_avg, highest_avg_score = [name], avg_score
        elif avg_score == highest_avg_score:
            highest_avg.append(name)
```

```
        if marks[1] > highest_assign_score:
            highest_assign, highest_assign_score = [name], marks[1]
        elif marks[1] == highest_assign_score:
            highest_assign.append(name)

        if marks[2] < lowest_lab_score:
            lowest_lab, lowest_lab_score = [name], marks[2]
        elif marks[2] == lowest_lab_score:
            lowest_lab.append(name)

        if avg_score < lowest_avg_score:
            lowest_avg, lowest_avg_score = [name], avg_score
        elif avg_score == lowest_avg_score:
            lowest_avg.append(name)

    print(' '.join(sorted(highest_avg)))
    print(' '.join(sorted(highest_assign)))
    print(' '.join(sorted(lowest_lab)))
    print(' '.join(sorted(lowest_avg)))

n = int(input().strip())
student_data = [input().strip() for _ in range(n)]

compute_student_statistics(n, student_data)

```

	Input	Expected	Got	
✓	4 James 67 89 56 Lalith 89 45 45 Ram 89 89 89 Sita 70 70 70	Ram James Ram Lalith Lalith	Ram James Ram Lalith Lalith	✓
✓	3 Raja 95 67 90 Aarav 89 90 90 Shadhana 95 95 91	Shadhana Shadhana Aarav Raja Raja	Shadhana Shadhana Aarav Raja Raja	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

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 %)

```
s1 = input().strip()
s2 = input().strip()

words1 = s1.split()
words2 = s2.split()

freq1 = {}
freq2 = {}

for word in words1:
    if word in freq1:
        freq1[word] += 1
    else:
        freq1[word] = 1

for word in words2:
    if word in freq2:
        freq2[word] += 1
    else:
        freq2[word] = 1

uncommon_words = []
for word in freq1:
    if freq1[word] == 1 and word not in freq2:
        uncommon_words.append(word)

for word in freq2:
    if freq2[word] == 1 and word not in freq1:
        uncommon_words.append(word)

print(" ".join(uncommon_words))

```

	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.

Question **3**

Correct

Mark 1.00 out of 1.00

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 %)

```
n = int(input().strip())

test_cases = {}

for _ in range(n):
    key, *values = input().strip().split()

    values = list(map(int, values))

    test_cases[key] = sum(values)

sorted_test_cases = dict(sorted(test_cases.items(), key=lambda item: item[1]))

for key, value in sorted_test_cases.items():
    print(key, value)

```

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

	Input	Expected	Got	
✓	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 **4**

Correct

Mark 1.00 out of 1.00

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 Johny get maximum votes. Since John is alphabetically smaller, we print it. Use dictionary to solve the above problem

Sample Input:

10

John

John

Johny

Jamie

Jamie

Johny

Jack

Johny

Johny

Jackie

Sample Output:

Johny

Answer: (penalty regime: 0 %)

```
n = int(input().strip())

vote_count = {}

for _ in range(n):
    candidate = input().strip()
    if candidate in vote_count:
        vote_count[candidate] += 1
    else:
```

```
        vote_count[candidate] = 1

max_votes = 0
winner = ""

for candidate, votes in vote_count.items():
    if votes > max_votes or (votes == max_votes and candidate < winner):
        max_votes = votes
        winner = candidate

print(winner)

```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

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

Points Letters

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

2 D and G

3 B, C, M and P

4 F, H, V, W and Y

5 K

8 J and X

10 Q and Z

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

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

Sample Input

REC

Sample Output

REC is worth 5 points.

For example:

Input	Result
REC	REC is worth 5 points.

Answer: (penalty regime: 0 %)

```
scrabble_points = {
    'A': 1, 'E': 1, 'I': 1, 'L': 1, 'N': 1, 'O': 1, 'R': 1, 'S': 1, 'T': 1, 'U': 1,
    'D': 2, 'G': 2,
    'B': 3, 'C': 3, 'M': 3, 'P': 3,
    'F': 4, 'H': 4, 'V': 4, 'W': 4, 'Y': 4,
    'K': 5,
    'J': 8, 'X': 8,
    'Q': 10, 'Z': 10
}

word = input().strip().upper()

score = 0

for letter in word:
    score += scrabble_points.get(letter, 0)

print(f"{word} is worth {score} points.")

```

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

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ Week8_MCQ

Jump to...

Functions ►

Started on	Thursday, 6 June 2024, 8:07 AM
State	Finished
Completed on	Thursday, 6 June 2024, 8:19 AM
Time taken	11 mins 48 secs
Grade	**13.00** out of 15.00 (**86.67**%)

Question **1**

Correct

Mark 1.00 out of 1.00

pop() function delete and _____ the element of dictionary.

a. display
b. add
c. return ✓
d. not return

The correct answer is: return

Question **2**

Correct

Mark 1.00 out of 1.00

Only values (without keys) can be printed in dictionary?

a. True ✓
b. False

The correct answer is: True

Question **3**

Correct

Mark 1.00 out of 1.00

A = {"A" : "Apple", "B" : "Ball", "C" : "Cat"} Which of the following statement will return : dict_items([('A', 'Apple'), ('B', 'Ball'), ('C', 'Cat')])

a. print(A.Items()) ✓
b. print(A.get())
c. print(A.values())
d. print(A.keys())

The correct answer is: print(A.Items())

Question **4**

Correct

Mark 1.00 out of 1.00

clear() method is used to delete the dictionary.

a. True
b. False ✓

The correct answer is: False

Question **5**

Correct

Mark 1.00 out of 1.00

All elements in dictionary are separated by _____.

a. Colon (
b. Semicolon(;)
c. dot(.)
d. Comma(,) ✓

The correct answer is: Comma(,)

Question **6**

Correct

Mark 1.00 out of 1.00

What will be the output of the following Python code snippet?

```
a={}
a['a']=1
a['b']=[2,3,4]
print(a)
```

a. {'b': [2], 'a': [3]}
b. {'b': [2, 3, 4], 'a': 1} ✓
c. Error
d. {'b': [2], 'a': 1}

Your answer is correct.

The correct answer is:
{'b': [2, 3, 4], 'a': 1}

Question **7**

Correct

Mark 1.00 out of 1.00

What does the following code print?

```
names = {'Janice': 5, 'Emily': 3, 'John': 7, 'Eleanor': 2}
list_o_names = []
names['Emily'] += 10
names['Erik'] = 22

for name in names:
    if names[name] > 5:
        list_o_names.append(name)
print(list_o_names)
```

- a. ['Janice', 'John', 'Erik']
- b. ['Emily', 'John', 'Erik'] ✓
- c. ['Janice', 'Emily', 'John', 'Eleanor']
- d. ['Janice', 'Emily', 'John']

Your answer is correct.

The correct answer is:
['Emily', 'John', 'Erik']

Question **8**

Incorrect

Mark 0.00 out of 1.00

Keys in dictionary are _____.

- a. Immutable
- b. integers
- c. antique
- d. Mutable ✗

The correct answer is: Immutable

Question **9**

Correct

Mark 1.00 out of 1.00

Write the output of the following codes.
>>>dl={1:10,2:20,3:30,4:40, 5:50}
>>>dl.items ()

- a. [(1, 10), (2, 20), (3, 30), (4, 40), (5, 50)] ✓
- b. [10, 20, 30, 40, 50]
- c. [1, 2, 3, 4, 5]
- d. Error

Your answer is correct.

The correct answer is:
[(1, 10), (2, 20), (3, 30), (4, 40), (5, 50)]

Question **10**

Correct

Mark 1.00 out of 1.00

Key – value concept is in ____.

- a. Dictionary ✓
- b. List
- c. String
- d. Tuple

The correct answer is: Dictionary

Question **11**

Incorrect

Mark 0.00 out of 1.00

Which of the following is used to delete an element from Dictionary?

- a. pop
- b. None of the mentioned
- c. remove
- d. delete ✗

The correct answer is: pop

Question **12**

Correct

Mark 1.00 out of 1.00

Dictionary is a ____ data type.

- a. None of the mentioned
- b. Mapping ✓
- c. Ordered
- d. Sequence

The correct answer is: Mapping

Question **13**

Correct

Mark 1.00 out of 1.00

1,2,3 are the ____ in the following dictionary. D = {1 : "One", 2 : "Two", 3 : "Three"}

- a. Keys ✓
- b. Items
- c. Values
- d. None of the mentioned

The correct answer is: Keys

Question **14**

Correct

Mark 1.00 out of 1.00

What will be the Output of the following code?

```
dl={1:10, 2:20, 3:30, 4:40}
d2={5:50, 6:60, 7:70}
dl.update (d2)
print (dl)
```

- a. {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60, 7: 70} ✓
- b. [(1, 10), (2, 20), (3, 30), (4, 40), (5, 50)]
- c. {1:10, 2: 20, 4: 40, 5: 50, 6: 60, 7: 70}
- d. [1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60, 7: 70]

Your answer is correct.

The correct answer is:
{1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60, 7: 70}

Question **15**

Correct

Mark 1.00 out of 1.00

In dictionary Keys and values are separated by _____.

a. Comma(,)
b. Semicolon(;)
c. dot(.)
d. Colon (😉 ✓

The correct answer is: Colon (😉

◄ Dictionary

Jump to...

Week8_Coding ►

Started on	Monday, 20 May 2024, 11:28 AM
State	Finished
Completed on	Monday, 20 May 2024, 12:20 PM
Time taken	51 mins 10 secs
Marks	5.00/5.00
Grade	**100.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

Write a code to check whether product of digits at even places is divisible by sum of digits at odd place of a positive integer.

Input Format:

Take an input integer from stdin.

Output Format:

Print TRUE or FALSE.

Example Input:

1256

Output:

TRUE

Example Input:

1595

Output:

FALSE

For example:

Test	Result
`print(productDigits(1256))`	`True`
`print(productDigits(1595))`	`False`

Answer: (penalty regime: 0 %)

Reset answer

```
def productDigits(n):

    s=str(n)
    e=1
    o=0
    for i in range(len(s)):
        if (i%2!=0):
            e*=int(s[i])
        else:
            o+=int(s[i])

    return e%o==0
```

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Given a number with maximum of 100 digits as input, find the difference between the sum

of odd and even position digits.

Input Format:

Take a number in the form of String from stdin.

Output Format:

Print the difference between sum of even and odd digits

Example input:

1453

Output:

1

Explanation:

Here, sum of even digits is 4 + 3 = 7

sum of odd digits is 1 + 5 = 6.

Difference is 1.

Note that we are always taking absolute difference

Answer: (penalty regime: 0 %)

Reset answer

```
def differenceSum(n):
    s=str(n)
    e=0
    o=0
    for i in range (len(s)):
        if (i%2!=0):
            e+=int(s[i])
        else:
            o+=int(s[i])

        return abs(e-o)

```

	Test	Expected	Got	
✓	`print(differenceSum(1453))`	1	1	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

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

```
def checkUgly(n):
    c=0
    while(n%2==0):
        n//=2
    while(n%3==0):
        n//=3
    while(n%5==0):
        n//=5
    if (n==1):
        return ("ugly")
    else:
        return ("not ugly")
```

	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.

Question **4**

Correct

Mark 1.00 out of 1.00

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 the number is not valid, it should display “Invalid input”.

If it is an automorphic number display “Automorphic” else display “Not Automorphic”.

Input Format:

Take a Integer from Stdin 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

For example:

Test	Result
`print(automorphic(5))`	`Automorphic`

Answer: (penalty regime: 0 %)

Reset answer

```
def automorphic(n):

    digit=0;no=n
    while(n!=0):
        n=n//10
        digit+=1
    v=10**digit
    sq=no*no

    if(no==sq%v):
        return ("Automorphic")
    else:
        return ("Not Automorphic")
```

	Test	Expected	Got	
✓	`print(automorphic(5))`	`Automorphic`	`Automorphic`	✓
✓	`print(automorphic(7))`	`Not Automorphic`	`Not Automorphic`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

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

```
def christmasDiscount(n):
    s=0
    for i in str(n):
        if i in '2357':
            s+=int(i)
    return s
```

	Test	Expected	Got	
✓	`print(christmasDiscount(578))`	12	12	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ Week9_MCQ

Jump to...

Searching ►

Started on	Thursday, 6 June 2024, 8:20 AM
State	Finished
Completed on	Thursday, 6 June 2024, 8:36 AM
Time taken	15 mins 57 secs
Grade	**13.00** out of 15.00 (**86.67**%)

Question **1**

Correct

Mark 1.00 out of 1.00

What is the output of the following function call?

```
def fun1(name, age=20):
    print(name, age)
fun1('Emma', 25)
```

a. name

b. Emma 20

c. age

d. Emma 25 ✓

Your answer is correct.

The correct answer is:
Emma 25

Question **2**

Correct

Mark 1.00 out of 1.00

Which of the following statement is not true regarding functions?

a. A function definition begins with "define" ✓

b. Function header always ends with a colon (.

c. A function may or may not have parameters.

d. A function may or may not return value.

The correct answer is: A function definition begins with "define"

Question **3**

Correct

Mark 1.00 out of 1.00

The return statement in function is used to _____.

- a. None of the mentioned
- b. Both return value and returns the control to the calling function ✓
- c. returns the control to the calling function
- d. return value

The correct answer is: Both return value and returns the control to the calling function

Question **4**

Correct

Mark 1.00 out of 1.00

Which of the following is not the scope of variable?

- a. Outside ✓
- b. Local
- c. Global
- d. None of the mentioned

The correct answer is: Outside

Question **5**

Correct

Mark 1.00 out of 1.00

What will be the output of the following Python code?

```
def printMax(a, b):
    if a > b:
        print(a, 'is maximum')
    elif a == b:
        print(a, 'is equal to', b)
    else:
        print(b, 'is maximum')
printMax(3, 4)
```

- a. 3
- b. None of the mentioned
- c. 4
- d. 4 is maximum ✓

Your answer is correct.

The correct answer is:
4 is maximum

Question **6**

Incorrect

Mark 0.00 out of 1.00

Which of the following is not the type of function argument?

- a. initial argument
- b. default argument
- c. Required argument
- d. Keyword argument ✗

The correct answer is: initial argument

Question **7**

Correct

Mark 1.00 out of 1.00

Which one of the following is the correct way of calling a function?

a. ret function_name()

b. function_name() ✓

c. call function_name()

d. function function_name()

Your answer is correct.

The correct answer is:
function_name()

Question **8**

Correct

Mark 1.00 out of 1.00

Python function always returns a value

Select one:

True ✓

False

The correct answer is 'True'.

Question **9**

Incorrect

Mark 0.00 out of 1.00

Fill in the line of the following Python code for calculating the factorial of a number?

```
def factorial🤔 :
    if (n==1 or n==0):
       return 1
    else:
        return ——
num = 5;
print("number : ",num)
print("Factorial : ",factorial(num))
```

- a. fact🤔 *fact(n-1)
- b. (n-1)*(n-2)
- c. n*(n-1) ✗
- d. (n * factorial(n - 1))

Your answer is incorrect.

The correct answer is:
(n * factorial(n - 1))

Question **10**

Correct

Mark 1.00 out of 1.00

A variable that is defined inside any function or a block is known as a _____.

- a. Function Variable
- b. Local variable ✓
- c. Global variable
- d. inside variable

The correct answer is: Local variable

Question **11**

Correct

Mark 1.00 out of 1.00

In a program, a function can be called ____ times.

- a. 3
- b. 5
- c. 2
- d. Multiple times ✓

The correct answer is: Multiple times

Question **12**

Correct

Mark 1.00 out of 1.00

The process of dividing a computer program into separate independent blocks of code with specific functionalities is known as _____.

- a. Programming
- b. Modular Programming ✓
- c. More Programming
- d. Step Programming

The correct answer is: Modular Programming

Question **13**

Correct

Mark 1.00 out of 1.00

The function can be called in the program by writing function name followed by ____.

- a.  ✓
- b. [ ]
- c. None of the mentioned
- d. { }

The correct answer is: 

Question **14**

Correct

Mark 1.00 out of 1.00

Which keyword is used to begin the definition of a function?

- a. def ✓
- b. Define
- c. DEF
- d. Def

The correct answer is: def

Question **15**

Correct

Mark 1.00 out of 1.00

The ____ statement returns the values from the function to the calling function.

- a. return ✓
- b. take
- c. send
- d. give

The correct answer is: return

◄ Functions

Jump to...

Week9_Coding ►

Started on	Thursday, 23 May 2024, 8:42 AM
State	Finished
Completed on	Monday, 27 May 2024, 8:49 PM
Time taken	4 days 12 hours
Marks	5.00/5.00
Grade	**100.00** out of 100.00

Question **1**

Correct

Mark 1.00 out of 1.00

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 3 6 8	12 8

Answer: (penalty regime: 0 %)

```
n=int(input())
a=input()
b=a.split()
l=[]
for i in range(n):
    if b[i]==b[0]:
        if (int(b[0])>=int(b[1])):
            l.append(b[0])
    elif b[i]==b[-1]:
        if (int(b[-1])>=int(b[-2])):
            l.append(b[-1])
    else:
        if(int(b[i])>=(int(b[i-1])) and (int(b[i+1])<=int(b[i])):
            l.append(b[i])
for i in l:
    print(i,end=" ")
```

	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 **2**

Correct

Mark 1.00 out of 1.00

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 %)

```
m=input()
n=int(input())
s=m.split(',')
l=[]
for i in s:
    i=int(i)
    if i not in l:
        l.append(i)
l.sort()
b=len(l);a=0
while a<=b:
    mid=(a+b)//2
    if l[mid]<n:
        a=mid+1
    elif l[mid]>n:
        b=mid-1
    else:
        print("True")
        break
else:
    print("False")
```

	Input	Expected	Got	
✓	1,2,3,5,8 6	False	False	✓
✓	3,5,9,45,42 42	True	True	✓
✓	52,45,89,43,11 11	True	True	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

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 %)

```
n=int(input())
arr=list(map(int,input().split()))
k=int(input())

seen= set()

for num in arr :
    if k-num in seen :
        print("Yes")
        break
    seen.add(num)
else:
    print("No")
```

	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 17	Yes	Yes	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

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

Answer: (penalty regime: 0 %)

```
a=input()
b=a.split(" ")
l=[]
list=[]
for i in b:
    i=int(i)
    l.append(i)
    if i not in list:
        list.append(i)
list.sort()
for i in list:
    print(i,l.count(i))
```

	Input	Expected	Got	
✓	4 3 5 3 4 5	3 2 4 2 5 2	3 2 4 2 5 2	✓
✓	12 4 4 4 2 3 5	2 1 3 1 4 3 5 1 12 1	2 1 3 1 4 3 5 1 12 1	✓

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

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

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]<=$2x10^6$.

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 %)

```
n=int(input())
a=list(map(int,input().split()))
s=0
for i in range(n):
    p=0
    for j in range(0,n-i-1):
        if a[j]>a[j+1]:
            a[j],a[j+1]=a[j+1],a[j]
            s+=1
            p+=1
    if p==0:
```

```
        break
print(f"List is sorted in {s} swaps.")
print(f"First Element: {a[0]}")
print(f"Last Element: {a[-1]}")
```

	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.

◄ Week10_MCQ

Jump to...

Sorting ►

Started on	Friday, 7 June 2024, 10:08 AM
State	Finished
Completed on	Friday, 7 June 2024, 10:15 AM
Time taken	6 mins 18 secs
Grade	**15.00** out of 15.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

What is mean by stable sorting algorithm?

a. A sorting algorithm is stable if it doesn't preserver the order of duplicate keys

b. A sorting algorithm is stable if it preserves the order of non-duplicate keys

c. A sorting algorithm is stable if it preserves the order of all keys

d. A sorting algorithm is stable if it preserves the order of duplicate keys ✓

Your answer is correct.

The correct answer is:
A sorting algorithm is stable if it preserves the order of duplicate keys

Question **2**

Correct

Mark 1.00 out of 1.00

Very slow way of sorting is_____

a. Insertion sort ✓

b. Quick sort

c. Heap sort

d. Bubble sort

Your answer is correct.

The correct answer is:
Insertion sort

Question **3**

Correct

Mark 1.00 out of 1.00

Which of the following is not the required condition for a binary search algorithm?

a. The list must be sorted

b. Number values should only be present

Number values should only be present

c. There should be direct access to the middle element in any sublist

d. There must be a mechanism to delete and/or insert elements in the list ✓

Your answer is correct.

The correct answer is:
There must be a mechanism to delete and/or insert elements in the list

Question **4**

Correct

Mark 1.00 out of 1.00

Given an array arr = {45,77,89,90,94,99,100} and key = 100; What are the mid values(corresponding array elements) generated in the first and second iterations?

a. 90 and 100

b. 89 and 94

c. 94 and 99

d. 90 and 99 ✓

Your answer is correct.

The correct answer is:
90 and 99

Question **5**

Correct

Mark 1.00 out of 1.00

Finding the location of a given item in a collection of items is called

a. Discovering

b. Searching ✓

c. Mining

d. Finding

Your answer is correct.

The correct answer is:
Searching

Question **6**

Correct

Mark 1.00 out of 1.00

Which of the following is not a limitation of binary search algorithm?

a. Requirement of sorted array is expensive when a lot of insertion and deletions are needed

b. There must be a mechanism to access middle element directly

c. Must use a sorted array

d. Binary search algorithm is not efficient when the data elements more than 1500 ✓

Your answer is correct.

The correct answer is:
Binary search algorithm is not efficient when the data elements more than 1500

Question **7**

Correct

Mark 1.00 out of 1.00

_____sort is the simplest sorting algorithm that works by repeatedly swapping the adjacent elements in case they are unordered in n-1 passes.

a. Complexity

b. Insertion

c. Selection

d. Bubble ✓

Your answer is correct.

The correct answer is: Bubble

Question **8**

Correct

Mark 1.00 out of 1.00

The process of placing or rearranging a collection of elements into a particular order is known as

a. Rearranging

b. Searching

c. Sorting ✓

d. Merging

Your answer is correct.

The correct answer is: Sorting

Question **9**

Correct

Mark 1.00 out of 1.00

Given an array arr = {45,77,89,90,94,99,100} and key = 99; what are the mid values(corresponding array elements) in the first and second levels of recursion?

a. 89 and 99

b. 89 and 94

c. 90 and 94

d. 90 and 99 ✓

Your answer is correct.

The correct answer is:
90 and 99

Question **10**

Correct

Mark 1.00 out of 1.00

Algorithm design technique used in merge sort algorithm is

a. Divide and conquer ✓

b. Greedy method

c. Dynamic programming

d. Backtracking

Your answer is correct.

The correct answer is:
Divide and conquer

Question **11**

Correct

Mark 1.00 out of 1.00

In _____ checks the elements of a list, one at a time, without skipping any element.

a. Linear search ✓

b. Both (1) & (3)

c. Binary search

d. Hash search

Your answer is correct.

The correct answer is:
Linear search

Question **12**

Correct

Mark 1.00 out of 1.00

_____ search takes a sorted/ordered list and divides it in the middle.

a. Binary ✓

b. Both (1) & (3)

c. Hash

d. Linear

Your answer is correct.

The correct answer is:
Binary

Question **13**

Correct

Mark 1.00 out of 1.00

_____is putting an element in the appropriate place in a sorted list yields a larger sorted order list.

a. Extraction

b. Distribution

c. Selection

d. Insertion ✓

Your answer is correct.

The correct answer is:
Insertion

Question **14**

Correct

Mark 1.00 out of 1.00

The average case occurs in the linear search algorithm

a. When the item is not the array at all

b. When the item is somewhere in the middle of the array ✓

c. When the item is the last element in the array

d. Item is the last element in the array or item is not there at all

Your answer is correct.

The correct answer is:
When the item is somewhere in the middle of the array

Question **15**

Correct

Mark 1.00 out of 1.00

_____ explain how an algorithm will perform when the input grows larger.

a. Sorting

b. Merging

c. Complexity ✓

d. Searching

Your answer is correct.

The correct answer is:
Complexity

◄ Searching

Jump to...

Week10_Coding ►