

RAJALAKSHMI ENGINEERING COLLEGE
RAJALAKSHMI NAGAR, THANDALAM – 602 105



**RAJALAKSHMI
ENGINEERING COLLEGE**

**GE23231
PROGRAMMING USING PYTHON**

Record Note Book

Name: NISHANTHI S

Register No: 230601032

Year: I

Semester: II

Department: CIVIL ENGINEERING

Academi Year: 2023-2024

Started on Thursday, 14 March 2024, 10:56 AM**State** Finished**Completed on** Thursday, 14 March 2024, 11:13 AM**Time taken** 17 mins 12 secs**Grade** **10.00** out of 10.00 (100%)**Question 1**

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 2**

Correct

Mark 1.00 out of 1.00

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

- a. .cpp
- b. .p
- c. .python
- d. .py ✓

Your answer is correct.

The correct answer is:

`.py`

Question 3

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

Your answer is correct.

The correct answer is:

3 1
1 3

Question 4

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

Your answer is correct.

The correct answer is:

int and str

Question 5

Correct

Mark 1.00 out of 1.00

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

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

Your answer is correct.

The correct answer is:

Indentation

Question 6

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. str
- b. 'str'
- c. <class 'str'> ✓
- d. class str

Your answer is correct.

The correct answer is:

<class 'str'>

Question 7

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 = 5,000,000
- d. x y z p = 5000 6000 7000 8000

Your answer is correct.

The correct answer is:

x,y,z,p = 5000, 6000, 7000, 8000

Question 8

Correct

Mark 1.00 out of 1.00

Who developed the Python language?

- a. Dennis Ritchie
- b. Guido Van Rossum ✓
- c. Bill Gates
- d. Von Neumann

Your answer is correct.

The correct answer is:

Guido Van Rossum

Question 9

Correct

Mark 1.00 out of 1.00

What will be the output of the following code snippet?

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

- a. obj
- b. float ✓
- c. str
- d. int

Your answer is correct.

The correct answer is:

float

Question 10

Correct

Mark 1.00 out of 1.00

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

- a. val()
- b. printf()
- c. print() ✓
- d. scanf()

Your answer is correct.

The correct answer is:

print()

[◀ Basics of Python](#)

Jump to...

[Week1_Coding ▶](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Operators and Formatting Output.](#) / [Week2 MCQ](#)

Started on Tuesday, 26 March 2024, 9:05 PM

State Finished

Completed on Tuesday, 26 March 2024, 9:08 PM

Time taken 3 mins 39 secs

Grade **13.00** out of 15.00 (**86.67%**)

Question 1

Correct

Mark 1.00 out of 1.00

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

a. **var_name**

b. **5var ✓**

c. **_var**

d. **var11**

Your answer is correct.

The correct answer is:

5var

Question 2

Correct

Mark 1.00 out of 1.00

What will be the output of statement $2^{}2^{**}2^{**}2$**

- a. 16
- b. 256
- c. 65536 ✓
- d. 32768

Your answer is correct.

The correct answer is:

65536

Question 3

Correct

Mark 1.00 out of 1.00

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

- a. Error ✓
- b. 5.0
- c. 5
- d. 5.5

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 code

```
x = 5  
y = 3  
print(x == y)
```

- a. False ✓
- b. Error
- c. 5==3
- d. True

Your answer is correct.

The correct answer is:

False

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

Your answer is correct.

The correct answer is:

Syntax Error

Question 6

Correct

Mark 1.00 out of 1.00

Which among the following [list](#) of [operators](#) has the highest precedence?

+, -, **, %, /, <<, >>, |

- a. |
- b. <<, >>
- c. ** ✓
- d. %

Your answer is correct.

The correct answer is:

**

Question 7

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 8

Correct

Mark 1.00 out of 1.00

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

- a. -24568
- b. 12493
- c. 12273 ✓
- d. -23679

Your answer is correct.

The correct answer is:

12273

Question 9

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. `int x = 35` c. `x = 35` ✓ d. `x ← 35`

Your answer is correct.

The correct answer is:

x = 35

Question 10

Correct

Mark 1.00 out of 1.00

In the Python statement `x = a + 6 - c-d`:

- `a` and `b` are _____
- `a + 6 - c-d` is _____

- a. terms, a group
- b. [operators](#), a statement
- c. operands, an equation
- d. operands, an expression ✓

Your answer is correct.

The correct answer is:
operands, an expression

Question 11

Incorrect

Mark 0.00 out of 1.00

What is the two's complement of -44?

- a. 11101011 ✗
- b. 10110011
- c. 1011011
- d. 11010100

Your answer is incorrect.

The correct answer is:
11010100

Question 12

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. • True True False True

b. • False True False True

c. • True True False True

d. • False True True True ✓

Your answer is correct.

The correct answer is:

- False True True True

Question 13

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. 2

c. 8 ✓

d. 4

Your answer is correct.

The correct answer is:

8

Question 14

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. Membership Operator ✓
- b. Assignment Operator
- c. Comparison Operator
- d. Arithmetic Operator

Your answer is correct.

The correct answers are:

Membership Operator,

Comparison Operator

Question 15

Incorrect

Mark 0.00 out of 1.00

What is the output of the following expression?

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

- a. Error ✗
- b. 8
- c. 3
- d. 0

Your answer is incorrect.

The correct answer is:

8

[◀ Operators](#)

Jump to...

[Week2_Coding ►](#)

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

State Finished

Completed on Thursday, 28 March 2024, 12:36 PM

Time taken 20 mins 27 secs

Grade 10.00 out of 15.00 (66.67%)

Question 1

Correct

Mark 1.00 out of 1.00

What is the output of the given below program?

```
a = 25
if a > 15:
    print("Hi")
if a <= 30:
    print("Hello")
else:
    print("Know Program")
```

- a. Hi
Know Program
- b. Hi ✓
Hello
- c. Hello
- d. Hello
Know Program

Your answer is correct.

The correct answer is:

Hi
Hello

Question 2

Correct

Mark 1.00 out of 1.00

___ is an empty statement in Python.

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

Your answer is correct.

The correct answer is:

pass

Question 3

Correct

Mark 1.00 out of 1.00

What keyword would you use to add an alternative condition to an if statement?

- a. else if
- b. elif ✓
- c. elseif

Your answer is correct.

The correct answer is:

elif

Question 4

Correct

Mark 1.00 out of 1.00

Ahaana wants to make a fun program , if user enters any number a "Good" or "funny" message will appear . She is confused that which is the most suitable control to be used to make such program. Help her to choose correct option.

- a. If
- b. Nested if
- c. if else ✓
- d. if elif

Your answer is correct.

The correct answer is:

if else

Question 5

Incorrect

Mark 0.00 out of 1.00

What will be the output for the following code?

```
if 1-1:  
    print("python")  
else:  
    print("0 is false")
```

- a. python
- b. Error ✕
- c. 0 is false

Your answer is incorrect.

The correct answer is:

0 is false

Question **6**

Incorrect

Mark 0.00 out of 1.00

```
x,y=1,2
```

```
if(x or y):
```

```
    print("1")
```

```
else:
```

```
    print("0")
```

- a. 0 X
- b. Runtime error
- c. Compile time error
- d. 1

Your answer is incorrect.

The correct answer is:

1

Question 7

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. REC
- b. No output
- c. REC
OPEN-ELECTIVE
- d. OPEN-ELECTIVE ✗

Your answer is incorrect.

The correct answer is:

No output

Question 8

Correct

Mark 1.00 out of 1.00

Which of the following statements correctly represents taking input from user in python?

- a. a=input("Enter the value") ✓
- b. a=inp("Enter the value")
- c. None of the mentioned
- d. a=get("Enter the value")

Your answer is correct.

The correct answer is:

a=input("Enter the value")

Question 9

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

Question 10

Correct

Mark 1.00 out of 1.00

What is the value of x at the end of the following sequence of instructions?

```
x = 10  
x = x * 3  
x = x + 5
```

- a. 15
- b. 30
- c. 35 ✓
- d. 45

Your answer is correct.

The correct answer is:

35

Question 11

Incorrect

Mark 0.00 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. equal ✗
- b. 0
- c. 1
- d. equal

0

Your answer is incorrect.

The correct answer is:

equal

0

Question 12

Incorrect

Mark 0.00 out of 1.00

Which of the following is true about the code below?

```
x = 3
if (x > 2):
    x = x * 2;
if (x > 4):
    x = 0;
print(x)
```

- a. if x is lesser than 0,x will be 0 after this code executes
- b. x will always equal 0 after this code executes for any value of x
- c. if x is greater than 2, the value in x will be doubled after this code executes ✗
- d. if x is greater than 2, x will equal 0 after this code executes

Your answer is incorrect.

The correct answer is:

if x is greater than 2, x will equal 0 after this code executes

Question 13

Correct

Mark 1.00 out of 1.00

What is the output of the following snippet?

```
s1 = "IIT " # Remember there is a space after I in IIT
s2 = "Punjab"
s1 = s1 * 2
s2 = "Ropar"
print(s1, s2)
```

- a. IIT IIT Ropar ✓
- b. IIT IIT Punjab
- c. IIT Ropar
- d. IIT Punjab

Your answer is correct.

The correct answer is:

IIT IIT Ropar

Question 14

Correct

Mark 1.00 out of 1.00

choose a valid Python if statement :

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

Your answer is correct.

The correct answer is:

if a>=2 :

Question 15

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. 33
- b. 22
- c. 44 ✓
- d. 11

Your answer is correct.

The correct answer is:

44

[◀ Selection control structures](#)

Jump to...

[Week3_coding ►](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Algorithmic Approach: Iteration control structures.](#) / [Week4_mcq](#)

Started on Tuesday, 28 May 2024, 6:24 PM

State Finished

Completed on Tuesday, 28 May 2024, 6:44 PM

Time taken 20 mins

Question **1**

Complete

```
for x in [0, 1, 2]:  
    pass
```

Predict the output of the program?

- a. Runtime Error
- b. Prints 0,1,2
- c. Compilation Error
- d. Prints nothing

Question **2**

Complete

Which is a counter-controlled in python?

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

Question 3

Complete

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

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

Question 4

Complete

```
Predict the output of the program?
for x in range(2, 8, 5):
    print(x)
```

- a. 2 7
- b. 2 8
- c. 2 4 6 8
- d. 2 3 4 5 6 7 8

Question 5

Complete

Which of the following is a loop in python?

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

Question 6

Complete

```
i = 1
while i < 4:
    print(i)
    if (i == 2):
        break
```

i += 1
Predict the output of the following?

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

Question 7

Complete

A while loop in python is used for what type of iteration?

- a. **indefinite**
- b. **discriminant**
- c. **indiscriminant**
- d. **definite**

Question 8

Complete

```
True= False
while(True):
    print(True)
    break
```

What is the output of the following?

- a. **Syntax Error**
- b. **No output**
- c. **True**
- d. **False**

Question 9

Complete

Which is a counter-controlled in python?

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

Question 10

Complete

```
num =0
while num < 5:
    num = num + 1
    print('num = ', num)
Predict the output of the following?
```

- a. Runs correctly
- b. Runtime error
- c. Indentation Error
- d. Prints no output

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

```
i = 0
while i <3 :
    print(i)
    i += 1
    if i == 2:
        continue
    else:
        print(0)
```

What is the output of the following?

a. 0

1

2

0

b. 0

0

1

2

0

c. 0

1

1

1

0

d. 0

0

1

1

0

Question 13

Complete

While loop can execute a set of statements till

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

Question 14

Complete

```
True= False
while(True):
    print(True)
    break
```

What is the output of the following?

- a. **Syntax Error**
- b. **No output**
- c. **False**
- d. **True**

Question 15

Complete

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

- a. `for [item] in [item]:
 loop body`
- b. `for[sequence] in [item]:
 loop body`
- c. `for [item] in [sequence]:
 loop body`
- d. `for[sequence] in [sequence]:
 loop body`

[◀ Iteration control structures](#)

Jump to...

[Week4_Coding ▶](#)

Started on Thursday, 2 May 2024, 11:10 AM

State Finished

Completed on Thursday, 2 May 2024, 11:40 AM

Time taken 30 mins 1 sec

Grade 11.00 out of 15.00 (73.33%)

Question 1

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 2

Correct

Mark 1.00 out of 1.00

What is the output of the following code.

```
Line1 = "And Then There Were None"  
Line2 = "Famous In Love"  
Line3 = "Famous Were The Kol And Klaus"  
Line4 = Line1 + Line2 + Line3  
print("And" in Line4)
```

- a. False
- b. True ✓ The "in" operator returns True if the strings contains the substring (ie, And), else returns False.
- c. True 2
- d. False 2

Your answer is correct.

The correct answer is:

True

Question 3

Correct

Mark 1.00 out of 1.00

What is the output of the following Code?

```
print(ord('B'))
```

Answer: 66



The correct answer is: 66

Question 4

Correct

Mark 1.00 out of 1.00

What is the output of the following code?

```
str1="vijay"  
for i in str1:  
    print(i, end="")
```

- a. None of the above
- b. No output
- c. vijay ✓
- d. 01234

Your answer is correct.

The correct answer is:

vijay

Question 5

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. ['What', 'will', 'have', 'so', 'will']
- b. What will have so will
- c. ['Wh', 't will h', 've so will'] X
- d. Wh t will h ve so will

Your answer is incorrect.

The correct answer is:

Wh t will h ve so will

Question 6

Correct

Mark 1.00 out of 1.00

What is the output of the following code?

```
my_string = 'arvijayakumar'
for i in range(my_string):
    print(i)
```

- a. 0 1 2 3 ... 12
1.
- b. None
- c. Error ✓ **range(str)** is not allowed.
- d. arvijayakumar

Your answer is correct.

The correct answer is:

Error

Question 7

Correct

Mark 1.00 out of 1.00

What will be the output of the following code?

```
a = '2'
```

```
b = 4
```

```
print(a*b)
```

Answer:



The correct answer is: 2222

Question 8

Incorrect

Mark 0.00 out of 1.00

Which of the following will result in an error?

```
str1="python"
```

- a. None of the mentioned
- b. str1[1]="x"
- c. print(str1[2]) X
- d. print(str1[0:9])

Your answer is incorrect.

The correct answer is:

```
str1[1]="x"
```

Question 9

Correct

Mark 1.00 out of 1.00

What is the output of the following Code?

```
str1="123456789"  
print(str1[2:6:2])
```

Answer: 35



The correct answer is: 35

Question 10

Correct

Mark 1.00 out of 1.00

What is the output of the following Code?

```
str1="6/4"  
print("str1")
```

Answer: str1



Explanation: Since in print statement, str1 is written inside double quotes so it will simply print str1 directly.

The correct answer is: str1

Question 11

Correct

Mark 1.00 out of 1.00

What is the output of the following code ?

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

- a. Welcomea
- b. Error ✓ Strings cannot be modified
- c. Weacome
- d. aWelcome

Your answer is correct.

The correct answer is:

Error

Question 12

Correct

Mark 1.00 out of 1.00

What will following Python code return?

```
str1="Stack of books"  
print(len(str1))
```

- a. 14 ✓ len() returns the length of the given string str1, including spaces and considering " " as a single character.
- b. 13
- c. 15
- d. 16

Your answer is correct.

The correct answer is:

14

Question 13

Correct

Mark 1.00 out of 1.00

What is the output of the following code?

```
my_string = 'vijay'  
for i in range(len(my_string)):  
    print (my_string)  
    my_string = 'a'
```

- a. None
- b. Error
- c. vijay a a a a ✓ String is modified only after 'vijay' has been printed once.
- d. vaaaaaaaaaaaa

Your answer is correct.

The correct answer is:

vijay a a a a

Question 14

Not answered

Marked out of 1.00

What is the output of the following code ?

```
example = "arvijayakumar"  
example[0] = 'A'  
print example
```

- a. A
- b. Error
- c. Arvijayakumar
- d. arvijayakumar

Your answer is incorrect.

The correct answer is:

Error

Question 15

Not answered

Marked out of 1.00

What is the output of the following code?

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

- a. Ab cd eF
- b. Ab cd ef
- c. Ab Cd Ef
- d. None of the mentioned

Your answer is incorrect.

The correct answer is:

Ab Cd Ef

[◀ Strings](#)

Jump to...

[Week5_Coding ►](#)

Started on Sunday, 19 May 2024, 6:16 PM

State Finished

Completed on Sunday, 19 May 2024, 6:50 PM

Time taken 34 mins 42 secs

Grade **12.00** out of 15.00 (80%)

Question 1

Correct

Mark 1.00 out of 1.00

Choose a correct statement

- a. 🎨 is used to represent the [list](#)
- b. [List](#) are immutable
- c. [List](#) is data structure in python used to store the sequence of various types. ✓
- d. [List](#) is data structure in python used to store the sequence of same types.

Your answer is correct.

The correct answer is:

[List](#) is data structure in python used to store the sequence of various types.

Question 2

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,[5,6,7,8]] ✗
- b. [1,2,3,4]
- 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 3

Correct

Mark 1.00 out of 1.00

What will be the output after the following statements?

```
m = ['Play']
n = ['Games', 'in', 'Python']
o = m + n
print(o)
```

- a. ['PlayGames', 'in', 'Python']
- b. ['Play', 'Games', 'in', 'Python'] ✓
- c. ['Games', 'in', 'Python', 'Play']
- d. ['Play Games', 'in', 'Python']

Your answer is correct.

The correct answer is:

['Play', 'Games', 'in', 'Python']

Question 4

Correct

Mark 1.00 out of 1.00

Which of the following can delete an element from a list, if its value is given?

- a. del()
- b. remove() ✓
- c. pop()
- d. extend()

Your answer is correct.

The correct answer is:

remove()

Question 5

Incorrect

Mark 0.00 out of 1.00

Write the output of the following :

L = "123456"**L = list(L)****print(type(L[0]))**Answer: `<class 'str'>`

The correct answer is: `<class 'str'>`

Question 6

Correct

Mark 1.00 out of 1.00

Find the output?

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

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

Your answer is correct.

The correct answer is:

`[]`

Question 7

Correct

Mark 1.00 out of 1.00

To find the last element of [list](#) namely 'list1' in Python, _____ will be used.

- a. list1[0]
- b. list1[pos]
- c. list1[:-1]
- d. list1[-1] ✓

Your answer is correct.

The correct answer is:

list1[-1]

Question 8

Correct

Mark 1.00 out of 1.00

Choose a correct representation of [list](#)

- a. (10,20,30,'REC')
- b. [10,20,30,'REC'] ✓
- c. 10,20,30,REC
- d. {10,20,30,'REC'}

Your answer is correct.

The correct answer is:

[10,20,30,'REC']

Question 9

Correct

Mark 1.00 out of 1.00

Find the output?

```
list1 = list('REC_CSE_ECE')
print(list1.count('_'))
```

- a. 3
- b. Error
- c. 2 ✓
- d. -4

Your answer is correct.

The correct answer is:

2

Question 10

Correct

Mark 1.00 out of 1.00

Find the Output?

```
list1 = [1, 2, 3, 4, 1, 2, 3, 1]
print(list1[5:20])
```

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

Your answer is correct.

The correct answer is:

[2, 3, 1]

Question 11

Correct

Mark 1.00 out of 1.00

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

 a. ['Amit', 'Sumit', 'Naina', 'Sunil'] ✓
 b. ['Amit', 'Sumit', 'Naina', ['Sunil']]
 c. List can not concatenate
```

Your answer is correct.

The correct answer is:

['Amit', 'Sumit', 'Naina', 'Sunil']

**Question 12**

Correct

Mark 1.00 out of 1.00

Find the output?

```
list3=[]
list1 ='REC_CSE_ECE'
list2= list1.split('_')
for i in list2:
 list3.extend(i)
print(len(list3))
```

- a. 11
- b. 9 ✓
- c. 3
- d. 12

Your answer is correct.

The correct answer is:

9

**Question 13**

Correct

Mark 1.00 out of 1.00

What will be the output after the following statements?

```
m = [45, 51, 67]
```

```
n = m[2]
```

```
print(n)
```

- a. 67 ✓
- b. 51
- c. [45, 51, 67]
- d. 45

Your answer is correct.

The correct answer is:

67

**Question 14**

Incorrect

Mark 0.00 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 15**

Correct

Mark 1.00 out of 1.00

What will be the output after the following statements?

```
m = 'A'
n = 'B'
o = 'C'
p = [m, n, o]
print(p)
```

- a. ['C', 'B', 'A']
- b. ['C', 'A', 'B']
- c. ['A', 'B', 'C'] ✓
- d. 'C', 'A', 'B'

Your answer is correct.

The correct answer is:

['A', 'B', 'C']

[◀ List](#)

[Jump to...](#)

[Week6\\_Coding ►](#)

**Started on** Monday, 27 May 2024, 6:26 PM**State** Finished**Completed on** Monday, 27 May 2024, 6:52 PM**Time taken** 26 mins 6 secs**Grade** 13.00 out of 15.00 (86.67%)**Question 1**

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 'int'>
- b. <class 'tuple'>
- c. <class 'str'> ✓
- d. str

Your answer is correct.

The correct answer is:

&lt;class 'str'&gt;

**Question 2**

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. SyntaxError: Different types cannot be used with sets
- b. {40, '10', 50, 20, 60, 30}
- c. {40, 10, '10', 50, 20, 60, 30} ✓
- d. {40, 10, 50, 20, 60, 30}

Your answer is correct.

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

**Question 3**

Correct

Mark 1.00 out of 1.00

Find the output of the given Python program?

```
t = (11, 3)
x = 3 * t
print(x)
```

- a. (11, 3, 11, 3, 11, 3) ✓
- b. [11,11,11,3,3,3]
- c. (11,3)(11,3)(11,3)
- d. (11,3,11,11,3,11,11,11,3)

Your answer is correct.

The correct answer is:

(11, 3, 11, 3, 11, 3)

**Question 4**

Correct

Mark 1.00 out of 1.00

Which of the following is a Python tuple?

- a. ("Wonder")
- b. [1,2,3,4]
- c. {1,3,8,9,41}
- d. (1,4,5,6,7) ✓

Your answer is correct.

The correct answer is:

(1,4,5,6,7)

**Question 5**

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

Your answer is correct.

The correct answer is:

(16,17,18,19)

**Question 6**

Incorrect

Mark 0.00 out of 1.00

Select all the correct options to remove "ECE" from the [set](#).

```
sampleSet = {"ECE", "R&A", "MCT"}
```

- a. del.sampleSet("ECE")
- b. sampleSet.delete("ECE")
- c. remove.sampleSet("ECE") ✗
- d. sampleSet.discard("ECE")

Your answer is incorrect.

The correct answer is:

```
sampleSet.discard("ECE")
```

**Question 7**

Correct

Mark 1.00 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.append(2)
- b. tupl.sort()
- c. tupl[1]=2
- d. tupl1=tupl+tupl ✓

Your answer is correct.

The correct answer is:

```
tupl1=tupl+tupl
```

**Question 8**

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. False

False

- b. True

False

- c. False

True

- d. True ✓

True

Your answer is correct.

The correct answer is:

True

True

**Question 9**

Incorrect

Mark 0.00 out of 1.00

A python tuple can be created without using any parentheses. (True/False)

- a. False ✗

- b. True

Your answer is incorrect.

The correct answer is:

True

**Question 10**

Correct

Mark 1.00 out of 1.00

What is the output of the given below program?

```
t1 = (1,2,3)
t2 = (4,5,6)
x = t1+t2
print(x)
```

- a. (1,2,3,4,5,6) ✓
- b. Error
- c. (1,2,3,3,2,1)
- d. (1,2,3)(4,5,6)

Your answer is correct.

The correct answer is:

(1,2,3,4,5,6)

**Question 11**

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 ✓

True

- b. False

False

- c. True

False

- d. False

True

Your answer is correct.

The correct answer is:

True

True

**Question 12**

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. A new set will be created with the unique elements of set1 and set2.
- c. Elements of set1 will get appended to 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 13**

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 14**

Correct

Mark 1.00 out of 1.00

What will be the output of below Python code?

```
tup1=("python","programming","Computer")
print(tup1[-3:0])
```

- a. () ✓
- b. Error
- c. (Computer)
- d. Computer

Your answer is correct.

The correct answer is:

```
()
```

**Question 15**

Correct

Mark 1.00 out of 1.00

Select which is true for Python tuple?

- a. A tuple maintains the order of items ✓
- b. A tuple is unordered
- c. None of these
- d. We can change the tuple once created

Your answer is correct.

The correct answer is: A tuple maintains the order of items

[◀ Set](#)[Week7\\_Coding ▶](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Experiments based on Dictionary and its operations.](#) / [Week8 MCQ](#)

**Started on** Saturday, 1 June 2024, 6:37 AM

**State** Finished

**Completed on** Saturday, 1 June 2024, 7:02 AM

**Time taken** 24 mins 40 secs

**Grade** 13.00 out of 15.00 (86.67%)

Question 1

Incorrect

Mark 0.00 out of 1.00

\_\_\_\_ function returns the number of key: value pairs of the [dictionary](#).

- a. length 
- b. len 
- c. items 
- d. total 

The correct answer is: len 

Question 2

Incorrect

Mark 0.00 out of 1.00

Which of the following is not method of [dictionary](#)?

- a. len 
- b. del 
- c. update 
- d. pop 

The correct answer is: del 

**Question 3**

Correct

Mark 1.00 out of 1.00

We can repeat the values of Key in [Dictionary](#)?

- a. False
- b. True ✓

The correct answer is: True

**Question 4**

Correct

Mark 1.00 out of 1.00

All elements in [dictionary](#) are separated by \_\_\_\_.

- a. dot(.)
- b. Colon (:) ☺
- c. Comma( ,) ✓
- d. Semicolon(:)

The correct answer is: Comma( ,)

**Question 5**

Correct

Mark 1.00 out of 1.00

Dictionaries in python are \_\_\_\_.

- a. Mapping data type
- b. Mutable data type
- c. Non-Mutable data type
- d. Both Non-Mutable data type and Mapping data type ✓

The correct answer is: Both Non-Mutable data type and Mapping data type

**Question 6**

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.keys())
- b. print(A.values())
- c. print(A.items()) ✓
- d. print(A.get())

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

**Question 7**

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

Your answer is correct.

The correct answer is:

{'b': [2, 3, 4], 'a': 1}

**Question 8**

Correct

Mark 1.00 out of 1.00

Which of the following function create a [dictionary](#) from a sequence of key-value pairs

- a. [dictionary](#)
- b. dict
- c. create
- d. convert

The correct answer is: dict

**Question 9**

Correct

Mark 1.00 out of 1.00

In [dictionary](#) Keys and values are separated by \_\_\_\_.

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

The correct answer is: Colon (:)

**Question 10**

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 11**

Correct

Mark 1.00 out of 1.00

Which function/statement delete all the items of the [dictionary](#)?

- a. delete
- b. pop
- c. del
- d. clear ✓

The correct answer is: clear

**Question 12**

Correct

Mark 1.00 out of 1.00

The key-value pair in [dictionary](#) is called \_\_\_\_.

- a. paired value
- b. pair item
- c. item ✓
- d. value

The correct answer is: item

**Question 13**

Correct

Mark 1.00 out of 1.00

Dictionaries are flexible in nature, means elements can be added or removed from it.

- a. True ✓
- b. False

The correct answer is: True

**Question 14**

Correct

Mark 1.00 out of 1.00

Both keys and values are unique in [dictionary](#).

- a. False ✓
- b. True

The correct answer is: False

**Question 15**

Correct

Mark 1.00 out of 1.00

`pop()` function delete and \_\_\_\_ the element of [dictionary](#).

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

The correct answer is: return

[◀ Dictionary](#)[Jump to...](#)[Week8\\_Coding ►](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Functions: Built-in functions, User-defined functions, Recursive functions](#) / [Week9\\_Coding](#)

**Started on** Sunday, 26 May 2024, 7:42 PM

**State** Finished

**Completed on** Monday, 27 May 2024, 9:17 PM

**Time taken** 1 day 1 hour

**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](#)

```

1 def productDigits(n):
2 n_str=str(n)
3 even_product=1
4 odd_sum=0
5 for index,digit in enumerate(n_str):
6 if (index+1)%2==0:
7 even_product*=int(digit)
8 else:
9 odd_sum+=int(digit)
10 if odd_sum==0:
11 return False
12 return even_product%odd_sum==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

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

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

Task:

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

return ugly if it is ugly, else return not ugly

Hint:

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

**For example:**

| Test                 | Result   |
|----------------------|----------|
| print(checkUgly(6))  | ugly     |
| print(checkUgly(21)) | not ugly |

**Answer:** (penalty regime: 0 %)

Reset answer

```

1 def checkUgly(num):
2 if num<=0:
3 return 'not ugly'
4 for factor in[2,3,5]:
5 while num%factor==0:
6 num/=factor
7 return 'ugly'if num==1 else'not ugly'
8

```

|   | 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 3**

Correct

Mark 1.00 out of 1.00

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

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

Input Format:

Integer input from stdin.

Output Format:

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

Example Input:

16

Output:

4

Explanation:

We need only 4 coins of value 4 each

Example Input:

25

Output:

7

Explanation:

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

**Answer:** (penalty regime: 0 %)

Reset answer

```
1 def coinChange(n):
2 I=[4,3,2,1]
3 j=0
4 for i in I:
5 j+=n//i
6 if n%i==0:
7 continue
8 n%=i
9 if n==0:
10 break
11 return j
12
13
```

|   | Test                  | Expected | Got |   |
|---|-----------------------|----------|-----|---|
| ✓ | print(coinChange(16)) | 4        | 4   | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 4**

Correct

Mark 1.00 out of 1.00

An abundant number is a number for which the sum of its proper divisors is greater than the number itself. Proper divisors of the number are those that are strictly lesser than the number.

Input Format:

Take input an integer from stdin

Output Format:

Return Yes if given number is Abundant. Otherwise, print No

Example input:

12

Output:

Yes

Explanation

The proper divisors of 12 are: 1, 2, 3, 4, 6, whose sum is  $1 + 2 + 3 + 4 + 6 = 16$ . Since sum of proper divisors is greater than the given number, 12 is an abundant number.

Example input:

13

Output:

No

Explanation

The proper divisors of 13 is: 1, whose sum is 1. Since sum of proper divisors is not greater than the given number, 13 is not an abundant number.

**For example:**

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

**Answer:** (penalty regime: 0 %)

Reset answer

```

1 v def abundant(n):
2 j=0
3 v for i in range(1,n):
4 v if n%i==0:
5 j+=i
6 v if j>i:
7 return 'Yes'
8 return 'No'
9

```

|   | <b>Test</b>         | <b>Expected</b> | <b>Got</b> |   |
|---|---------------------|-----------------|------------|---|
| ✓ | print(abundant(12)) | Yes             | Yes        | ✓ |
| ✓ | print(abundant(13)) | No              | No         | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

//

**Question 5**

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

```

1 def differenceSum(n):
2 N=str(n)
3 b=c=0
4 for i in range(len(N)):
5 if i%2==0:
6 b+=int(N[i])
7 else:
8 c+=int(N[i])
9 if b-c>=0:
10 a=b-c
11 else:
12 a=c-b
13 return a
14

```

|   | <b>Test</b>                | <b>Expected</b> | <b>Got</b> |   |
|---|----------------------------|-----------------|------------|---|
| ✓ | print(differenceSum(1453)) | 1               | 1          | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[◀ Week9\\_MCQ](#)

Jump to...

Searching ►

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Searching techniques: Linear and Binary](#) / [Week10 MCQ](#)

**Started on** Monday, 27 May 2024, 5:25 PM

**State** Finished

**Completed on** Monday, 27 May 2024, 5:44 PM

**Time taken** 19 mins 32 secs

**Grade** **12.00** out of 15.00 (80%)

Question **1**

Correct

Mark 1.00 out of 1.00

The average case occurs in the linear search algorithm

- a. When the item is the last element in the array
- b. Item is the last element in the array or item is not there at all
- c. When the item is not the array at all
- d. When the item is somewhere in the middle of the array ✓

Your answer is correct.

The correct answer is:

When the item is somewhere in the middle of the array

Question **2**

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. Merging
- b. Sorting ✓
- c. Searching
- d. Rearranging

Your answer is correct.

The correct answer is: Sorting

**Question 3**

Correct

Mark 1.00 out of 1.00

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

- a. Finding
- b. Mining
- c. Searching ✓
- d. Discovering

Your answer is correct.

The correct answer is:

Searching

**Question 4**

Correct

Mark 1.00 out of 1.00

Which of the following is not an in-place sorting algorithm?

- a. Quick sort
- b. Heap sort
- c. Merge sort ✓
- d. Selection sort

Your answer is correct.

The correct answer is:

Merge sort

**Question 5**

Correct

Mark 1.00 out of 1.00

\_\_\_\_\_ search takes a sorted/ordered [list](#) and divides it in the middle.

- a. Linear
- b. Hash
- c. Binary ✓
- d. Both (1) & (3)

Your answer is correct.

The correct answer is:

Binary

**Question 6**

Correct

Mark 1.00 out of 1.00

Two-way merge sort algorithm is used to sort the following elements in ascending order.

200,470,150,80,90,40,400,300,120,70

What is the order of these elements after second pass of the merge sort algorithm?

- a. 40,70,80,90,120,150,200,300,400,470
- b. 200,470,80,150,40,90,300,400,70,120
- c. 40,80,90,150,200,300,400,470,70,120
- d. 80,150,200,470,40,90,300,400,70,120 ✓

Your answer is correct.

The correct answer is:

80,150,200,470,40,90,300,400,70,120

**Question 7**

Correct

Mark 1.00 out of 1.00

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

- a. Binary search algorithm is not efficient when the data elements more than 1500 ✓
- b. Requirement of sorted array is expensive when a lot of insertion and deletions are needed
- c. Must use a sorted array
- d. There must be a mechanism to access middle element directly

Your answer is correct.

The correct answer is:

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

**Question 8**

Incorrect

Mark 0.00 out of 1.00

Very slow way of sorting is\_\_\_\_\_

- a. Heap sort
- b. Insertion sort
- c. Bubble sort ✗
- d. Quick sort

Your answer is incorrect.

The correct answer is:

Insertion sort

**Question 9**

Correct

Mark 1.00 out of 1.00

Algorithm design technique used in merge sort algorithm is

- a. Greedy method
- b. Backtracking
- c. Dynamic programming
- d. Divide and conquer ✓

Your answer is correct.

The correct answer is:

Divide and conquer

**Question 10**

Correct

Mark 1.00 out of 1.00

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

- a. Searching
- b. Merging
- c. Sorting
- d. Complexity ✓

Your answer is correct.

The correct answer is:

Complexity

**Question 11**

Incorrect

Mark 0.00 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 94
- b. 89 and 99
- c. 90 and 94 X
- d. 90 and 99

Your answer is incorrect.

The correct answer is:

90 and 99

**Question 12**

Incorrect

Mark 0.00 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. 89 and 94
- b. 90 and 100 X
- c. 90 and 99
- d. 94 and 99

Your answer is incorrect.

The correct answer is:

90 and 99

**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. Distribution
- b. Selection
- c. Insertion ✓
- d. Extraction

Your answer is correct.

The correct answer is:

Insertion

**Question 14**

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. Bubble ✓
- d. Selection

Your answer is correct.

The correct answer is: Bubble

**Question 15**

Correct

Mark 1.00 out of 1.00

What is mean by stable sorting algorithm?

- a. A sorting algorithm is stable if it preserves the order of non-duplicate keys
- b. A sorting algorithm is stable if it preserves the order of duplicate keys ✓
- c. A sorting algorithm is stable if it preserves the order of all keys
- d. A sorting algorithm is stable if it doesn't preserver 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

[◀ Searching](#)

Jump to...

[Week10\\_Coding ►](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Experiments based on Variables, Datatypes in Python.](#) / [Week1\\_Coding](#)

**Started on** Thursday, 14 March 2024, 11:15 AM

**State** Finished

**Completed on** Thursday, 14 March 2024, 7:06 PM

**Time taken** 7 hours 51 mins

**Marks** 6.00/6.00

**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,&lt;class 'int'&gt;

10.9,&lt;class 'float'&gt;

**For example:**

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

**Answer:** (penalty regime: 0 %)

```

1 a=int(input())
2 b=float(input())
3 print(a,type(a),sep=",")
4 print(round(b,1),type(b),sep=",")
5

```

|   | Input         | Expected                                    | Got                                         |   |
|---|---------------|---------------------------------------------|---------------------------------------------|---|
| ✓ | 10<br>10.9    | 10,<class 'int'><br>10.9,<class 'float'>    | 10,<class 'int'><br>10.9,<class 'float'>    | ✓ |
| ✓ | 12<br>12.5    | 12,<class 'int'><br>12.5,<class 'float'>    | 12,<class 'int'><br>12.5,<class 'float'>    | ✓ |
| ✓ | 89<br>7.56    | 89,<class 'int'><br>7.6,<class 'float'>     | 89,<class 'int'><br>7.6,<class 'float'>     | ✓ |
| ✓ | 55000<br>56.2 | 55000,<class 'int'><br>56.2,<class 'float'> | 55000,<class 'int'><br>56.2,<class 'float'> | ✓ |

|   | Input            | Expected                                     | Got                                          |   |
|---|------------------|----------------------------------------------|----------------------------------------------|---|
| ✓ | 2541<br>2541.679 | 2541,<class 'int'><br>2541.7,<class 'float'> | 2541,<class 'int'><br>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 %)

```

1 basic_salary=int(input())
2 dearness_allowance=(40/100)*basic_salary
3 house_rent=(20/100)*basic_salary
4 gross_salary=int(dearness_allowance+house_rent+basic_salary)
5 print(gross_salary)

```

|   | Input | Expected | Got   |   |
|---|-------|----------|-------|---|
| ✓ | 10000 | 16000    | 16000 | ✓ |
| ✓ | 20000 | 32000    | 32000 | ✓ |
| ✓ | 28000 | 44800    | 44800 | ✓ |
| ✓ | 5000  | 8000     | 8000  | ✓ |

Passed all tests! ✓

**Correct**

Marks for this submission: 1.00/1.00.

**Question 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 %)

```

1 a=float(input())
2 b=a**0.5
3 print(round(b,3))

```

|   | Input | Expected | Got    |   |
|---|-------|----------|--------|---|
| ✓ | 8.00  | 2.828    | 2.828  | ✓ |
| ✓ | 14.00 | 3.742    | 3.742  | ✓ |
| ✓ | 4.00  | 2.000    | 2.0    | ✓ |
| ✓ | 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 | 30.43 is the gain percent. |
| 500   |                            |
| 60000 |                            |

**Answer:** (penalty regime: 0 %)

```

1 x=int(input())
2 y=int(input())
3 z=int(input())
4 a=x+y
5 b=z-a
6 c=(b/a)*100
7 print(f'{c:.2f} is the gain percent.')
8
9

```

|   | Input                 | Expected                   | Got                        |   |
|---|-----------------------|----------------------------|----------------------------|---|
| ✓ | 10000<br>250<br>15000 | 46.34 is the gain percent. | 46.34 is the gain percent. | ✓ |

|   | <b>Input</b>           | <b>Expected</b>            | <b>Got</b>                 |   |
|---|------------------------|----------------------------|----------------------------|---|
| ✓ | 45500<br>500<br>60000  | 30.43 is the gain percent. | 30.43 is the gain percent. | ✓ |
| ✓ | 5000<br>0<br>7000      | 40.00 is the gain percent. | 40.00 is the gain percent. | ✓ |
| ✓ | 12500<br>5000<br>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    | Your total refund will be \$7.00. |
| 20    |                                   |

**Answer:** (penalty regime: 0 %)

```

1 a=int(input())
2 b=int(input())
3 x=a*0.10
4 y=b*0.25
5 z=x+y
6 print(f'Your total refund will be ${z:.2f}.')

```

|   | Input      | Expected                           | Got                                |   |
|---|------------|------------------------------------|------------------------------------|---|
| ✓ | 20<br>20   | Your total refund will be \$7.00.  | Your total refund will be \$7.00.  | ✓ |
| ✓ | 11<br>22   | Your total refund will be \$6.60.  | Your total refund will be \$6.60.  | ✓ |
| ✓ | 123<br>200 | Your total refund will be \$62.30. | Your total refund will be \$62.30. | ✓ |

|   | <b>Input</b> | <b>Expected</b>                    | <b>Got</b>                         |   |
|---|--------------|------------------------------------|------------------------------------|---|
| ✓ | 76<br>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<br>Weekend 0.38 |

**Answer:** (penalty regime: 0 %)

```
1 sal=int(input())
2 weekend_sal=abs((sal-500)/130)
3 weekday_sal=weekend_sal+10
4 print("weekdays",f"{weekday_sal:.2f}")
5 print("weekend",f"{weekend_sal:.2f}")
```

|   | <b>Input</b> | <b>Expected</b>                 | <b>Got</b>                      |   |
|---|--------------|---------------------------------|---------------------------------|---|
| ✓ | 450          | weekdays 10.38<br>weekend 0.38  | weekdays 10.38<br>weekend 0.38  | ✓ |
| ✓ | 500          | weekdays 10.00<br>weekend 0.00  | weekdays 10.00<br>weekend 0.00  | ✓ |
| ✓ | 10000        | weekdays 83.08<br>weekend 73.08 | weekdays 83.08<br>weekend 73.08 | ✓ |
| ✓ | 6789         | weekdays 58.38<br>weekend 48.38 | weekdays 58.38<br>weekend 48.38 | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[◀ Week1\\_Quiz](#)

Jump to...

[Operators ►](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Operators and Formatting Output.](#) / [Week2 Coding](#)

**Started on** Thursday, 21 March 2024, 11:02 AM

**State** Finished

**Completed on** Tuesday, 26 March 2024, 8:40 PM

**Time taken** 5 days 9 hours

**Overdue** 3 days 9 hours

**Marks** 19.00/19.00

**Grade** **100.00** out of 100.00

**Question 1**

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 %)

```
1 num=int(input())
2 last_digit=abs(num)%10
3 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 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,  $0 \leq x \leq 1$ .**Output Format:**

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

**Input 1:**

0

**Output 1:**

C

**Input 2:**

1

**Output 1:**

D

**For example:**

| Input | Result |
|-------|--------|
| 0     | C      |

**Answer:** (penalty regime: 0 %)

```
1 x=int(input())
2 ascii_value=67+x
3 print(chr(ascii_value))
```

|   | <b>Input</b> | <b>Expected</b> | <b>Got</b> |   |
|---|--------------|-----------------|------------|---|
| ✓ | 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

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

**Input format:**

Line 1 has the total number of weapons

Line 2 has the total number of Soldiers.

**Output Format:**

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

Sample Input:

32

43

Sample Output:

False

**For example:**

| Input | Result |
|-------|--------|
| 32    | False  |
| 43    |        |

**Answer:** (penalty regime: 0 %)

```
1 weapons=int(input())
2 soldiers=int(input())
3 print(weapons%3==0 and soldiers%2==0)
4
```

|   | Input         | Expected | Got   |   |
|---|---------------|----------|-------|---|
| ✓ | 32<br>43      | False    | False | ✓ |
| ✓ | 273<br>7890   | True     | True  | ✓ |
| ✓ | 800<br>4590   | False    | False | ✓ |
| ✓ | 6789<br>32996 | True     | True  | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 4**

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 %)

```

1 number=int(input())
2 does_doll_sing=(number%2==0) and (number>0)and(number<=100)
3 print(does_doll_sing)
4

```

|   | 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 5**

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    | False  |
| 40    |        |

**Answer:** (penalty regime: 0 %)

```

1 age=int(input())
2 weight=int(input())
3 print(age>=18 and weight>40)

```

|   | <b>Input</b> | <b>Expected</b> | <b>Got</b> |   |
|---|--------------|-----------------|------------|---|
| ✓ | 19<br>45     | True            | True       | ✓ |
| ✓ | 18<br>40     | False           | False      | ✓ |
| ✓ | 18<br>42     | True            | True       | ✓ |
| ✓ | 16<br>45     | False           | False      | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.



**Question 6**

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 %)

```
1 widget_weight= 75
2 gizmo_weight=112
3 num_widgets=int(input())
4 num_gizmos=int(input())
5 total_weight=(num_widgets*widget_weight)+(num_gizmos*gizmo_weight)
6 print("The total weight of all these widgets and gizmos is",total_weight,"grams.")
```

|   | <b>Input</b> | <b>Expected</b>                                                    | <b>Got</b>                                                         |   |
|---|--------------|--------------------------------------------------------------------|--------------------------------------------------------------------|---|
| ✓ | 10<br>20     | The total weight of all these widgets and gizmos is<br>2990 grams. | The total weight of all these widgets and gizmos is<br>2990 grams. | ✓ |

Passed all tests! ✓

**Correct**

Marks for this submission: 10.00/10.00.

**Question 7**

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.<br>Balance as of end of Year 2: \$10816.00.<br>Balance as of end of Year 3: \$11248.64. |

**Answer:** (penalty regime: 0 %)

```

1 intial_deposit=float(input())
2 interest_rate=0.04
3 balance_year_1=intial_deposit*(1+interest_rate)
4 balance_year_2=balance_year_1*(1+interest_rate)
5 balance_year_3=balance_year_2*(1+interest_rate)
6 print(f'Balance as of end of Year 1: ${balance_year_1:.2f}.')
7 print(f'Balance as of end of Year 2: ${balance_year_2:.2f}.')
8 print(f'Balance as of end of Year 3: ${balance_year_3:.2f}.')
9

```

|   | Input | Expected                                                                                                                         | Got                                                                                                                              |   |
|---|-------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---|
| ✓ | 10000 | Balance as of end of Year 1: \$10400.00.<br>Balance as of end of Year 2: \$10816.00.<br>Balance as of end of Year 3: \$11248.64. | Balance as of end of Year 1: \$10400.00.<br>Balance as of end of Year 2: \$10816.00.<br>Balance as of end of Year 3: \$11248.64. | ✓ |
| ✓ | 20000 | Balance as of end of Year 1: \$20800.00.<br>Balance as of end of Year 2: \$21632.00.<br>Balance as of end of Year 3: \$22497.28. | Balance as of end of Year 1: \$20800.00.<br>Balance as of end of Year 2: \$21632.00.<br>Balance as of end of Year 3: \$22497.28. | ✓ |

Passed all tests! ✓

**Correct**

Marks for this submission: 1.00/1.00.

**Question 8**

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 %)

```

1 meal_cost=float(input())
2 tax_rate=0.05
3 tip_rate=0.18
4 tax_amount=meal_cost*tax_rate
5 tip_amount=meal_cost*tip_rate
6 total_cost=meal_cost+tax_amount+tip_amount
7 print(f'The tax is {tax_amount:.2f} and the tip is {tip_amount:.2f}, making the total {total_cost:.2f}')

```

|   | 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 9**

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 %)

```

1 |number=int(input())
2 |count_ones=(number&1)+((number>>1)&1)+((number>>2)&1)+((number>>3)&1)
3 |print(count_ones)

```

|   | 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 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     | True False True True |
| 25    |                      |
| 23    |                      |
| 20    |                      |
| 10    |                      |

**Answer:** (penalty regime: 0 %)

```

1 n=int(input())
2 p1=int(input())
3 p2=int(input())
4 p3=int(input())
5 p4=int(input())
6
7 print(p1%n==0,p2%n==0,p3%n==0,p4%n==0)

```

|   | Input                     | Expected              | Got                   |   |
|---|---------------------------|-----------------------|-----------------------|---|
| ✓ | 5<br>25<br>23<br>20<br>10 | True False True True  | True False True True  | ✓ |
| ✓ | 4<br>23<br>24<br>21<br>12 | False True False True | False True False True | ✓ |
| ✓ | 8<br>64<br>8<br>16<br>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 ►

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Algorithmic Approach: Selection control structures](#) / [Week3\\_coding](#)

**Started on** Wednesday, 27 March 2024, 8:56 PM

**State** Finished

**Completed on** Wednesday, 27 March 2024, 10:01 PM

**Time taken** 1 hour 5 mins

**Marks** 10.00/10.00

**Grade** **100.00** out of 100.00

**Question 1**

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 to the 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 %)

```

1 number = int(input())
2 number = abs(number)
3 number_str = str(number)
4 if len(number_str) < 2:
5 second_last_digit = -1
6 else:
7 second_last_digit = int(number_str[-2])
8 print(second_last_digit)

```

|   | 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 2**

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 %)

```

1 year =int(input())
2 remainder = year % 12
3 if remainder == 0:
4 animal = "Monkey"
5 elif remainder == 1:
6 animal = "Rooster"
7 elif remainder == 2:
8 animal = "Dog"
9 elif remainder == 3:
10 animal = "Pig"
11 elif remainder == 4:
12 animal = "Rat"
13 elif remainder == 5:
14 animal = "Ox"
15 elif remainder == 6:
16 animal = "Tiger"
17 elif remainder == 7:
18 animal = "Hare"
19 elif remainder == 8:
20 animal = "Dragon"
21 elif remainder == 9:
22 animal = "Snake"
23 elif remainder == 10:

```

```
24 animal = "Horse"
25 elif remainder == 11:
26 animal = "Sheep"
27 print(f"{year} is the year of the {animal}.")
```

|   | <b>Input</b> | <b>Expected</b>                | <b>Got</b>                     |   |
|---|--------------|--------------------------------|--------------------------------|---|
| ✓ | 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 3**

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 %)

```

1 month = input().capitalize()
2 if month == "January" or month == "March" or month == "May" or month == "July" or month == "August" or month == "October" or month == "December":
3 days = "31"
4 elif month == "April" or month == "June" or month == "September" or month == "November":
5 days = "30"
6 elif month == "February":
7 days = "28 or 29"
8 else:
9 days = None
10 if days:
11 print(f"{month} has {days} days in it.")
12 else:
13 print("Please enter a valid month name.")
```

|   | <b>Input</b> | <b>Expected</b>                   | <b>Got</b>                        |   |
|---|--------------|-----------------------------------|-----------------------------------|---|
| ✓ | 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 4**

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  $3^2 + 4^2 = 25 = 5^2$

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 %)

```
1 a = int(input())
2 b = int(input())
3 c = int(input())
4 if a*a + b*b == c*c or a*a +c*c == b*b or b*b + c*c == a*a:
5 print("yes")
6 else:
7 print("no")
```

|   | <b>Input</b> | <b>Expected</b> | <b>Got</b> |   |
|---|--------------|-----------------|------------|---|
| ✓ | 3<br>5<br>4  | yes             | yes        | ✓ |
| ✓ | 5<br>8<br>2  | 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 find the eligibility of admission for a professional course based on the following criteria:

Marks in Maths  $\geq$  65

Marks in Physics  $\geq$  55

Marks in Chemistry  $\geq$  50

Or

Total in all three subjects  $\geq$  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    | The candidate is eligible |
| 60    |                           |
| 80    |                           |

**Answer:** (penalty regime: 0 %)

```

1 maths_marks = int(input())
2 physics_marks = int(input())
3 chemistry_marks = int(input())
4 total_marks = maths_marks + physics_marks + chemistry_marks
5 if(maths_marks >= 65 and physics_marks >= 55 and chemistry_marks >= 50) or (total_marks >= 180):

```

```
6 print("The candidate is eligible")
7 v else:
8 print("The candidate is not eligible")
```

|   | <b>Input</b>   | <b>Expected</b>               | <b>Got</b>                    |   |
|---|----------------|-------------------------------|-------------------------------|---|
| ✓ | 70<br>60<br>80 | The candidate is eligible     | The candidate is eligible     | ✓ |
| ✓ | 50<br>80<br>80 | The candidate is eligible     | The candidate is eligible     | ✓ |
| ✓ | 50<br>60<br>40 | The candidate is not eligible | The candidate is not eligible | ✓ |
| ✓ | 20<br>10<br>25 | The candidate is not eligible | The candidate is not eligible | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 6**

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<br>60<br>60 | That's a equilateral triangle |
| 40<br>40<br>80 | That's a isosceles triangle   |

**Answer:** (penalty regime: 0 %)

```

1 side1 = int(input())
2 side2 = int(input())
3 side3 = int(input())
4 if side1 == side2 and side2 == side3:
5 print("That's a equilateral triangle")
6 elif side1 == side2 or side2 == side3 or side1 == side3:
7 print("That's a isosceles triangle")
8 else:
9 print("That's a scalene triangle")
10

```

|   | <b>Input</b>   | <b>Expected</b>               | <b>Got</b>                    |   |
|---|----------------|-------------------------------|-------------------------------|---|
| ✓ | 60<br>60<br>60 | That's a equilateral triangle | That's a equilateral triangle | ✓ |
| ✓ | 40<br>40<br>80 | That's a isosceles triangle   | That's a isosceles triangle   | ✓ |
| ✓ | 50<br>60<br>70 | That's a scalene triangle     | That's a scalene triangle     | ✓ |
| ✓ | 50<br>50<br>80 | That's a isosceles triangle   | That's a isosceles triangle   | ✓ |
| ✓ | 10<br>10<br>10 | That's a equilateral triangle | That's a equilateral triangle | ✓ |

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

| Unit                            | Charge / Unit |
|---------------------------------|---------------|
| Upto 199                        | @1.20         |
| 200 and above but less than 400 | @1.50         |
| 400 and above but less than 600 | @1.80         |
| 600 and above                   | @2.00         |

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

Sample Test Cases

Test Case 1

Input

50

Output

100.00

Test Case 2

Input

300

Output

517.50

**For example:**

| Input  | Result  |
|--------|---------|
| 100.00 | 120.00  |
| 500    | 1035.00 |

**Answer:** (penalty regime: 0 %)

```

1 units = float(input())
2 if units <= 199:
3 bill = units*1.20
4 elif units < 400:
5 bill = units * 1.50
6 elif units < 600:
7 bill = units * 1.80
8 else:
9 bill = units * 2.00
10 if bill > 400:
11 bill += bill * 0.15
12 if bill < 100:
13 bill = 100
14 print(bill)

```

|   | 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 8**

Correct

Mark 1.00 out of 1.00

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

Sample Input 1

i

Sample Output 1

It's a vowel.

Sample Input 2

y

Sample Output 2

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

Sample Input3

c

Sample Output 3

It's a consonant.

**For example:**

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

**Answer:** (penalty regime: 0 %)

```

1 letter = input().lower ()
2 if letter in "aeiou":
3 message = "It's a vowel."
4 elif letter == 'y':
5 message = "Sometimes it's a vowel... Sometimes it's a consonant."
6 else:
7 message = "It's a consonant."
8 print(message)

```

|   | <b>Input</b> | <b>Expected</b>                                       | <b>Got</b>                                            |   |
|---|--------------|-------------------------------------------------------|-------------------------------------------------------|---|
| ✓ | i            | It's a vowel.                                         | It's a vowel.                                         | ✓ |
| ✓ | y            | Sometimes it's a vowel... Sometimes it's a consonant. | Sometimes it's a vowel... Sometimes it's a consonant. | ✓ |
| ✓ | c            | It's a consonant.                                     | It's a consonant.                                     | ✓ |
| ✓ | e            | It's a vowel.                                         | It's a vowel.                                         | ✓ |
| ✓ | r            | It's a consonant.                                     | It's a consonant.                                     | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 9**

Correct

Mark 1.00 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 %)

```

1 year = int(input())
2 if year % 400 == 0 :
3 print(f"{year} is a leap year.")
4 elif year % 100 ==0:
5 print(f"{year} is not a leap year.")
6 elif year % 4 == 0:
7 print(f"{year} is a leap year.")
8 else:
9 print(f"{year} is not 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 a leap year.     | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 10**

Correct

Mark 1.00 out of 1.00

IN / OUT

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

Input Format:

Input consists of 2 integers.

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

Output Format:

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

Sample Input and Output:

Input

8

3

Output

OUT

**For example:**

| Input | Result |
|-------|--------|
| 8     | OUT    |
| 3     |        |

**Answer:** (penalty regime: 0 %)

```

1 problems_given = int(input())
2 problems_solved = int(input())
3 if problems_solved >= problems_given /2:
4 print("IN")
5 else:

```

```
6 | print("OUT")
```

|   | <b>Input</b> | <b>Expected</b> | <b>Got</b> |   |
|---|--------------|-----------------|------------|---|
| ✓ | 8<br>3       | OUT             | OUT        | ✓ |
| ✓ | 8<br>5       | IN              | IN         | ✓ |
| ✓ | 20<br>9      | OUT             | OUT        | ✓ |
| ✓ | 50<br>31     | IN              | IN         | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[◀ Week3\\_mcq](#)

Jump to...

[Iteration control structures ►](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Algorithmic Approach: Iteration control structures.](#) / [Week4 Coding](#)

|                     |                                 |
|---------------------|---------------------------------|
| <b>Started on</b>   | Thursday, 4 April 2024, 7:53 PM |
| <b>State</b>        | Finished                        |
| <b>Completed on</b> | Sunday, 7 April 2024, 12:45 PM  |
| <b>Time taken</b>   | 2 days 16 hours                 |
| <b>Overdue</b>      | 16 hours 51 mins                |
| <b>Marks</b>        | 10.00/10.00                     |
| <b>Grade</b>        | <b>100.00</b> out of 100.00     |

**Question 1**

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 %)

```

1 n= int(input())
2 n+=1
3 square_root = 0
4 while square_root*square_root<n:
5 square_root+=1
6 if square_root*square_root == n:
7 print("Yes")
8 else:
9 print("No")
10

```

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

Passed all tests! ✓

**Correct**

Marks for this submission: 1.00/1.00.

**Question 2**

Correct

Mark 1.00 out of 1.00

Write a program that 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:  $2 \leq N \leq 5000$ , 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 %)

```

1 n=int(input())
2 is_prime= True
3 if n%2==0 and n>2:
4 is_prime= False
5 else:
6 for i in range (3,int(n**0.5)+1,2):
7 if n%i ==0:
8 is_prime = False
9 break
10 print(2 if is_prime else 1)

```

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

Passed all tests! ✓

**Correct**

Marks for this submission: 1.00/1.00.

**Question 3**

Correct

Mark 1.00 out of 1.00

Write a 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  $\geq 1$  and  $\leq 25000$ .

Some examples are as below.

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

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

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

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

**For example:**

| Input | Result |
|-------|--------|
| 292   | 1      |
| 1015  | 2      |
| 108   | 3      |
| 22    | 0      |

**Answer:** (penalty regime: 0 %)

```

1 N = int(input())
2 non_repeated_count = 0
3 digit_occurrences = [0] * 10
4 temp_N = N
5 while temp_N > 0:
6 digit = temp_N % 10
7 digit_occurrences[digit] +=1
8 temp_N //=10
9 temp_N=N
10 while temp_N>0:
11 digit= temp_N % 10
12 if digit_occurrences[digit]==1:
13 digit_occurrences[digit]=-1
14 non_repeated_count+=1
15 temp_N // =10
16 print(non_repeated_count)
17
18

```

|   | 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 4**

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 %)

```

1 number=int(input())
2 n= number
3 num_digits = 0
4 while n>0:
5 n/=10
6 num_digits+= 1
7 sum_of_powers=0
8 n=number
9 while n>0:
10 digit=n%10
11 sum_of_powers += digit**num_digits
12 num_digits-=1
13 n/=10
14 if sum_of_powers==number:
15 print("Yes")
16 else:
17 print("No")
18

```

|   | <b>Input</b> | <b>Expected</b> | <b>Got</b> |   |
|---|--------------|-----------------|------------|---|
| ✓ | 175          | Yes             | Yes        | ✓ |
| ✓ | 123          | 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 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  $\geq 1$  and  $\leq 25000$ .

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 %)

```

1 n=int(input())
2 unique_digit_count=0
3 for digit_to_check in range(10):
4 has_digit= False
5 temp_n=n
6 while temp_n>0:
7 if temp_n % 10 == digit_to_check:
8 has_digit= True
9 break
10 temp_n //=10
11 if has_digit:
12 unique_digit_count += 1
13 print(unique_digit_count)

```

|   | 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 6**

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,

$$5! = 5 \times 4 \times 3 \times 2 \times 1 = 120$$

$$4! = 4 \times 3 \times 2 \times 1 = 24$$

$$9! = 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 = 362880$$

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 %)

```

1 n=int(input())
2 factorial=1
3 for i in range(1,n+1):
4 factorial*=i
5 print(factorial)

```

|   | Input | Expected | Got |   |
|---|-------|----------|-----|---|
| ✓ | 5     | 120      | 120 | ✓ |
| ✓ | 4     | 24       | 24  | ✓ |

|   | Input | Expected | Got    |   |
|---|-------|----------|--------|---|
| ✓ | 9     | 362880   | 362880 | ✓ |

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 to find the sum of the series  $1 + 11 + 111 + 1111 + \dots + n$  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 %)

```

1 n=int(input())
2 current_term=1
3 sum_series=0
4 for _ in range(n):
5 sum_series += current_term
6 current_term=current_term*10+1
7 print(sum_series)
8

```

|   | <b>Input</b> | <b>Expected</b> | <b>Got</b> |   |
|---|--------------|-----------------|------------|---|
| ✓ | 4            | 1234            | 1234       | ✓ |
| ✓ | 6            | 123456          | 123456     | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 8**

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 %)

```
1 n=int(input())
2 next_perfect_square=0
3 candidate = 0
4 while next_perfect_square<=n:
5 candidate +=1
6 next_perfect_square = candidate*candidate
7 print(next_perfect_square)
```

|   | Input | Expected | Got |   |
|---|-------|----------|-----|---|
| ✓ | 10    | 16       | 16  | ✓ |

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 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 %)

```

1 n=int(input())
2 a,b=0,1
3 if n==1:
4 nth_number = a
5 elif n==2:
6 nth_number = b
7 else:
8 for _ in range(2,n):
9 nth_number = a+b
10 a,b = b, nth_number
11 print(nth_number)

```

|   | Input | Expected | Got |   |
|---|-------|----------|-----|---|
| ✓ | 1     | 0        | 0   | ✓ |

|   | Input | Expected | Got |   |
|---|-------|----------|-----|---|
| ✓ | 4     | 2        | 2   | ✓ |
| ✓ | 7     | 8        | 8   | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 10**

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 %)

```

1 n=int(input())
2 number=n
3 if number<10:
4 print("yes")
5 else:
6 while number%2==0:
7 number/=2
8 while number%3==0:
9 number/=3
10 while number%5==0:
11 number/=5
12 while number% 7==0:
13 number/=7
14 if number==1:
15 print("Yes")
16 else:
17 print("No")

```

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

Passed all tests! ✓

**Correct**

Marks for this submission: 1.00/1.00.

[◀ Week4\\_mcq](#)

Jump to...

[Strings ►](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Experiments based on Strings and its operations.](#) / [Week5 Coding](#)

|                     |                                |
|---------------------|--------------------------------|
| <b>Started on</b>   | Thursday, 2 May 2024, 11:57 AM |
| <b>State</b>        | Finished                       |
| <b>Completed on</b> | Sunday, 5 May 2024, 5:58 PM    |
| <b>Time taken</b>   | 3 days 6 hours                 |
| <b>Overdue</b>      | 1 day 6 hours                  |
| <b>Marks</b>        | 10.00/10.00                    |
| <b>Grade</b>        | <b>100.00</b> out of 100.00    |

**Question 1**

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 %)

```

1 input_string=input()
2 count_letters=0
3 count_digits=0
4 count_special=0
5 for char in input_string:
6 if char.isdigit():
7 count_digits +=1
8 elif char.isalpha():
9 count_letters += 1
10 else:
11 count_special += 1
12 print(count_letters)
13 print(count_digits)
14 print(count_special)

```

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

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 %)

```
1 text=input().lower()
2 words=text.split()
3 non_palindrome=[]
4 for word in words:
5 if word !=word[::-1]:
6 non_palindrome.append(word)
7 print(" ".join(non_palindrome))
```

|   | <b>Input</b>                  | <b>Expected</b>     | <b>Got</b>          |   |
|---|-------------------------------|---------------------|---------------------|---|
| ✓ | 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

**For example:**

| Input                            | Result                                 |
|----------------------------------|----------------------------------------|
| arvijayakumar@rajalakshmi.edu.in | edu.in<br>rajalakshmi<br>arvijayakumar |

**Answer:** (penalty regime: 0 %)

```
1 s = input()
2 username, domain_extension = s.split('@')
3 domain, extension = domain_extension.split('. ',1)
4 print(extension)
5 print(domain)
6 print(username)
```

|   | <b>Input</b>                     | <b>Expected</b>                        | <b>Got</b>                             |   |
|---|----------------------------------|----------------------------------------|----------------------------------------|---|
| ✓ | abcd@gmail.com                   | com<br>gmail<br>abcd                   | com<br>gmail<br>abcd                   | ✓ |
| ✓ | arvijayakumar@rajalakshmi.edu.in | edu.in<br>rajalakshmi<br>arvijayakumar | edu.in<br>rajalakshmi<br>arvijayakumar | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 4**

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 %)

```

1 b=''
2 try:
3 while True:
4 a=input()
5 if a not in b:
6 print(a)
7 b+=a
8 except:
9 pass
10

```

|   | <b>Input</b>                                | <b>Expected</b>          | <b>Got</b>               |   |
|---|---------------------------------------------|--------------------------|--------------------------|---|
| ✓ | first<br>second<br>first<br>third<br>second | first<br>second<br>third | first<br>second<br>third | ✓ |
| ✓ | rec<br>cse<br>it<br>rec<br>cse              | rec<br>cse<br>it         | rec<br>cse<br>it         | ✓ |

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 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       | True   |
| PYnative |        |

**Answer:** (penalty regime: 0 %)

```

1 s1=input()
2 s2=input()
3 is_balanced= True
4 for char in s1:
5 if char not in s2:
6 is_balanced= False
7 break
8 print("True" if is_balanced else "False")

```

|   | Input           | Expected | Got   |   |
|---|-----------------|----------|-------|---|
| ✓ | Yn<br>PYnative  | True     | True  | ✓ |
| ✓ | Ynf<br>PYnative | False    | False | ✓ |

Passed all tests! ✓

**Correct**

Marks for this submission: 1.00/1.00.

**Question 6**

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:**

$2 \leq N \leq 10$

$2 \leq \text{Length of } S1, S2 \leq 1000$

**Example Input/Output 1:**

Input:

abcbde

cdefghbb

3

Output:

bcd

**Note:**

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

**Answer:** (penalty regime: 0 %)

```

1 s1=input()
2 s2=input()
3 n=int(input())
4 unique_chars=""
5 found_chars=""
6 for char in s1:
7 if char in s2 and char not in found_chars:
8 unique_chars+=char
9 found_chars+=char
10 if len(unique_chars)==n:
11 break
12 print(unique_chars)
13

```

|   | Input                   | Expected | Got |   |
|---|-------------------------|----------|-----|---|
| ✓ | abcbde<br>cdefghbb<br>3 | bcd      | bcd | ✓ |

Passed all tests! ✓

**Correct**

Marks for this submission: 1.00/1.00.

**Question 7**

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**

aabbbbcccccc

**Answer:** (penalty regime: 0 %)

```

1 input_string=input()
2 output_string=''
3 i=0
4 while i<len(input_string):
5 char=input_string[i]
6 i+=1
7 number=0
8 while i<len(input_string)and input_string[i].isdigit():
9 number = number*10+int(input_string[i])
10 i+=1
11 output_string+=char*number
12 print(output_string)

```

|   | <b>Input</b> | <b>Expected</b>    | <b>Got</b>         |   |
|---|--------------|--------------------|--------------------|---|
| ✓ | a2b4c6       | aabbbbcccccc       | aabbbbcccccc       | ✓ |
| ✓ | a12b3d4      | aaaaaaaaaaabbddddd | aaaaaaaaaaabbddddd | ✓ |

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&amp;B

**Output:**

B&amp;A

**Explanation:** As we ignore '&' and

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

**For example:**

| Input | Result |
|-------|--------|
| A&x#  | x&A#   |

**Answer:** (penalty regime: 0 %)

```

1 s=input()
2 letters=[c for c in s if c.isalpha()]
3 letters.reverse()
4 it= iter(letters)
5 result=''.join (next(it)if c.isalpha()else c for c in s)
6 print(result)

```

|   | 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

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

**Constraints**

1&lt;= string length &lt;= 200

**Sample Input 1**experience  
enc**Sample Output 1**

xpri

**Answer:** (penalty regime: 0 %)

```
1 s1=input()
2 s2=input()
3 result=""
4 for char in s1:
5 if char not in s2:
6 result += char
7 print(result)
```

|   | <b>Input</b>      | <b>Expected</b> | <b>Got</b> |   |
|---|-------------------|-----------------|------------|---|
| ✓ | experience<br>enc | xpri            | xpri       | ✓ |

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 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 %)

```

1 sentence=input()
2 words = sentence.split()
3 if len(words)<2:
4 result="LESS"
5 else:
6 result=words[1].upper()
7 print(result)

```

|   | 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.

[◀ Week5\\_MCQ](#)

Jump to...

[List ►](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Experiments based on Lists and its operations.](#) / [Week6 Coding](#)

|                     |                              |
|---------------------|------------------------------|
| <b>Started on</b>   | Sunday, 19 May 2024, 4:20 PM |
| <b>State</b>        | Finished                     |
| <b>Completed on</b> | Sunday, 19 May 2024, 6:13 PM |
| <b>Time taken</b>   | 1 hour 52 mins               |
| <b>Marks</b>        | 10.00/10.00                  |
| <b>Grade</b>        | <b>100.00</b> out of 100.00  |

**Question 1**

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 %)

```
1 def is_increasing(lst):
2 return all(lst[i]<lst[i+1] for i in range(len(lst)-1))
3 def is_decreasing(lst):
4 return all(lst[i]>lst[i+1] for i in range(len(lst)-1))
5 def check_strictly_increasing_or_decreasing(lst):
6 if is_increasing(lst) or is_increasing(lst):
7 return True
8 for i in range(len(lst)):
9 temp_lst=lst[:i]+lst[i+1:]
10 if is_increasing(temp_lst) or is_decreasing(temp_lst):
11 return True
12 n=int(input())
13 lst=[]
14 for _ in range(n):
15 lst.append(int(input()))
16 if check_strictly_increasing_or_decreasing(lst):
17 print("True")
18 else:
19 print("false")
```

|   | Input                                | Expected | Got  |   |
|---|--------------------------------------|----------|------|---|
| ✓ | 7<br>1<br>2<br>3<br>0<br>4<br>5<br>6 | True     | True | ✓ |
| ✓ | 4<br>2<br>1<br>0<br>-1               | True     | True | ✓ |

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 %)

```
1 sorted_array=[]
2 for _ in range(10):
3 sorted_array.append(int(input()))
4 item_to_insert=int(input())
5 print(f"ITEM to be inserted:{item_to_insert}")
6 position=0
7 while position <len(sorted_array) and sorted_array[position]<item_to_insert:
8 position+=1
9 sorted_array.insert(position,item_to_insert)
10 print("After insertion array is:")
11 for element in sorted_array:
12 print(element)
```

|   | Input                                                 | Expected                                                                | Got                                                                     |   |
|---|-------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------|---|
| ✓ | 1<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>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 | ✓ |

|   | <b>Input</b>                                                     | <b>Expected</b>                                                                                                         | <b>Got</b>                                                                                                              |   |
|---|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---|
| ✓ | 11<br>22<br>33<br>55<br>66<br>77<br>88<br>99<br>110<br>120<br>44 | ITEM to be inserted:44<br>After insertion array is:<br>11<br>22<br>33<br>44<br>55<br>66<br>77<br>88<br>99<br>110<br>120 | ITEM to be inserted:44<br>After insertion array is:<br>11<br>22<br>33<br>44<br>55<br>66<br>77<br>88<br>99<br>110<br>120 | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 3**

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<br>1<br>2<br>2<br>3<br>4      | 1 2 3 4 |
| 6<br>1<br>1<br>2<br>2<br>3<br>3 | 1 2 3   |

**Answer:** (penalty regime: 0 %)

```
1 n=int(input())
2 elements=[]
3 for _ in range(n):
4 elements.append(int(input()))
5 distinct_elements=set(elements)
6 print(' '.join(map(str,sorted(distinct_elements))))
```

|   | Input                           | Expected | Got     |   |
|---|---------------------------------|----------|---------|---|
| ✓ | 5<br>1<br>2<br>2<br>3<br>4      | 1 2 3 4  | 1 2 3 4 | ✓ |
| ✓ | 6<br>1<br>1<br>2<br>2<br>3<br>3 | 1 2 3    | 1 2 3   | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 4**

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  $p^{\text{th}}$  element of the [list](#), sorted ascending. If there is no  $p^{\text{th}}$  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  $p = 3^{\text{rd}}$  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  $p = 1^{\text{st}}$  factor of 1 is returned as the answer.

**For example:**

| Input   | Result |
|---------|--------|
| 10<br>3 | 5      |
| 10<br>5 | 0      |
| 1<br>1  | 1      |

**Answer:** (penalty regime: 0 %)

```

1 n=int(input())
2 p=int(input())
3 factors=set()
4 for i in range(1,int(n**0.5)+1):
5 if n%i==0:
6 factors.add(i)
7 factors.add(n//i)
8 sorted_factors=sorted(factors)
9 if p<=len(sorted_factors):
10 print(sorted_factors[p-1])
11 else:
12 print(0)

```

|   | Input   | Expected | Got |   |
|---|---------|----------|-----|---|
| ✓ | 10<br>3 | 5        | 5   | ✓ |
| ✓ | 10<br>5 | 0        | 0   | ✓ |
| ✓ | 1<br>1  | 1        | 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 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

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     | 2      |
| 1     |        |
| 2     |        |
| 3     |        |
| 3     |        |
| 3     | 1      |
| 1     |        |
| 2     |        |
| 1     |        |

**Answer:** (penalty regime: 0 %)

```

1 n=int(input())
2 arr=[]
3 for _ in range(n):
4 arr.append(int(input()))
5 total_sum=sum (arr)
6 left_sum=0
7 pivot_index=-1
8 for i in range(n):
9 right_sum=total_sum-left_sum-arr[i]
10 if left_sum==right_sum:
11 pivot_index=i
12 break
13 left_sum+=arr[i]
14 print(pivot_index)
15
16

```

|   | Input                 | Expected | Got |   |
|---|-----------------------|----------|-----|---|
| ✓ | 4<br>1<br>2<br>3<br>3 | 2        | 2   | ✓ |
| ✓ | 3<br>1<br>2<br>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

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
23
56
45
23
40
```

Output

```
23 occurs 3 times
45 occurs 2 times
56 occurs 1 times
40 occurs 1 times
```

**Answer:** (penalty regime: 0 %)

```
1 n=int(input())
2 elements=[]
3 for _ in range (n):
4 elements.append(int(input()))
5 processed=[]
6 for element in elements:
7 if element not in processed:
8 count=elements.count(element)
9 print(f"{element} occurs {count} times")
10 processed.append(element)
```

|   | <b>Input</b>                                | <b>Expected</b>                                                                  | <b>Got</b>                                                                       |   |
|---|---------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---|
| ✓ | 7<br>23<br>45<br>23<br>56<br>45<br>23<br>40 | 23 occurs 3 times<br>45 occurs 2 times<br>56 occurs 1 times<br>40 occurs 1 times | 23 occurs 3 times<br>45 occurs 2 times<br>56 occurs 1 times<br>40 occurs 1 times | ✓ |

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 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 %)

```
1 n=int(input())
2 elements=[]
3 for _ in range(n):
4 elements.append(int(input()))
5
6 print("Element not found")
```

```

4 elements.append(int(input()))
5 search_element=int(input())
6 count=0
7 locations=[]
8 for index,element in enumerate(elements):
9 if element==search_element:
10 locations.append(index+1)
11 count+=1
12 if count>0:
13 for location in locations:
14 print(f"{search_element} is present at location {location}.")
15 print(f"{search_element} is present {count} times in the array.")
16 else:
17 print(f"{search_element} is not present in the array.")

```

|   | <b>Input</b>                           | <b>Expected</b>                                                                                  | <b>Got</b>                                                                                       |   |
|---|----------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---|
| ✓ | 4<br>5<br>6<br>5<br>7<br>5             | 5 is present at location 1.<br>5 is present at location 3.<br>5 is present 2 times in the array. | 5 is present at location 1.<br>5 is present at location 3.<br>5 is present 2 times in the array. | ✓ |
| ✓ | 5<br>67<br>80<br>45<br>97<br>100<br>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 8**

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 %)

```
1 n1=int(input())
2 array1=[]
3 for _ in range(n1):
4 element=int(input())
5 array1.append(element)
6 n2=int(input())
7 array2=[]
8 for _ in range(n2):
9 element=int(input())
10 array2.append(element)
11 merged_array=list(set(array1+array2))
12 merged_array.sort()
13 print(" ".join(map(str,merged_array)))
```

|   | <b>Input</b>                                                                                  | <b>Expected</b>                  | <b>Got</b>                       |   |
|---|-----------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|---|
| ✓ | 5<br>1<br>2<br>3<br>6<br>9<br>4<br>2<br>4<br>5<br>10                                          | 1 2 3 4 5 6 9 10                 | 1 2 3 4 5 6 9 10                 | ✓ |
| ✓ | 7<br>4<br>7<br>8<br>10<br>12<br>30<br>35<br>9<br>1<br>3<br>4<br>5<br>7<br>8<br>11<br>13<br>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 9**

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 %)

```
1 m=int(input())
2 n=int(input())
3 list1=[]
4 for _ in range(m):
5 row=[int(input()) for _ in range(n)]
6 list1.append(row)
7 list2=[]
8 for _ in range(m):
9 row=[int(input()) for _ in range(n)]
10 list2.append(row)
11 zipped_list=[]
12 for i in range(m):
13 combined_row=list1[i] + list2[i]
14 zipped_list.append(combined_row)
15 print(zipped_list)
16
17
```

|   | <b>Input</b>                                   | <b>Expected</b>              | <b>Got</b>                   |   |
|---|------------------------------------------------|------------------------------|------------------------------|---|
| ✓ | 2<br>2<br>1<br>2<br>3<br>4<br>5<br>6<br>7<br>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 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  $A[i] - A[j] = k$ ,  $i \neq j$ .

**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<br>3<br>1<br>3<br>5<br>4  | 1      |
| 1<br>3<br>1<br>3<br>5<br>99 | 0      |

**Answer:** (penalty regime: 0 %)

```

1 T= int(input())
2 results=[]
3 for _ in range(T):
4 N=int(input())
5 A=[]
6 for _ in range(N):
7 A.append(int(input()))
8 k=int(input())
9 found = False
10 start=0
11 end=1
12 while end < N:
13 if start == end:
14 end+=1
15 elif A [end]-A [start]==k:
16 results.append(1)
17 found=True
18 break
19 elif A[end]-A[start]<k:
20 end+=1
21 else:
22 start+=1
23 if not found:
24 results.append(0)
25 for result in results:
26 print(result)
27

```

|   | Input                       | Expected | Got |   |
|---|-----------------------------|----------|-----|---|
| ✓ | 1<br>3<br>1<br>3<br>5<br>4  | 1        | 1   | ✓ |
| ✓ | 1<br>3<br>1<br>3<br>5<br>99 | 0        | 0   | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◀ Week6\_MCQ

Jump to...

Tuples ►

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Experiments based on Tuples, Sets and its operations](#) / [Week7 Coding](#)

|                     |                               |
|---------------------|-------------------------------|
| <b>Started on</b>   | Sunday, 26 May 2024, 5:57 PM  |
| <b>State</b>        | Finished                      |
| <b>Completed on</b> | Tuesday, 28 May 2024, 5:59 AM |
| <b>Time taken</b>   | 1 day 12 hours                |
| <b>Marks</b>        | 5.00/5.00                     |
| <b>Grade</b>        | <b>100.00</b> out of 100.00   |

**Question 1**

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 %)

```

1 | def findDuplicate(nums):
2 | seen=set()
3 | for num in nums:
4 | if num in seen:
5 | return num
6 | seen.add(num)
7 | nums=list(map(int,input().split()))
8 | print(findDuplicate(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 2**

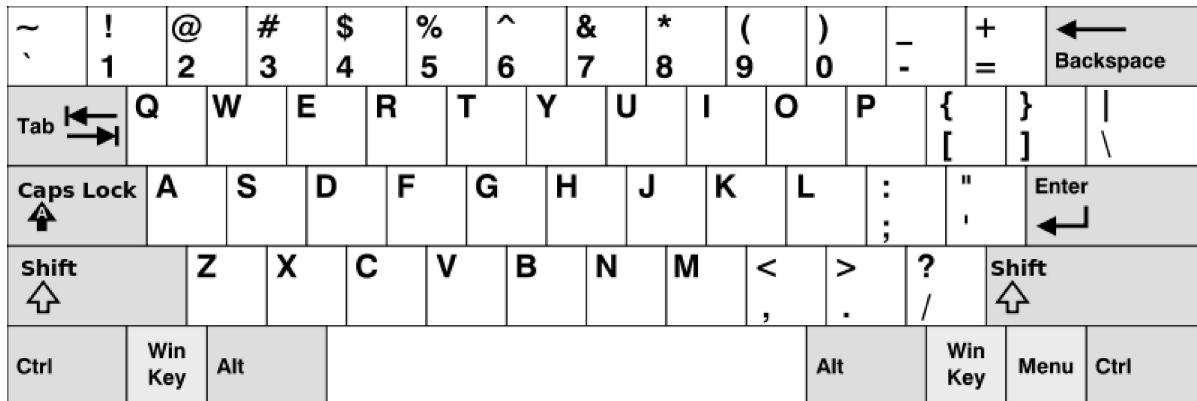
Correct

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 |
| Alaska | Dad    |
| Dad    |        |
| Peace  |        |
| 2      |        |
| adsfd  | adsdf  |
| afd    | afd    |

**Answer:** (penalty regime: 0 %)

```
1 def findwords(words):
2 row1=set("qwertyuiopQWERTYUIOP")
3 row2=set("asdfghjklASDFGHJKL")
4 row3=set("zxcvbnmZXCVBNM")
5 result=[]
```

```

6 for word in words:
7 word_set=set(word)
8 if word_set.issubset(row1) or word_set.issubset(row2) or word_set.issubset(row3):
9 result.append(word)
10 return result
11 n= int(input())
12 words=[input().strip() for _ in range(n)]
13 output_words=findwords(words)
14 if output_words:
15 for word in output_words:
16 print(word)
17 else:
18 print("No words")

```

|   | <b>Input</b>                         | <b>Expected</b> | <b>Got</b>    |   |
|---|--------------------------------------|-----------------|---------------|---|
| ✓ | 4<br>Hello<br>Alaska<br>Dad<br>Peace | Alaska<br>Dad   | Alaska<br>Dad | ✓ |
| ✓ | 1<br>omk                             | No words        | No words      | ✓ |
| ✓ | 2<br>adsfd<br>afd                    | adsfd<br>afd    | adsfd<br>afd  | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 3**

Correct

Mark 1.00 out of 1.00

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

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

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

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

**Example 1:**

**Input:** s = "AAAAACCCCCAAAAACCCCCCAAAAGGGTTT"

**Output:** ["AAAAACCCCC", "CCCCAAAAA"]

**Example 2:**

**Input:** s = "AAAAAAAAAAAAAA"

**Output:** ["AAAAAAAAAA"]

**For example:**

| Input                           | Result                  |
|---------------------------------|-------------------------|
| AAAAACCCCCAAAAACCCCCCAAAAGGGTTT | AAAAACCCCC<br>CCCCAAAAA |

**Answer:** (penalty regime: 0 %)

```

1 s=input().strip()
2 sequence_length=10
3 seen_sequences=set()
4 duplicate_sequences=set()
5 for i in range(len(s) - sequence_length+1):
6 current_sequence=s[i:i + sequence_length]
7 if current_sequence in seen_sequences:
8 duplicate_sequences.add(current_sequence)
9 else:
10 seen_sequences.add(current_sequence)
11 result=list(duplicate_sequences)
12 for seq in result:
13 print(seq)
14

```

|   | Input                           | Expected                | Got                     |   |
|---|---------------------------------|-------------------------|-------------------------|---|
| ✓ | AAAAACCCCCAAAAACCCCCCAAAAGGGTTT | AAAAACCCCC<br>CCCCAAAAA | AAAAACCCCC<br>CCCCAAAAA | ✓ |

|   | Input          | Expected   | Got        |   |
|---|----------------|------------|------------|---|
| ✓ | AAAAAAAAAAAAAA | AAAAAAAAAA | AAAAAAAAAA | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 4**

Correct

Mark 1.00 out of 1.00

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

**Examples:**

**Input:** t = (5, 6, 5, 7, 7, 8 ), K = 13

**Output:** 2

**Explanation:**

Pairs with sum K( = 13) are { (5, 8), (6, 7), (6, 7) }.

Therefore, distinct pairs with sum K( = 13) are { (5, 8), (6, 7) }.

Therefore, the required output is 2.

**For example:**

| Input          | Result |
|----------------|--------|
| 1,2,1,2,5<br>3 | 1      |
| 1,2<br>0       | 0      |

**Answer:** (penalty regime: 0 %)

```

1 t=tuple(map(int,input().split(',')))
2 k=int(input())
3 pair_counts={}
4 for i in range(len(t)):
5 for j in range(i+1,len(t)):
6 pair_sum=t[i]+t[j]
7 if pair_sum==k:
8 pair_counts[min(t[i],t[j],max(t[i],t[j]))]=pair_counts.get
9 distinct_pairs_count=len(pair_counts)
10 print(distinct_pairs_count)

```

|   | Input             | Expected | Got |   |
|---|-------------------|----------|-----|---|
| ✓ | 5,6,5,7,7,8<br>13 | 2        | 2   | ✓ |
| ✓ | 1,2,1,2,5<br>3    | 1        | 1   | ✓ |
| ✓ | 1,2<br>0          | 0        | 0   | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 5**

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 %)

```

1 input_str=input()
2 unique_chars=set(input_str)
3 binary_chars={'0','1'}
4 result='Yes' if unique_chars<=binary_chars else 'No'
5 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.

[◀ Week7\\_MCQ](#)

Jump to...

[Dictionary ►](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Experiments based on Dictionary and its operations.](#) / [Week8\\_Coding](#)

|                     |                                 |
|---------------------|---------------------------------|
| <b>Started on</b>   | Thursday, 30 May 2024, 10:49 AM |
| <b>State</b>        | Finished                        |
| <b>Completed on</b> | Thursday, 30 May 2024, 11:43 AM |
| <b>Time taken</b>   | 54 mins 8 secs                  |
| <b>Marks</b>        | 5.00/5.00                       |
| <b>Grade</b>        | <b>100.00</b> out of 100.00     |

**Question 1**

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 %)

|   |                          |
|---|--------------------------|
| 1 | n = int(input().strip()) |
| 2 |                          |

```

3 vote_count = {}
4
5 for _ in range(n):
6 candidate = input().strip()
7 if candidate in vote_count:
8 vote_count[candidate] += 1
9 else:
10 vote_count[candidate] = 1
11
12 max_votes = 0
13 winner = ""
14
15 for candidate, votes in vote_count.items():
16 if votes > max_votes or (votes == max_votes and candidate < winner):
17 max_votes = votes
18 winner = candidate
19
20 print(winner)

```

//

|   | <b>Input</b>                                                                                        | <b>Expected</b> | <b>Got</b> |   |
|---|-----------------------------------------------------------------------------------------------------|-----------------|------------|---|
| ✓ | 10<br>John<br>John<br>Johny<br>Johny<br>Jamie<br>Jamie<br>Johny<br>Jack<br>Johny<br>Johny<br>Jackie | Johny           | Johny      | ✓ |
| ✓ | 6<br>Ida<br>Ida<br>Ida<br>Kiruba<br>Kiruba<br>Kiruba                                                | Ida             | Ida        | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

## Question 2

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 has 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:**

| <b>Input</b>    | <b>Result</b> |
|-----------------|---------------|
| 4               | Ram           |
| James 67 89 56  | James Ram     |
| Lalith 89 45 45 | Lalith        |
| Ram 89 89 89    | Lalith        |
| Sita 70 70 70   |               |

**Answer:** (penalty regime: 0 %)

```
1 n = int(input())
2 d = {}
3 sc = []
4 am = []
5 lm = []
6 for i in range(n):
7 x = input().split()
8 d[x[0]] = [int(x[1]),int(x[2]),int(x[3])]
9 sc.append(sum(d[x[0]])//3)
10 am.append(int(x[2]))
11 lm.append(int(x[3]))
12 if
```

```

12 a1 = []
13 a2 = []
14 a3 = []
15 a4 = []
16 k = list(d.keys())
17 for i in range(len(k)):
18 if(sc[i] == max(sc)):
19 a1.append(k[i])
20
21 for i in range(len(k)):
22 if(am[i] == max(am)):
23 a2.append(k[i])
24
25 for i in range(len(k)):
26 if(lm[i] == min(lm)):
27 a3.append(k[i])
28
29 for i in range(len(k)):
30 if(sc[i] == min(sc)):
31 a4.append(k[i])
32 a1.sort()
33 a2.sort()
34 a3.sort()
35 a4.sort()
36 for i in a1:
37 print(i,end = " ")
38 print(" ")
39 for i in a2:
40 print(i,end = " ")
41 print(" ")
42 for i in a3:
43 print(i,end = " ")
44 print(" ")
45 for i in a4:
46 print(i,end = " ")
47 print(" ")

```

|   | <b>Input</b>                                                            | <b>Expected</b>                            | <b>Got</b>                                 |   |
|---|-------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------|---|
| ✓ | 4<br>James 67 89 56<br>Lalith 89 45 45<br>Ram 89 89 89<br>Sita 70 70 70 | Ram<br>James Ram<br>Lalith<br>Lalith       | Ram<br>James Ram<br>Lalith<br>Lalith       | ✓ |
| ✓ | 3<br>Raja 95 67 90<br>Aarav 89 90 90<br>Shadhana 95 95 91               | Shadhana<br>Shadhana<br>Aarav Raja<br>Raja | Shadhana<br>Shadhana<br>Aarav Raja<br>Raja | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 3**

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 %)

```

1 def scrabble_score(word):
2
3 letter_points = {
4 'A': 1, 'E': 1, 'I': 1, 'L': 1, 'N': 1, 'O': 1, 'R': 1, 'S': 1, 'T': 1, 'U': 1,
5 'D': 2, 'G': 2,
6 'B': 3, 'C': 3, 'M': 3, 'P': 3,
7 'F': 4, 'H': 4, 'V': 4, 'W': 4, 'Y': 4,
8 'K': 5,
9 'J': 8, 'X': 8,
10 'Q': 10, 'Z': 10
11 }
12
13 score = sum(letter_points.get(letter.upper(), 0) for letter in word)
14
15 return score
16
17
18 word = input()
19 score = scrabble_score(word)
20 print(f"{word} is worth {score} points.")
21

```

|   | <b>Input</b> | <b>Expected</b>        | <b>Got</b>             |   |
|---|--------------|------------------------|------------------------|---|
| ✓ | GOD          | GOD is worth 5 points. | GOD is worth 5 points. | ✓ |
| ✓ | REC          | REC is worth 5 points. | REC is worth 5 points. | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 4**

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 | sweet sour |
| this apple is sour  |            |

**Answer:** (penalty regime: 0 %)

```

1 | s1=input().split()
2 | s2=input().split()
3 | s1.extend(s2)
4 | c=[]
5 | a=[]
6 v for i in s1:
7 v if(s1.count(i)==1):
8 print(i,end=' ')

```

|   | Input                                     | Expected   | Got        |   |
|---|-------------------------------------------|------------|------------|---|
| ✓ | this apple is sweet<br>this apple is sour | sweet sour | sweet sour | ✓ |
| ✓ | apple apple<br>banana                     | banana     | banana     | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 5**

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  | Gfg 17  |
| Best 7 6 5 | Best 18 |

**Answer:** (penalty regime: 0 %)

```

1 n = int(input())
2 d = {}
3 b = []
4 for i in range(n):
5 x = input().split()
6 s = ""
7 l = []
8 for j in x:
9 if(j.isalpha()):
10 s=s+j
11 else:
12 l.append(int(j))
13 d[s] = sum(l)
14 b.append(sum(l))
15 m = list(d.values())
16 m.sort()
17 k = list(d.keys())
18
19
20 for i in range(len(m)):
21 print(k[b.index(m[i])],m[i])

```

|   | Input                        | Expected          | Got               |   |
|---|------------------------------|-------------------|-------------------|---|
| ✓ | 2<br>Gfg 6 7 4<br>Best 7 6 5 | Gfg 17<br>Best 18 | Gfg 17<br>Best 18 | ✓ |
| ✓ | 2<br>Gfg 6 6<br>Best 5 5     | Best 10<br>Gfg 12 | Best 10<br>Gfg 12 | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[◀ Week8\\_MCQ](#)

Jump to...

[Functions ►](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Functions: Built-in functions, User-defined functions, Recursive functions](#) / [Week9 MCQ](#)

**Started on** Tuesday, 28 May 2024, 6:15 PM

**State** Finished

**Completed on** Tuesday, 28 May 2024, 6:42 PM

**Time taken** 26 mins 24 secs

**Grade** **14.00** out of 15.00 (**93.33%**)

Question **1**

Correct

Mark 1.00 out of 1.00

Which of the following function definition header is wrong?

- a. def div(p1=4, p2, p3): ✓
- b. def sum(n1, n2, n = 3):
- c. def mul(p1, n1, m1):
- d. def scan(p1, p2 = 4, p3 = 5):

The correct answer is: def div(p1=4, p2, p3):

Question **2**

Correct

Mark 1.00 out of 1.00

Choose the incorrect statement.

- a. print(pow(2.3, 3.2))
- b. print(pow(2, 3, 2))
- c. None of the mentioned ✓
- d. print(pow(2, 3))

The correct answer is: None of the mentioned

**Question 3**

Correct

Mark 1.00 out of 1.00

The part of the program where a variable is accessible is known as the \_\_\_\_ of that variable

- a. part
- b. scope ✓
- c. module
- d. none of the mentioned

The correct answer is: scope

**Question 4**

Correct

Mark 1.00 out of 1.00

The return statement in function is used to \_\_\_\_.

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

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

**Question 5**

Correct

Mark 1.00 out of 1.00

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

```
def test(i,j):
 if(i==0):
 return j
 else:
 return test(i-1,i+j)
print(test(4,7))
```

- a. Infinite loop
- b. 7
- c. 13
- d. 17 ✓

Your answer is correct.

The correct answer is:

17

**Question 6**

Correct

Mark 1.00 out of 1.00

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

```
def sayHello():
 print('Hello World!')
sayHello()
sayHello()
```

- a. Hello World! ✓  
Hello World!
- b. None of the mentioned
- c. Hello  
Hello
- d. 'Hello World!'
'Hello World!'

Your answer is correct.

The correct answer is:

Hello World!  
Hello World!

**Question 7**

Correct

Mark 1.00 out of 1.00

Which of the following are advantages of using function in program?

- a. All of the mentioned ✓
- b. It makes debugging easier.
- c. It increases readability of program.
- d. It increases reusability.

The correct answer is: All of the mentioned

**Question 8**

Correct

Mark 1.00 out of 1.00

**What is the output of the following function call?**

```
def fun1(num):
 return num + 25
fun1(5)
print(num)
```

- a. 25
- b. 5
- c. num
- d. NameError ✓

Your answer is correct.

The correct answer is:

NameError

**Question 9**

Correct

Mark 1.00 out of 1.00

**What is the output of the following function call?**

```
def outer_fun(a, b):
 def inner_fun(c, d):
 return c + d
 return inner_fun(a, b)
 return a
result = outer_fun(5, 10)
print(result)
```

- a. 5 ✓
- b. (15,5)
- c. 15
- d. Syntax Error

Your answer is correct.

The correct answer is:

5

**Question 10**

Incorrect

Mark 0.00 out of 1.00

cal(n1) : What is n1?

- a. Argument
- b. None of the mentioned
- c. Parameter ✗
- d. Keyword

The correct answer is: Argument

**Question 11**

Correct

Mark 1.00 out of 1.00

**Which of the following items are present in the function header?**

- a. parameter list
- b. function name
- c. return value
- d. Both A and B ✓

Your answer is correct.

The correct answer is:

Both A and B

**Question 12**

Correct

Mark 1.00 out of 1.00

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

- a. function\_name() ✓
- b. ret function\_name()
- c. call function\_name()
- d. function function\_name()

Your answer is correct.

The correct answer is:

function\_name()

**Question 13**

Correct

Mark 1.00 out of 1.00

The \_\_\_\_ statement returns the values from the function to the calling function.

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

The correct answer is: return

**Question 14**

Correct

Mark 1.00 out of 1.00

**Which of the following function headers is correct?**

- a. def fun(a, b = 2, c = 3) ✓
- b. def fun(a = 2, b = 3, c)
- c. def fun(a = 2, b, c = 3)
- d. def fun(a, b, c = 3, d)

Your answer is correct.

The correct answer is:

def fun(a, b = 2, c = 3)

**Question 15**

Correct

Mark 1.00 out of 1.00

Which module is to be imported for using randint function?

- a. random ✓
- b. rand
- c. randrange
- d. randomrange

The correct answer is: random

[◀ Functions](#)

Jump to...

[Week9\\_Coding ►](#)

[Dashboard](#) / [My courses](#) / [PSPP/PUP](#) / [Searching techniques: Linear and Binary](#) / [Week10 Coding](#)

**Started on** Sunday, 26 May 2024, 6:29 PM

**State** Finished

**Completed on** Monday, 27 May 2024, 9:38 PM

**Time taken** 1 day 3 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 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<sup>6</sup>.

**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<br>3 2 1     | List is sorted in 3 swaps.<br>First Element: 1<br>Last Element: 3 |
| 5<br>1 9 2 8 4 | List is sorted in 4 swaps.<br>First Element: 1<br>Last Element: 9 |

**Answer:** (penalty regime: 0 %)

```
1 def bubble_sort(arr):
2 n=len(arr)
3 num_swaps=0
4 for i in range(n-1):
```

```
4 ▾ for i in range(n):
5 ▾ for j in range(n-1):
6 ▾ if arr[j] > arr[j+1]:
7 arr[j], arr[j+1] = arr[j+1], arr[j]
8 num_swaps+=1
9 print(f"List is sorted in {num_swaps} swaps.")
10 print(f"First Element: {arr[0]}")
11 print(f"Last Element: {arr[-1]}")
12 n=int(input())
13 a=list(map(int,input().split()))
14 bubble_sort(a)
15
```

|   | <b>Input</b>   | <b>Expected</b>                                                   | <b>Got</b>                                                        |   |
|---|----------------|-------------------------------------------------------------------|-------------------------------------------------------------------|---|
| ✓ | 3<br>3 2 1     | List is sorted in 3 swaps.<br>First Element: 1<br>Last Element: 3 | List is sorted in 3 swaps.<br>First Element: 1<br>Last Element: 3 | ✓ |
| ✓ | 5<br>1 9 2 8 4 | List is sorted in 4 swaps.<br>First Element: 1<br>Last Element: 9 | List is sorted in 4 swaps.<br>First Element: 1<br>Last Element: 9 | ✓ |

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<br>6    | False  |
| 3,5,9,45,42<br>42 | True   |

**Answer:** (penalty regime: 0 %)

```

1 n=input()
2 k=(input())
3 if k in n:
4 print(True)
5 else:
6 print(False)
7

```

|   | Input                | Expected | Got   |   |
|---|----------------------|----------|-------|---|
| ✓ | 1,2,3,5,8<br>6       | False    | False | ✓ |
| ✓ | 3,5,9,45,42<br>42    | True     | True  | ✓ |
| ✓ | 52,45,89,43,11<br>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<br>8 9 12 15 3<br>11      | Yes    |
| 6<br>2 9 21 32 43 43 1<br>4 | No     |

**Answer:** (penalty regime: 0 %)

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

|   | Input                       | Expected | Got   |  |
|---|-----------------------------|----------|-------|--|
| ✓ | 5<br>8 9 12 15 3<br>11      | Yes      | Yes ✓ |  |
| ✓ | 6<br>2 9 21 32 43 43 1<br>4 | No       | No ✓  |  |
| ✓ | 6<br>13 42 31 4 8 9<br>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&lt;=n, arr[i]&lt;=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<br>4 2<br>5 2 |

**Answer:** (penalty regime: 0 %)

```

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

```

|   | Input       | Expected          | Got               |   |
|---|-------------|-------------------|-------------------|---|
| ✓ | 4 3 5 3 4 5 | 3 2<br>4 2<br>5 2 | 3 2<br>4 2<br>5 2 | ✓ |

|   | Input           | Expected                         | Got                              |   |
|---|-----------------|----------------------------------|----------------------------------|---|
| ✓ | 12 4 4 4 2 3 5  | 2 1<br>3 1<br>4 3<br>5 1<br>12 1 | 2 1<br>3 1<br>4 3<br>5 1<br>12 1 | ✓ |
| ✓ | 5 4 5 4 6 5 7 3 | 3 1<br>4 2<br>5 3<br>6 1<br>7 1  | 3 1<br>4 2<br>5 3<br>6 1<br>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 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

$A[i-1] \leq A[i] \geq A[i+1]$  for middle elements.  $[0 < i < n-1]$

$A[i-1] \leq A[i]$  for last element  $[i=n-1]$

$A[i] \geq A[i+1]$  for first element  $[i=0]$

**Input Format**

The first line contains a single integer  $n$ , the length of  $A$ .

The second line contains  $n$  space-separated integers,  $A[i]$ .

**Output Format**

**Print** peak numbers separated by space.

**Sample Input**

5

8 9 10 2 6

**Sample Output**

10 6

**For example:**

| Input    | Result |
|----------|--------|
| 4        | 12 8   |
| 12 3 6 8 |        |

**Answer:** (penalty regime: 0 %)

```

1 def find_peak_elements(arr):
2 peak_elements=[]
3 for i in range(len(arr)):
4 if i == 0 and arr[i]>=arr[i+1]:
5 peak_elements.append(arr[i])
6 elif i== len(arr)-1 and arr[i]>=arr[i-1]:
7 peak_elements.append(arr[i])
8 elif arr[i-1]<=arr[i]>=arr[i+1]:
9 peak_elements.append(arr[i])
10 return peak_elements
11 n= int(input())
12 arr=list(map(int,input().split()))
13 result= find_peak_elements(arr)
14 print(*result)

```

|   | Input                | Expected  | Got       |   |
|---|----------------------|-----------|-----------|---|
| ✓ | 7<br>15 7 10 8 9 4 6 | 15 10 9 6 | 15 10 9 6 | ✓ |
| ✓ | 4<br>12 3 6 8        | 12 8      | 12 8      | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[◀ Week10\\_MCQ](#)

Jump to...

[Sorting ►](#)