Skip to main content

# CS23336-Introduction to Python Programming

| | |
|---|---|
| Started on | Wednesday, 28 August 2024, 1:38 PM |
| State | Finished |
| Completed on | Wednesday, 28 August 2024, 2:39 PM |
| Time taken | 1 hour 1 min |
| Marks | 10.00/10.00 |
| Grade | 100.00 out of 100.00 |

Question 1

Correct

Mark 1.00 out of 1.00

Flag question

## Question text

An automorphic number is a number whose square ends with the number itself.

For example, 5 is an automorphic number because 5*5 =25. The last digit is 5 which same as

the given number.

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

Input Format:

Take a Integer from Keyboard

Output Format:

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

Example input:

5

Output:

Automorphic

Example input:

25

Output:

Automorphic

Example input:

7

Output:

Not Automorphic

Answer:(penalty regime: 0 %)

```
n=int(input())
sq=n*n
if str(sq).endswith(str(n)):
    print("Automorphic")
else:
    print("Not Automorphic")
```

## Feedback

| | Input | Expected | Got | |
|---|---|---|---|---|
| | 5 | Automorphic | Automorphic | |

| | Input | Expected | Got | |
|---|---|---|---|---|
| | 625 | Automorphic | Automorphic | |
| | 7 | Not Automorphic | Not Automorphic | |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 2

Correct

Mark 1.00 out of 1.00

Flag question

## Question text

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

Input:

3

Output:

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

For example:

| Input | Result |
|---|---|
| 4 | 1<br>2 3<br>4 5 6<br>7 8 9 10 |

Answer:(penalty regime: 0 %)

```
n=int(input())
num=1
for i in range(1,n+1):
    print(" "*(n-i),end="")
    for j in range(1,i+1):
        print(num,end=" ")
        num+=1
    print()
```

## Feedback

|  | Input | Expected | Got |  |
|---|---|---|---|---|
|  | 3 | 1<br>2 3<br>4 5 6 | 1<br>2 3<br>4 5 6 |  |
|  | 4 | 1<br>2 3<br>4 5 6<br>7 8 9 10 | 1<br>2 3<br>4 5 6<br>7 8 9 10 |  |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 3

Correct

Mark 1.00 out of 1.00

Flag question

# Question text

Let’s print a chessboard!

Write a program that takes input:

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

Output Format

Print the chessboard as per the given examples

Sample Input / Output

Input:

2

W

Output:

WB

BW

Answer:(penalty regime: 0 %)

```
num=int(input())
char=input()
for i in range(num):
    for j in range(num):
        if(i+j)%2==0:
            print(char,end="")
        else:
            print("B"if char=="W" else 
"W",end="")
```

```
    print()
```

## Feedback

| | Input | Expected | Got | |
|---|---|---|---|---|
| | 2<br>W | WB<br>BW | WB<br>BW | |
| | 3<br>B | BWB<br>WBW<br>BWB | BWB<br>WBW<br>BWB | |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 4

Correct

Mark 1.00 out of 1.00

Flag question

## Question text

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

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

Some examples are as below.

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

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

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

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

For example:

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

Answer:(penalty regime: 0 %)

```
n=int(input())
n_str=str(n)
digit_count={}

for digit in n_str:
    if digit in digit_count:
        digit_count[digit]+=1
    else:
        digit_count[digit]=1

non_repeat_count=0
for count in digit_count.values():
    if count==1:
        non_repeat_count+=1

print(non_repeat_count)
```

## Feedback

| | Input | Expected | Got | |
|---|---|---|---|---|
| | 292 | 1 | 1 | |
| | 1015 | 2 | 2 | |
| | 108 | 3 | 3 | |
| | 22 | 0 | 0 | |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 5

Correct

Mark 1.00 out of 1.00

Flag question

## Question text

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

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

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

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

Input Format:

x1-position of kangaroo1
v1-Speed of kangaroo1
x2-position of kangaroo2
v2-Speed of kangaroo2
k-jumps

Output Format:

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

For example:

| Input | Result |
|---|---|
| 0<br>3<br>4<br>2<br>6 | YES |

Answer:(penalty regime: 0 %)

```python
x1=int(input())
v1=int(input())
x2=int(input())
v2=int(input())
k=int(input())

if(x1<x2 and v1<=v2)or(x2<x1 and v2<=v1):
    print("NO")
else:
    meet=False
    for i in range(k):
        x1+=v1
        x2+=v2
        if x1==x2:
            meet=True
            break
    if meet:
        print("YES")
    else:
        print("NO")
```

## Feedback

|  | Input | Expected | Got |  |
|---|---|---|---|---|
|  | 0<br>3<br>4<br>2<br>6 | YES | YES |  |

|  | Input | Expected | Got |  |
|---|---|---|---|---|
|  | 0<br>3<br>2<br>4<br>8 | NO | NO |  |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 6

Correct

Mark 1.00 out of 1.00

Flag question

## Question text

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

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

Input

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

Output

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

Example Input

578

Output

12

Explanation:

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

Answer:(penalty regime: 0 %)

```
def is_prime(n):
    if n<2:
       return False
    for i in range(2, int(n**0.5)+1):
        if n%i==0:
            return False
    return True

def sum(num):
    sum_p=0
    for digit in str(num):
         if is_prime(int(digit)):
            sum_p+=int(digit)
    return sum_p

num=int(input())
sum_prime=sum(num)
print(sum_prime)
```

## Feedback

| | Input | Expected | Got | |
|---|---|---|---|---|
| | 578 | 12 | 12 | |
| | 456 | 5 | 5 | |
| | 7032 | 12 | 12 | |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 7

Correct

Mark 1.00 out of 1.00

Flag question

## Question text

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

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

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

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

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

For example:

| Input | Result |
|---|---|
| 2<br>20 | 8 |
| 700<br>725 | 3 |

Answer:(penalty regime: 0 %)

```
start=int(input())
end=int(input())
count=0
for num in range(start,end+1):
    if num>1:
        is_prime=True
        for i in range(2,int(num**0.5)+1):
            if num%i==0:
               is_prime=False
               break
        if is_prime:
           count+=1

print(count)
```

## Feedback

|  | Input | Expected | Got |  |
|---|---|---|---|---|
|  | 2<br>20 | 8 | 8 |  |
|  | 700<br>725 | 3 | 3 |  |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 8

Correct

Mark 1.00 out of 1.00

Flag question

## Question text

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

Input Format:

Single integer input.

Output Format:

Yes or No.

Example Input:

24

Output:

Yes

Example Input:

26

Output:

No

For example:

| Input | Result |
|---|---|
| 24 | Yes |

Answer:(penalty regime: 0 %)

```
n=int(input())
m=1
while True:
    square=m*m
    if square >=n:
        x=square-n
        if x>0:
            print("Yes")
            break
    m+=1

    if m*m-n>m:
        print("No")
        break
```

## Feedback

|  | Input | Expected | Got |  |
|---|---|---|---|---|
|  | 24 | Yes | Yes |  |

|  | Input | Expected | Got |  |
|---|---|---|---|---|
|  | 26 | No | No |  |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 9

Correct

Mark 1.00 out of 1.00

Flag question

## Question text

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

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

Input Format:

One line containing the value of 'n', where 1<=n<=10,000

Output Format:

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

Sample Test Cases

Test Case 1

Input

10

Output

4

Test Case 2

Input

23

Output

22

Test Case 3

Input

11

Output

10

Answer:(penalty regime: 0 %)

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

n=int(input())
count=0
for i in range(1,n+1):
    if gcd(i,n)==1:
        count+=1

print(count)
```

## Feedback

| | Input | Expected | Got | |
|---|---|---|---|---|
| | 10 | 4 | 4 | |
| | 23 | 22 | 22 | |
| | 11 | 10 | 10 | |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

Question 10

Correct

Mark 1.00 out of 1.00

Flag question

## Question text

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

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

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

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

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

For example:

| Input | Result |
|---|---|
| 2<br>20 | 8 |
| 700<br>725 | 3 |

Answer:(penalty regime: 0 %)

```
start=int(input())
end=int(input())
```

```
count=0

for num in range(start,end+1):
    if num>1:
        is_prime=True
        for i in range(2,int(num**0.5)+1):
            if num%i==0:
                is_prime=False
                break
        if is_prime:
           count+=1

print(count)
```

## Feedback

| | Input | Expected | Got | |
|---|---|---|---|---|
| | 2<br>20 | 8 | 8 | |
| | 700<br>725 | 3 | 3 | |

Passed all tests!

Correct

Marks for this submission: 1.00/1.00.

[Finish review]

Skip Quiz navigation

## Quiz navigation

Question 1 This page

Question 2 This page

Question 3 This page

Question 4 This page

Question 5 This page

Question 6 This page

Question 7 This page

Question 8 This page

Question 9 This page

Question 10 This page

Show one page at a time

[Finish review]