

# Rajalakshmi Engineering College

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## NeoColab\_REC\_CS23221\_Python Programming

### REC\_Python\_Week 2\_CY

Attempt : 1  
Total Mark : 40  
Marks Obtained : 40

### Section 1 : Coding

#### 1. Problem Statement

Alex is practicing programming and is curious about prime and non-prime digits. He wants to write a program that calculates the sum of the non-prime digits in a given integer using loops.

Help Alex to complete his task.

Example:

Input:

845

output:

12

Explanation:

Digits: 8 (non-prime), 4 (non-prime), 5 (prime)

The sum of Non-Prime Digits:  $8 + 4 = 12$

Output: 12

### ***Input Format***

The input consists of a single integer X.

### ***Output Format***

The output prints an integer representing the sum of non-prime digits in X.

Refer to the sample output for formatting specifications.

### ***Sample Test Case***

Input: 845

Output: 12

### ***Answer***

# You are using Python

```
x = input().strip()
```

```
non_prime_sum=0
```

```
for digit in x:
```

```
    if digit not in '2357':
```

```
        non_prime_sum+=int(digit)
```

```
print(non_prime_sum)
```

**Status :** Correct

**Marks :** 10/10

## **2. Problem Statement**

Students are allowed to work on our computer center machines only after entering the correct secret code. If the code is correct, the message "Logged In" is displayed. They are not allowed to log in to the machine until

they enter the correct secret code.

Write a program to allow the student to work only if he/she enters the correct secret code.

Note: Here, secret code means the last three digits should be divisible by the first digit of the number.

### ***Input Format***

The input consists of an integer n, which represents the secret code.

### ***Output Format***

The output displays either "Logged In" or "Incorrect code" based on the given condition.

Refer to the sample output for the formatting specifications.

### ***Sample Test Case***

Input: 2345

Output: Incorrect code

### ***Answer***

```
# You are using Python
a = int(input())
first_digit_extract = int(str(a)[0])
last_three_digit_extract = a%1000
if last_three_digit_extract % first_digit_extract == 0:
    print("Logged In")
else:
    print("Incorrect code")
```

**Status :** Correct

**Marks :** 10/10

## **3. Problem Statement**

Rohith is a data analyst who needs to categorize countries based on their

population growth rates. Each country is assigned a unique code. Rohith will receive a code and corresponding data based on the code. If the data falls within specific thresholds, he needs to classify the country's priority level.

Your task is to write a program that reads a country code and its associated data, and then determines if the priority is "High" or "Low."

Thresholds: France: Priority is "High" if the percentage  $< 50$ , else "Low". Japan: Priority is "High" if life expectancy  $> 80$ , else "Low". Brazil: Priority is "High" if the urban population  $> 80$ , else "Low".

### ***Input Format***

The first line of input consists of an integer, representing the country code (1 for France, 2 for Japan, 3 for Brazil).

If the country code is 1,

- The second line consists of a floating-point value  $N$ , representing the percentage of the English-speaking population.

If the country code is 2,

- The second line consists of a floating-point value  $A$ , representing the average life expectancy in years.

If the country code is 3,

- The second line consists of a floating-point value  $P$ , representing the percentage of the urban population.

### ***Output Format***

The first line of output displays "Priority: High" or "Priority: Low" based on the input data.

If the country code is invalid, print "Invalid".

Refer to the sample output for formatting specifications.

### Sample Test Case

Input: 1

30.0

Output: Priority: High

### Answer

# You are using Python

```
code = int(input())
```

```
if code == 1:
```

```
    n = float(input())
```

```
    if n < 50:
```

```
        print("Priority: High")
```

```
    else:
```

```
        print("Priority: Low")
```

```
elif code == 2:
```

```
    a = float(input())
```

```
    if a > 80:
```

```
        print("Priority: High")
```

```
    else:
```

```
        print("Priority: Low")
```

```
elif code == 3:
```

```
    m = float(input())
```

```
    if m > 80:
```

```
        print("Priority: High")
```

```
    else:
```

```
        print("Priority: Low")
```

```
else:
```

```
    print("Invalid")
```

Status : Correct

Marks : 10/10

## 4. Problem Statement

Nisha is a mathematics enthusiast, eager to explore the realm of twin prime numbers. The objective is to develop a program that enables the discovery and presentation of twin prime pairs.

The program should take an integer 'n' as input and generate 'n' pairs of twin primes, displaying the pairs with a difference of 2 between them.

### ***Input Format***

The input consists of a single integer, n.

### ***Output Format***

The output displays the 'n' pairs of twin primes, the pairs with a difference of 2 between them.

Refer to the sample output for the formatting specifications.

### ***Sample Test Case***

Input: 5

Output: 3 5

5 7

11 13

17 19

29 31

### ***Answer***

# You are using Python

```
def is_prime(p):
```

```
    if p<=1:
```

```
        return False
```

```
    if p==2:
```

```
        return True
```

```
    if p%2==0:
```

```
        return False
```

```
    for i in range(3, int(p**0.5)+1,2):
```

```
        if p%i==0:
```

```
            return False
```

```
    return True
```

```
n = int(input())
```

```
count = 0
```

```
current = 3
```

```
while count<n:
```

```
    if is_prime(current) and is_prime(current + 2):
```

```
        print(f"{current} {current+2}")
```

```
        count+=1
```

current +=2

Status : Correct

Marks : 10/10