Rajalakshmi Engineering College

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NeoColab_REC_CS23221_Python Programming

REC_Python_Week 2_MCQ

Attempt : 1
Total Mark : 15
Marks Obtained : 8

Section 1 : MCQ

1. What will be the output for the following code snippet?

```
i = 0
for i in range(10):
    break
print(i)
```

Answer

0

Status : Correct ***Marks : 1/1***

2. How many times will the inner for loop be executed in the below code?

```
i=0
```

```
while(True):
  for j in range(4,0,-2):
    print(i*j)
    print('')
    i=i+1
  if(i%2==0):
    break
```

Answer

02

Status : Correct ***Marks : 1/1***

3. What will be the output of the following Python code?

```
i = 1
while True:
   if i%3 == 0:
      break
   print(i)
   i + = 1
```

Answer

1 2

Status : Wrong ***Marks : 0/1***

4. What is the purpose of the pass statement in Python?

Answer

To continue a loop without executing the code.

Status : Wrong ***Marks : 0/1***

5. What will be the output of the following Python code?

```
i = 1
while True:
```

```
if i % 2 == 0:
    i += 1
    continue
if i > 10:
    break
print(i, end = " ")
i += 2
```

Answer

1 3 5 7 9

Status : Correct ***Marks : 1/1***

6. What is the output of the following?

```
for i in range(10):
    if i == 5:
        break
    else:
        print(i, end=' ')
else:
    print("Here")
```

Answer

0 1 2 3 4 Here

Status : Wrong ***Marks : 0/1***

7. What will be the output of the following code?

```
i = 1
while True:
    if i%0O7 == 0:
        break
    print(i)
    i += 1
```

Answer

1 2 3 4 5 6

Status : Correct ***Marks : 1/1***

8. What is the output of the following?

```
i=0
while(1):
  i++
  print i
  if(i==4):
    break
```

Answer

Syntax Error

Status : Correct ***Marks : 1/1***

9. What will be the output of the following Python code?

```
i = 5
while True:
    if i%0O11 == 0:
        break
    print(i)
    i += 1
```

Answer

5 6 7 8 9 10

Status : Wrong ***Marks : 0/1***

10. What is the output of the following code?

```
i = 5
while True:
    if i%0O9 == 0:
        break
    print(i)
    i += 1
```

Answer

5 6 7 8

Status : Wrong ***Marks : 0/1***

11. What is the output of the following program?

```
i=1
while(i<3):
  j=0
  while(j<3):
    print(i%3,end=" ")
    j=j+1
  i=i+1
```

Answer

0 0 0 1 1 1

Status : Wrong ***Marks : 0/1***

12. What will be the output of the following code snippet?

```
i = 0
while i < 5:
    if i % 2 == 0:
        i += 1
        continue
    print(i, end=" ")
    i += 1
```

Answer

1 3

Status : Correct ***Marks : 1/1***

13. What will be the output of the following code snippet?

```
balloon_inflated = False
```

```
while not balloon_inflated:
    if not balloon_inflated:
        balloon_inflated = True
        print("inflate-", end="")
print("done")
```

Answer

inflate-done

Status : Correct ***Marks : 1/1***

14. What will the following code output?

```
x = 0
while x < 5:
    if x == 3:
        break
    x += 1
else:
    print("Completed")
print(x)
```

Answer

"Completed"

Status : Wrong ***Marks : 0/1***

15. Which keyword is used to immediately terminate a loop?

Answer

break

Status : Correct ***Marks : 1/1***

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NeoColab_REC_CS23221_Python Programming

REC_Python_Week 2_COD_Updated

Attempt : 1
Total Mark : 50
Marks Obtained : 40

Section 1 : Coding

1. Problem Statement

John, a software developer, is analyzing a sequence of numbers within a given range to calculate their digit sum. However, to simplify his task, he excludes all numbers that are palindromes (numbers that read the same backward as forward).

Help John find the total sum of the digits of non-palindromic numbers in the range [start, end] (both inclusive).

Example:

Input:

10

20

Output:

55

Explanation:

Range [10, 20]: Non-palindromic numbers are 10, 12, 13, 14, 15, 16, 17, 18, 19 and 20.

Digit sums: 1+0 + 1+2 + 1+3 + 1+4 + 1+5 + 1+6 + 1+7 + 1+8 + 1+9 + 2+0 = 55.

Output: 55

Input Format

The first line of input consists of an integer, representing the starting number of the range.

The second line of input consists of an integer, representing the ending number of the range.

Output Format

The output prints a single integer, representing the total sum of the digits of all non-palindromic numbers in the range.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 10
20
Output: 55

Answer

You are using Python

Status : Wrong ***Marks : 0/10***

2. Problem Statement

Emma, a mathematics enthusiast, is exploring a range of numbers and wants to count how many of them are not Fibonacci numbers.

Help Emma determine the count of non-Fibonacci numbers within the given range [start, end] using the continue statement.

Input Format

The first line of input consists of an integer, representing the starting number of the range.

The second line consists of an integer, representing the ending number of the range.

Output Format

The output prints a single integer, representing the count of numbers in the range that are not Fibonacci numbers.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 1
10
Output: 5

Answer

```
# You are using Python
start=int(input())
end=int(input())
fib=[0,1]
while fib[-1]<=end:
    fib.append(fib[-1]+fib[-2])
count=0
for num in range(start,end+1):
    if num not in fib:
        count+=1
print(count)
```

Status : Correct ***Marks : 10/10***

3. Problem Statement

As a junior developer working on a text analysis project, your task is to create a program that displays the consonants in a sentence provided by the user, separated by spaces.

You need to implement a program that takes a sentence as input and prints the consonants while skipping vowels and non-alphabetic characters using only control statements.

Input Format

The input consists of a string representing the sentence.

Output Format

The output displays space-separated consonants present in the sentence.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: Hello World!
Output: H l l W r l d

Answer

```
# You are using Python
sentence=input()
vowels="aeiouAEIOU"
consonants=[char for char in sentence if char.isalpha() and char not in vowels]
print(' '.join(consonants))
```

Status : Correct ***Marks : 10/10***

4. Problem Statement

You work as an instructor at a math enrichment program, and your goal is to develop a program that showcases the concept of using control statements to manipulate loops. Your task is to create a program that takes an integer 'n' as input and prints the squares of even numbers from 1 to 'n', while skipping odd numbers.

Input Format

The input consists of a single integer, which represents the upper limit of the range.

Output Format

The output displays the square of even numbers from 1 to 'n' separated by lines.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: 10

Output: 4
16
36
64
100

Answer

```
# You are using Python
n=int(input())
for i in range(1,n+1):
    if i%2==0:
        print(i*i)
```

Status : Correct ***Marks : 10/10***

5. Problem Statement

Ethan, a curious mathematician, is fascinated by perfect numbers. A perfect number is a number that equals the sum of its proper divisors

(excluding itself). Ethan wants to identify all perfect numbers within a given range.

Help him write a program to list these numbers.

Input Format

The first line of input consists of an integer start, representing the starting number of the range.

The second line consists of an integer end, representing the ending number of the range.

Output Format

The output prints all perfect numbers in the range, separated by a space.

Refer to the sample output for formatting specifications.

Sample Test Case

Input: 1
100

Output: 6 28

Answer

```
# You are using Python
start=int(input())
end=int(input())
def perfect(n):
    if n<2:
        return False
    divisors=[i for i in range(1,n)if n % i==0]
    return sum(divisors)==n
perfect_numbers=[str(num) for num in range(start,end+1)if perfect(num)]
print(" ".join(perfect_numbers))
```

Status : Correct ***Marks : 10/10***

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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

```
a=input()
sum=0
for i in a:
    num=int(i)
    if num not in {2,3,5,7}:
        sum+=num
print(sum)
```

Status : Correct ***Marks : 10/10***

2. 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
n=int(input())
t=[]
num=3

while len(t)<n:
    for i in range(2,num):
        if(num%i==0):
            break
    else:
            for i in range(2,num+2):
                if(num+2)%i==0:
                    break
            else:
                    t.append((num,num+2))
    num+=2
for a,b in t:
```

```
print(a,b)
```

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

```
x=int(input())
if(x>3):
   print("Invalid")
if(x==1):
   n=float(input())
   if(n<50):
      print("Priority: High")
   else:
      print("Priority: Low")

if(x==2):
   a=float(input())
   if(a>80):
      print("Priority: High")
   else:
      print("Priority: Low")

if(x==3):
   p=float(input())
   if(p>80):
      print("Priority: High")
   else:
      print("Priority: Low")
```

Status : Correct ***Marks : 10/10***

4. 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

```
n=int(input())
str_n=str(n)
first_digit=int(str_n[0])
last_3_digits=int(str_n[-3:])
if(last_3_digits%first_digit==0):
    print("Logged In")
else:
    print("Incorrect code")
```

Status : Correct ***Marks : 10/10***