Started on	Wednesday, 7 May 2025, 3:24 PM
State	Finished
Completed on	Wednesday, 7 May 2025, 3:27 PM
Time taken	2 mins 59 secs
Grade	**80.00** out of 100.00

Question **1**

Correct

Mark 20.00 out of 20.00

Write a Python Program to find whether the given matrix is an identity matrix or not:

if the matrix is an identity matrix ,print True

else print False

For example:

Test	Input	Result
n=int(input()) M=read_matrix(n) print(is_identity(M))	3 1 2 3 4 5 6 7 8 9	False

Answer: (penalty regime: 0 %)

```
def read_matrix(n):
    matrix = []
    for i in range(n):
        row = list(map(int, input().split()))
        matrix.append(row)
    return matrix

def is_identity(matrix):

    for i in range(n):
        for j in range(n):
            if i == j:
                if matrix[i][j] != 1:
                    return False
            else:
                if matrix[i][j] != 0:
                    return False
    return True
```

	Test	Input	Expected	Got	
✔	n=int(input()) M=read_matrix(n) print(is_identity(M))	3 1 2 3 4 5 6 7 8 9	False	False	✔
✔	n=int(input()) M=read_matrix(n) print(is_identity(M))	4 1 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1	True	True	✔
✔	n=int(input()) M=read_matrix(n) print(is_identity(M))	2 1 2 3 4	False	False	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **2**

Correct

Mark 20.00 out of 20.00

Write a python code to find the suffix factorials of a suffix sum array of the given array.

[Hint: input: arr[] = {1, 2, 3, 4}
Output: {3628800, 362880, 5040, 24}
Explanation: *The suffix sum of the given array is {10, 9, 7, 4}.*
Therefore, suffix factorials of the obtained suffix sum array is {10!, 9!, 7!, 4!}]

For example:

Test	Input	Result
N = int(input()) arr=createList(N) print('The given array: ',arr) suffixFactorialArray(arr)	4 1 2 3 4	The given array: [1, 2, 3, 4] The suffix sum array: [10, 9, 7, 4] Factorial of suffix sum array:,3628800 362880 5040 24

Answer: (penalty regime: 0 %)

```
def suffixFactorialArray(A):
    for i in range(len(A)-2, -1, -1):
        A[i] += A[i + 1]
    print('The suffix sum array: ', A)
    fact = [0 for _ in range(A[0] + 1)]
    fact[0] = 1
    for i in range(1, A[0] + 1):
        fact[i] = i * fact[i - 1]
    for i in range(0, N):
        A[i] = fact[A[i]]
    print('Factorial of suffix sum array:',end=',')
    for i in range(0, N):
        print(A[i], end=" ")
def createList(N):
    l=[0 for i in range(N)]
    for i in range(N):
        l[i]=int(input())
    return l
```

	Test	Input	Expected	Got	
✔	N = int(input()) arr=createList(N) print('The given array: ',arr) suffixFactorialArray(arr)	4 1 2 3 4	The given array: [1, 2, 3, 4] The suffix sum array: [10, 9, 7, 4] Factorial of suffix sum array:,3628800 362880 5040 24	The given array: [1, 2, 3, 4] The suffix sum array: [10, 9, 7, 4] Factorial of suffix sum array:,3628800 362880 5040 24	✔
✔	N = int(input()) arr=createList(N) print('The given array: ',arr) suffixFactorialArray(arr)	3 5 3 2	The given array: [5, 3, 2] The suffix sum array: [10, 5, 2] Factorial of suffix sum array:,3628800 120 2	The given array: [5, 3, 2] The suffix sum array: [10, 5, 2] Factorial of suffix sum array:,3628800 120 2	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **3**

Correct

Mark 20.00 out of 20.00

Write a Python Program to extract only the strong numbers from a list using filter

```
Example :145 is a strong number
```

```
Sum of digit factorials  = 1! + 4! + 5!
                         = 1 + 24 + 120
                         = 145
```

For example:

Input	Result
5 2 67 145 40585 60	[2, 145, 40585]

Answer: (penalty regime: 0 %)

```
def factorial(n):
    p=1
    for i in range(1,n+1):
        p=p*i
    return p
def IsStrong(x):
    temp=x
    sum=0
    while (x>0):
        r=x%10
        sum = sum+factorial(r)
        x=x//10
    if sum==temp:
        return True
    else:
        return False

L=[]
n=int(input())
for i in range(n):
    x=int(input())
    L.append(x)
```

	Input	Expected	Got	
✔	5 2 67 145 40585 60	[2, 145, 40585]	[2, 145, 40585]	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **4**

Not answered

Mark 0.00 out of 20.00

Write a program in Python to calculate the value of the following expression by using lambda function.

The expression is -

```
(x / 10) + (y / 2) * z
```

For example:

Input	Result
4 3 2	3.4

Answer: (penalty regime: 0 %)

```
1
```

	Input	Expected	Got	
✖	4 3 2	3.4	<function <lambda> at 0x7f8b8f933790>	✖

Some hidden test cases failed, too.

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

Show differences

Incorrect

Marks for this submission: 0.00/20.00.

Question **5**

Correct

Mark 20.00 out of 20.00

Write a Python program to find the square root of all elements in a list using list comprehension.

For example:

Input	Result
3 9 121 25	[9.0, 121.0, 25.0] [3.0, 11.0, 5.0]

Answer: (penalty regime: 0 %)

```
n=int(input())
l=[]
for i in range(n):
    x=float(input())
    l.append(x)
sq_l=[item**0.5 for item in l]
print(l)
print(sq_l)
```

	Input	Expected	Got	
✔	3 9 121 25	[9.0, 121.0, 25.0] [3.0, 11.0, 5.0]	[9.0, 121.0, 25.0] [3.0, 11.0, 5.0]	✔
✔	5 2 3.5 6 9 45	[2.0, 3.5, 6.0, 9.0, 45.0] [1.4142135623730951, 1.8708286933869707, 2.449489742783178, 3.0, 6.708203932499369]	[2.0, 3.5, 6.0, 9.0, 45.0] [1.4142135623730951, 1.8708286933869707, 2.449489742783178, 3.0, 6.708203932499369]	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.