Started on	Wednesday, 15 May 2024, 11:24 AM
State	Finished
Completed on	Wednesday, 15 May 2024, 11:48 AM
Time taken	24 mins 30 secs
Grade	**80.00** out of 100.00

Question **1**

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 createList (n):
    l=[]
    for i in range (n):
        x=int(input())
        l.append(x)
    return l

def suffixFactorialArray(l):
    size= len(l)
    arr=[0 for i in range (size)]
    for i in  range (size):
        arr[i]=sum(l)
        l.pop(0)
    print(f"The suffix sum array:  {arr}")
    print("Factorial of suffix sum array:,",end="")
    for items in arr :
        fact=1
        for i  in range (1,items+1):
            fact=fact*i
        print(fact,end=" ")
```

	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 **2**

Correct

Mark 20.00 out of 20.00

Write a Python program to filter the prime numbers in a list using filter ( )

For example:

Input	Result
4 17 19 35 97	[17, 19, 97]

Answer: (penalty regime: 0 %)

```
def is_prime (num):
    for i in range (2,num):
        if num % i == 0 :
            return False
    else:
        return True
a=int(input())
L=[]
for i in range (a):
    x=int(input())
    L.append(x)
result = list(filter(is_prime,L))
print(result)
```

	Input	Expected	Got	
✔	4 17 19 35 97	[17, 19, 97]	[17, 19, 97]	✔

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 generate the following matrix without reading the elements of the matrix:

For example:

Input	Result
5	Matrix: 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5

Answer: (penalty regime: 0 %)

```
def generate_matrix(n):
    matrix = [[0]*n for row in range(n)]
    for i in range(len(matrix)):
        matrix[i][i]=n
    return matrix
def print_matrix(M):
    print("Matrix:")
    for i in range(len(M)):
        for j in range(len(M[0])):
            print(M[i][j],end=" ")
        print()
n=int(input())
M=generate_matrix(n)
print_matrix(M)
```

	Input	Expected	Got	
✔	5	Matrix: 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5	Matrix: 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5	✔
✔	4	Matrix: 4 0 0 0 0 4 0 0 0 0 4 0 0 0 0 4	Matrix: 4 0 0 0 0 4 0 0 0 0 4 0 0 0 0 4	✔

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 python program to display elements from a list, present at odd index positions

For example:

Input	Result
7 10 20 30 40 50 60 70	20 40 60

Answer: (penalty regime: 0 %)

```
1
```

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 %)

```
a=int(input())
l=[]
for i in range (a):
    b = float(input())
    l.append(b)
print(l)

row=[]
for i in l :
    c = i ** 0.5
    row.append(c)
print(row)
```

	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.