

Started on	Wednesday, 7 May 2025, 3:21 PM
State	Finished
Completed on	Wednesday, 7 May 2025, 3:27 PM
Time taken	6 mins 9 secs
Grade	80.00 out of 100.00

Question 1

Not answered

Mark 0.00 out of 20.00

Write a Python program to print even numbers till 'N' using head recursion.

For example:

Input	Result
9	2 4 6 8

Answer: (penalty regime: 0 %)

1 |

	Input	Expected	Got	
✖	30	2 4 6 8 10 12 14 16 18 20 22 24 26 28 30	***Run error*** Traceback (most recent call last): File "__tester__.python3", line 13, in <module> l=int(input()) EOFError: EOF when reading a line	✖

Testing was aborted due to error.

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

Show differences

Incorrect

Marks for this submission: 0.00/20.00.

Question **2**

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, 145, 40585]
2	
67	
145	
40585	
60	

Answer: (penalty regime: 0 %)

```

1 def factorial(n):
2     p=1
3     for i in range(1,n+1):
4         p=p*i
5     return p
6 def IsStrong(x):
7     temp=x
8     sum=0
9     while (x>0):
10        r=x%10
11        sum = sum+factorial(r)
12        x=x//10
13    if sum==temp:
14        return True
15    else:
16        return False
17
18 L=[]
19 n=int(input())
20 for i in range(n):
21     x=int(input())
22     L.append(x)

```

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

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 find the cube of all elements in a list using [list comprehension](#)

**For example:**

Input	Result
3	[11.5, 22.0, 33.23]
11.5	[1520.875, 10648.0, 36693.65926699999]
22	
33.23	

**Answer:** (penalty regime: 0 %)

```

1 n=int(input())
2 l=[]
3 for i in range(n):
4     x=float(input())
5     l.append(x)
6 sq_l=[item**3 for item in l]
7 print(l)
8 print(sq_l)
```

	Input	Expected	Got	
✓	3 11.5 22 33.23	[11.5, 22.0, 33.23] [1520.875, 10648.0, 36693.65926699999]	[11.5, 22.0, 33.23] [1520.875, 10648.0, 36693.65926699999]	✓
✓	5 2 3.5 6 9 45	[2.0, 3.5, 6.0, 9.0, 45.0] [8.0, 42.875, 216.0, 729.0, 91125.0]	[2.0, 3.5, 6.0, 9.0, 45.0] [8.0, 42.875, 216.0, 729.0, 91125.0]	✓

Passed all tests! ✓

**Correct**

Marks for this submission: 20.00/20.00.

Question 4

Correct

Mark 20.00 out of 20.00

Write a Python program to multiply two matrices with equal number of rows and columns (N X N).

For example:

Input	Result
3	Matrix:
1 1 1	1 1 1
2 2 2	2 2 2
3 3 3	3 3 3
2 2 2	Matrix:
2 2 2	2 2 2
2 2 2	2 2 2
2 2 2	2 2 2
	Matrix:
	6 6 6
	12 12 12
	18 18 18

Answer: (penalty regime: 0 %)

```

1 import numpy as np
2
3 n=int(input())
4 Matrix1 = []
5 for i in range(n):
6
7     row = list(map(int, input().split()))
8     Matrix1.append(row)
9     print("Matrix:")
10 for i in Matrix1:
11     print(" ".join(map(str,i)))
12
13
14
15
16 Matrix2 = []
17 for i in range(n):
18
19     row = list(map(int, input().split()))
20     Matrix2.append(row)
21     print("Matrix:")
22 for i in Matrix2:
```

	Input	Expected	Got	
✓	3	Matrix:	Matrix:	✓
	1 1 1	1 1 1	1 1 1	
	2 2 2	2 2 2	2 2 2	
	3 3 3	3 3 3	3 3 3	
	2 2 2	Matrix:	Matrix:	
	2 2 2	2 2 2	2 2 2	
	2 2 2	2 2 2	2 2 2	
	2 2 2	2 2 2	2 2 2	
		Matrix:	Matrix:	
		6 6 6	6 6 6	
		12 12 12	12 12 12	
		18 18 18	18 18 18	
✓	2	Matrix:	Matrix:	✓
	1 2	1 2	1 2	
	3 4	3 4	3 4	
	2 4	Matrix:	Matrix:	
	3 6	2 4	2 4	
		3 6	3 6	
		Matrix:	Matrix:	
		8 16	8 16	
		18 36	18 36	

Passed all tests! ✓

Correct

Marks for this submission: 20.00/20.00.

## Question 5

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 %)

```

1 def suffixFactorialArray(A):
2     for i in range(len(A)-2, -1, -1):
3         A[i] += A[i + 1]
4     print('The suffix sum array: ', A)
5     fact = [0 for _ in range(A[0] + 1)]
6     fact[0] = 1
7     for i in range(1, A[0] + 1):
8         fact[i] = i * fact[i - 1]
9     for i in range(0, N):
10        A[i] = fact[A[i]]
11    print('Factorial of suffix sum array:',end='')
12    for i in range(0, N):
13        print(A[i], end=" ")
14 def createList(N):
15    l=[0 for i in range(N)]
16    for i in range(N):
17        l[i]=int(input())
18    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.

