Day 19: Advanced Python – Decorators, Iterators & Socket Programming

1. Assignment Question 1: Implement a Custom Decorator

Create a Python decorator called execution_timer that measures the execution time of any function it decorates. Apply this decorator to a function that calculates the factorial of a number recursively.

✅ **Expected Output Example:**

Factorial of 5 is: 120

Execution time: 0.000012 seconds

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2. Assignment Question 2: Create a Custom Iterator

Write a Python class EvenNumbers that implements an iterator to generate even numbers up to a given n. The iterator should return even numbers one by one when iterated using a for loop.

✅ **Example Usage:**

```
evens = EvenNumbers(10)
for num in evens:
    print(num)
```

✅ **Expected Output:**

0

2

4

6

8

10

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