Problem set 4

## Medium: Factorial Calculation

**Question:** Implement a function that calculates the factorial of a given non-negative integer using recursion.

**Explanation:** Recursion is a fundamental concept in programming. This problem will help you understand how to define base cases and recursive cases.

**Hint:** Remember that the factorial of `n` (denoted as `n!`) is `n * (n-1)!`, with `0! = 1`.