Assignment: Function in Python

Objective:

To understand how to define, call, and utilize functions in Python for code reusability, modularity, and problem-solving.

Level 1 – Easy

▼ Task 1: Create a Simple Function

Define a function greet() that prints "Hello, welcome to Python!" and call it.

Task 2: Function with Parameters

Create a function add(a, b) that takes two numbers and prints their sum. Call it with different values.

▼ Task 3: Function with Return Value

Define a function square(n) that returns the square of a number. Call it and print the result.

Level 2 – Medium

▼ Task 4: Default Parameter

Create a function greet_user (name="Guest") that greets the user. If no name is provided, it should greet "Guest".

▼ Task 5: Function with Multiple Return Values

Write a function calculator(a, b) that returns the sum, difference, product, and quotient of two numbers.

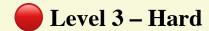
🔽 Task 6: Even or Odd Checker

Define a function check_even_odd(n) that returns "Even" if the number is even and "Odd" if the number is odd.

🔽 Task 7: Factorial Function

Write a function factorial (n) that returns the factorial of a number using a loop.

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🔽 Task 8: Recursive Function

Write a recursive version of the factorial(n) function.

✓ Task 9: Prime Number Checker

Define a function is prime(n) that returns True if the number is prime and False otherwise.

Task 10: Function with Variable Number of Arguments

Write a function total sum (*args) that accepts any number of arguments and returns their sum.

🔽 Task 11: Lambda Function

Use a lambda function to calculate the square of a number and call it with input 5.

✓ Task 12: Function Inside a Function (Nested Function)

Create a function outer() which contains a nested function inner() that prints "This is the inner function".



