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Reusable Functions

◆ Task 1: Square Numbers

This task defines a function that takes a list of numbers and returns their squares. It goes through each number one by one, squares it, and stores the results in a new list. Finally, it returns the list of squared numbers.

Example Output: A list like [4, 16, 36, 64, 100].

◆ Task 2: Even or Odd Checker

This function checks if a given number is even or odd. If the number is divisible by 2, it returns "Even", otherwise it returns "Odd".

Example Output: "Even" for 12 and "Odd" for 9.

Parameters & Return

◆ Task 1: Calculate Area

This function calculates the area of a circle based on a given radius. It uses the mathematical formula $\pi \times \text{radius squared}$ and gives back the result.

Example Output: An area value like 78.53 for radius 5.

◆ Task 2: Greet User

This function accepts two values: a name and an age. It returns a greeting message that includes the name and mentions the user's age.

Example Output: "Hello Zainab, you are 20 years old."

Scope & Modules

◆ Task 1: Change Counter

This task demonstrates how a global variable can be updated from inside a function. Each time the function is called, the global counter increases by 1.

Example Output: The counter starts at 0, then becomes 1, then 2.

◆ Task 2: Use of Custom Module

A separate module named `math_tools` contains a function to multiply two numbers. This module is imported into another file and used to perform multiplication.

Example Output: A result like 20 from multiplying 4 and 5.