**Introduction**

This Python programming assignment includes four diverse projects that demonstrate fundamental concepts such as user input, conditionals, loops, API interaction, and file handling:

**Age Calculator –** A utility that calculates a person’s age based on their birth year and the current year, emphasizing basic arithmetic operations and user interaction.

**Prime Number Generator –** Generates all prime numbers up to a given number using efficient logic, showcasing loop structures and conditional checks.

**Student Marks Processor –** Takes marks for multiple subjects, calculates total and average, and determines performance category, illustrating list operations, input handling, and conditional logic.

**Weather Data Fetcher and Analyzer –** Interacts with the OpenWeatherMap API to retrieve live weather data, analyze it, and log it into a CSV file. This demonstrates API calls, error handling, JSON processing, and file operations.

Each program addresses a unique real-world task using clear and modular code.