Daily Diary - 06/06/2024

Day 1 - BASICS OF PYTHON

Activities and Learnings

Introduction to Python Programming:

Hello World: Started with the traditional "Hello World!" program. Basic Arithmetic Operations: Addition, Subtraction, Multiplication, Division, Floor Division, Modulo, and Exponential operations were performed and printed. Variables and Calculations: Calculated total points scored in a game using win_points, draw_points, and lost_points. Calculated percentages and performed comparison operations using r, a, and ap. Problem-Solving Exercises:

Zoo Animal Population: Updated and printed the total lion population after the arrival of new cubs. Weather Monitoring System: Updated and printed the temperature after a heatwave. Plant Growth Tracking: Calculated and printed the final height of a plant after a week of growth. Space Mission Trajectory: Calculated and printed the final velocity of a space mission after a given time. Pizza Sharing Among Friends: Calculated and printed the maximum number of slices each friend can have without cutting the pizza. Pendulum Oscillation: Calculated and printed the period of oscillation for a pendulum using its length and gravity. Bug Tracking in Software Development: Updated and printed the bug count after fixing some bugs. Gem Collection in a Game: Updated and printed the gem count after collecting new gems. Heart Rate Variability Improvement: Updated and printed the HRV index after a relaxation session. Bacterial Colony Growth: Calculated and printed the new bacteria count after a day, given its doubling rate. Code Examples python Copy code # Example of a basic arithmetic operation a = 10 b = 5

print("Addition:", a + b) print("Subtraction:", a - b) print("Multiplication:", a * b) print("Division:", a / b)

Example of calculating total points in a game

win_points = 3 draw_points = 1 lost_points = 0 total_points = (6 * win_points) + (1 * draw_points) + (2 * lost_points) print("Total points scored:", total_points)

Example of updating lion population

lion_population = 10 lion_population += 5 print("Total lion population:", lion_population) Summary Today's session involved practicing basic Python programming concepts including arithmetic operations, variable manipulation, and solving practical problems through coding. Each problem was designed to

strengthen understanding of fundamental programming principles and applying them to real-world scenarios.