Question 1: Crop Monitoring System

Imagine you are developing a Crop Monitoring System for farmers. Write a Python function monitor_crop(temperature, humidity, rainfall) that takes environmental conditions as input and returns "Watering needed" if the humidity is low and rainfall is below average, and "Optimal conditions" otherwise.

Question 2: Library Book Reservation System

Design a Python program for a Library Book Reservation System. Create a function reserve_book(book_title, student_status) that allows students to reserve a book. If the book is available and the student is a regular student, reserve the book; if the student is a VIP student, provide instant reservation. Handle cases where the book is not available.

Question 3: Ride-Sharing Fare Calculator

You are working on a Ride-Sharing Fare Calculator. Develop a Python function calculate_fare(distance, time_of_day) that takes the distance of the ride and the time of day as input and returns the fare. Apply a 20% surcharge during peak hours (8 am - 10 am and 5 pm - 7 pm) and a 10% discount for late-night rides (10 pm - 5 am).

Question 4: Health Tracker App

Create a function check_activity_goal(steps_taken, goal) for a Health Tracker App. If the user has achieved their daily step goal (given as input), return "Goal achieved," otherwise, provide a message indicating how many more steps are needed to reach the goal.

Question 5: Online Shopping Cart

Develop a Python program for an Online Shopping Cart. Create a function checkout(cart_total) that takes the total cost of items in the cart and applies a discount based on the user's membership level. Regular members get a 5% discount, premium members get a 10% discount, and VIP members get a 15% discount.

Question 6: Weather App

Imagine building a Weather App. Write a function weather_advice(temperature, precipitation) that provides advice based on the current weather conditions. If it's hot and sunny, suggest wearing sunscreen; if it's raining, recommend carrying an umbrella; and if it's cold, suggest dressing warmly.