ALGORITHM

Initialization:

1. Include the LiquidCrystal library for controlling the LCD display.

2. Define constants and variables for pins and sensor data.

3. Initialize the LCD display with 16 columns and 2 rows.

4. Display a welcome message on the LCD and clear it after 2 seconds.

Main Loop (Repeated):

1. Read the analog value from the rain sensor.

2. Map the analog value to a percentage representing the rain level.

3. Check if a button for silent mode is pressed:

    a. If pressed, set silent mode to ON.

4. Display the rain level percentage on the LCD.

5. If the rain level is above 30% and silent mode is OFF:

    a. Activate the buzzer.

    b. Display a "Rain Alert...!!!" message on the LCD.

    c. Turn off the green LED and turn on the red LED.

    d. Wait for 300 milliseconds.

6. If the rain level is 30% or lower:

    a. Set silent mode to OFF.

    b. Display ".....Normal....." on the LCD.

    c. Turn on the green LED and turn off the red LED.

    d.Turn off the buzzer.

7. Add a short delay before repeating the loop.

8. End of Loop

This algorithm describes the key steps performed by the Arduino code to read and display rain sensor data, provide feedback, and allow for silent mode control.

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