**Step 4:** **implement the Solution (Word Coding)**

**Code:**

**Platform: Arduino UNO**

**Language: Arduino C/C++**

if (currentTime == feedingTime && digitalRead(foodSensorPin) == HIGH) {

  // the feeding time is correct and there’s enough food available

    feederServo.write(90);     // Dispense food portion

    delay(2000);               // Wait 2 seconds

    feederServo.write(0);      // Reset servo position

    lcd.clear();

    lcd.setCursor(0, 0);

    lcd.print("Next: (The Next Feeding Time)");  // Replace with actual next feeding time

    lcd.setCursor(0, 1);

    lcd.print("Food: (Remaining Food Percent)"); // Replace with actual food percent

    digitalWrite(buzzerPin, LOW);  // Make sure buzzer is off during feeding

} else if (digitalRead(foodSensorPin) == LOW) {

    lcd.clear();

    lcd.print("Low Food!");

    digitalWrite(buzzerPin, HIGH); // Turn buzzer on for low food alert

} else {

    digitalWrite(buzzerPin, LOW);  // Turn buzzer off if no alert  }