**UNIVERSITY OF CANBERRA  
INTRODUCTION TO INFORMATION TECHNOLOGY (4478/8936)**   
Assignment 1: The Solving Problem Process.

**Part 3: On AI Agent Integration**

**ANSWER:**

**Explore real-world implementation**

* Microcontroller: Arduino Uno or ESP32
* Servo Motor or DC Motor: To rotate and dispense food
* RTC Module: Ds3231 for accurate timekeeping
* Weight Sensor: HX711 + load cell under the bowl
* Food Level Sensor: Ultrasonic or IR Sensor
* Alert System: Buzzer, LED, or Wi-Fi module for notifications.

**Improve Documentation in README.md file includes:**

* Project Overview
* Features
* System Design
* Folder Structure
* Usage instructions
* Acknowledgements.

**Short Reflection:**

I used Microsoft Copilot to refine the logic of my automated pet feeder system. I asked it to review my Word Code and suggest improvements. It responded with a more modular and descriptive version that included a loop, sensor thresholds, and clearer logic. This helped me understand how to structure my code more efficiently and think about edge cases like sensor failure or missed feedings.

I also asked Copilot to propose alternative solutions. It suggested an event-driven approach, which I hadn’t considered. This made me realize that polling every minute might not be the most efficient method, especially for battery-powered systems.

Finally, I explored how this system could be implemented using real-world hardware like Arduino and sensors. Copilot provided a list of components and explained how they could be connected.

Overall, using Copilot helped me improve the quality of my solution, expand my thinking, and better understand how software logic translates to hardware systems. It also made me reflect on the ethical responsibility of ensuring such systems are reliable and safe for animals.