

Part 1 – Problem-Solving Process

Step 2 – Organise and Describe the Data

Input	Type	Sample Value	Operational Constraints
Feeding Time (RTC)	Time (HH:MM)	08:00, 18:00	24-hour clock; programmable in 1-min increments
Food Bin Level Sensor	Boolean	TRUE/FALSE	Must detect if food is <10% capacity
Bowl Weight Sensor	Float (grams)	0g, 50g, 100g	Accuracy $\pm 2g$; checks 10 mins after feeding
Manual Override Switch	Boolean	ON/OFF	Staff can trigger manual feed anytime
Output			
Motor Rotation	Integer (degrees)	90°	Dispense approx. 50g per 90° turn
Alert Notification	String	“Food Not Eaten”	Triggered via buzzer or text after 10 mins
Feeding Log Entry	Timestamp + Status	08:00 SUCCESS	Stored locally in memory or sent to server

Figure 1: Data Table