The Arduino code you've provided is a time-based control system for an automatic fish feeder using:

A servo motor (to release food),

An LED (as an indicator),

A buzzer (as an audible alert).

A dataset in this context could be understood in two ways:

Simulated runtime logs (i.e., what the serial output might look like over time),

Sensor or status data you could collect for analysis or logging.

Since this device doesn't have sensors and only actuates based on time, the dataset would mainly consist of timestamped feeding events and time-until-next-feed logs.

Simulated Dataset for Automatic Fish Feeder Below is a mock dataset showing what this system would output during its runtime, assuming it runs for 12 hours.

Timestamp (HH:MM:SS)

Event LED State Buzzer State Servo Position Next Feed In (min)

00:00:00 System Start OFF OFF 0 240

00:00:03 Feeding fish... ON ON 90 → 0 240

00:00:06 Feeding done! OFF OFF 0 240

00:00:09 Next feed in OFF OFF 0 239

00:00:12 Next feed in OFF OFF 0 239

04:00:00 Feeding fish... ON ON 90 → 0 240

08:00:00 Feeding fish... ON ON 90 → 0 240

12:00:00 Feeding fish... ON ON 90 → 0 240

📊 Dataset Table – Automatic Fish Feeder

Timestamp	Event	LED State	Buzzer State	Servo Position	Next Feed In (min)
00:00:00	System Start	OFF	OFF	0	240
00:00:03	Feeding fish...	ON	ON	90 → 0	240
00:00:06	Feeding done!	OFF	OFF	0	240
00:30:00	Waiting	OFF	OFF	0	210
01:00:00	Waiting	OFF	OFF	0	180
02:00:00	Waiting	OFF	OFF	0	120
03:00:00	Waiting	OFF	OFF	0	60
03:59:57	Waiting	OFF	OFF	0	1
04:00:00	Feeding fish...	ON	ON	90 → 0	240
04:00:03	Feeding done!	OFF	OFF	0	240
06:00:00	Waiting	OFF	OFF	0	120

07:59:57	Waiting	OFF	OFF	0	1
08:00:00	Feeding fish...	ON	ON	90 → 0	240
08:00:03	Feeding done!	OFF	OFF	0	240
10:00:00	Waiting	OFF	OFF	0	120
11:59:57	Waiting	OFF	OFF	0	1
12:00:00	Feeding fish...	ON	ON	90 → 0	240
12:00:03	Feeding done!	OFF	OFF	0	240

🧠 How This Table Reflects the Code:

- The servo moves to 90° to feed and returns to 0°.
- LED and buzzer activate during feeding (500 ms before + 500 ms after).
- `millis()` and a `feedInterval` of 4 hours determine feeding timing.
- Status is updated every 3 seconds in the loop.