NAME OF GROUP: ATOMIC CREW

NAME OF PROJECT: WATER AND FOOD DISPENSER FOR PETS

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Problem Definition

- It is often observed that people are getting less time to look after their pets hence sometimes their basic needs such as drinking water and food could be neglected. We can't always guarantee that our pets are going to get their meal fresh drinking water on time every day. This often leads to our pets having health issues, which results in them and also their owners being stressed. In order to take care of their pets, owners are sometimes unable to fulfill their professional as well as personal commitments.

Inputs

- For Water Dispensing model
    - Ultrasonic Sensor and Moisture Sensor
        - The microcontroller will take data from the ultrasonic sensor and moisture sensor as input. Ultrasonic sensor triggers a relay module to turn on the water pump, dispensing water into a bowl.
        - Moisture sensor will be responsible for controlling water level.
- Food dispensing time- In the food dispensing model, we will take the timings of the food disposal from the user through the app.
- Pet information about the type,breed, medical information.

Functionality

- Part 1- Water Dispenser

  As soon as the pet appears in the front of the dispenser then the distance between the pet and dispenser is measured by the ultrasonic sensor. When the distance reduces than the predefined distance set in the microcontroller then the water pump is switched ON and water is dispensed in the bowl. But the flow of water again depends upon the level of water filled in the bowl. If water is already available in the bowl then it is sensed by

the moisture sensor and hence water would not flow. If the water level is less than desired water level then only water would flow.

- Part 2- Food Dispenser

  Food dispenser works with time as a base. The food containers have various compartments out of which one would be enabled at a time for the pet. The user specifies the feeding time. Normally, an empty compartment would be enabled. When feeding time arrives, the compartment containing food would be enabled for the pet.

- Part 3- Mobile application
  - Schedule setter: Schedule plan would be specified by the user that would provide the list of events or tasks. Also at the times at which each one should happen or to be done for example the food dispensing would happen at the specified time given by the user from the app.
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    - Breed info: The breed info has complete list of recognised breeds which contains personality, history, health, nutrition, grooming, pictures
    - Reminder: Frequent reminders would be posted for pets regarding vaccination, cleaning, hygiene, medication and custom tasks.

Expected outcomes

- Dispensing of water as soon as the pet comes in front of the dispenser for water.
- Restricting the flow of water when the pet arrives in the front of the dispenser with the bowl filled with water.
- Enabling the compartment containing food for the pet at the pre defined time set by the user.
- Giving the user suggestions about the pet's well being for example specifying the nutritional requirements according to the pet and its breed, vaccination schedules, the required physical activity for the pet.

Final outcome

- Dispense of water when required.
- Enabling the food compartment at the time set by the user.
- Suggestions to the user about the needs of the pet.
- Reminder for the pet owner about the needs of the pet.
- A better life for the pet.