**1.Understand and define the problem:**

**Problem Statement:**

Many people around the world like having pets, dogs or cats but sometimes they have to leave their pet at home alone to go for work, study or go on trips that last for days, and pet boarding or pet sitting both are quite expensive services. So, this raises an important question: how can I make sure my dog is fed on time and stay healthy while I am away for such a long time all by itself in its house?

**Plan:**

We aim to design a low-cost automated pet feeder that can schedule feeding time, track the amount of food eaten, and alert the owner when food is low or uneaten.

**Objectives:**

- Adjustable portion sizes (50g to 300g).

- Support four times of feeding daily (twenty a day).

- Circuits to detect when the bowl empties (each type of bowl requires tests).

- Warnings if storage is low/disuse or food unused.

- Use Arduino software with a servo motor and sensors such as force plates (FSRs) to build a design that is equitably priced.

System Sketch diagram showing the input and the outputs of the automated pet feeder controlled by Arduino:**A diagram of an input output

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