CHAPTER 1
INTRODUCTION

1.1 Background

In Campurejo there is a boiler chicken farm which is located far from residential area. The problem that arises is about the efficiency of time and energy, where the owner of the farm should check and feed the chicken up to 4-5 times a day. So it needs an automatic feeding mechanism to further improve the efficiency of time and effort.

One way to create automatic feeding mechanisms is to use the NodeMcu Microcontroller, Servo Motor, Ultrasonic Sensor HC-SR04, and Real-Time Clock (RTC) DS3231. Results from a study entitled The Effect of Feeding Patterns with Supplementation of Some Levels of Vitamin C on Physiological Production and Chicken Organs of Boiler Chicken (on Subekti, 2009), the best time to feed was 6 pm to 9 am. Therefore, this research would help the problem solving of the broiler chicken farm in case the unwell organize feeding time become well organize during 15 hours start from 6 pm till 9 am automatically.

Time and energy efficiency can be enhanced by collaborating NodeMcu Microcontroller, Servo Motor, Ultrasonic Sensor HC-SR04, and Real-Time Clock (DSC) DS3231 to become an automatic feeding mechanism by programming NodeMcu Microcontroller using Arduino IDE where in the program there is command To read the time, read the feed distance, and move the servo motor to open or closed. Combined with IoT (Internet of Thing) that allows data from the feed distance to the ultrasonic sensor can be accessed via the internet. Through the internet, the distance to the ultrasonic sensor feed can be uploaded and can be accessed.

1.2 Scope

The scopes of the issues to be discussed in this report are:

1. Measure the distance between feed and ultrasonic sensors
2. Record distance data to table and chart to broker thinger.io
3. Record once-minute data to broker thinger.io
4. Control feed automatically
5. the researcher is not responsible if the feed is scattered
6. feeding on the main tube is still done manually

1.3 Objective

Objective of this project is to create automatic feeding mechanism and ease of supervision so as to improve the efficiency of time and effort.