ABSTRACT

Broiler chicken is one of the most popular commodities among other livestock products, because it has a high protein content. According to data from Badan Pusat Statistik in 2018, the amount of chicken meat consumption per capita increases by an average of 0.5 kg each year. This proves that the community's need for chicken meat is always increasing so making broiler chicken farming is a promising business. However, many parameters can affect the health and quality of broilers, including changes in temperature and humidity, the amount of consumption of feed and drinking water, as well as ammonia gas levels caused by chicken manure. This makes the farmer must repeatedly monitor the condition of the farm and manually adjust the state of the coop to keep it optimal. Because the location of the farm is far from the settlement, it is very inefficient if the farmer has to repeatedly go to the coop just to just check and turn on the equipment in the cage.

In this Final Task the author designed an Android-based mobile application to control and monitor chicken farms. The mobile application can send commands from the smartphone via a web server that has been connected with sensors and Internet of Things based devices that are in the coop, otherwise sensors in the enclosure will send data in the form of values from existing parameters to be displayed on the mobile application. Data about the condition parameters in the chicken coop will be displayed in realtime and processed into a daily report on the mobile application. The results of testing the functionality, all features contained in the mobile application can be run properly. For testing the delay of mobile applications in the process of writing/uploading data which was carried out in 6 trial sessions, it was found that the average delay was 275.8 ms. Whereas in the read/download process an average delay 625.6 ms, is obtained so that it can be concluded that the delay is quite good.

Keywords : Smart Poultry Farm, Broiler Chicken, Android, Internet of Things.