

ABSTRACT

Indonesia as a country that has a very large livestock sector, almost every resident in Indonesia is a breeder of chickens, cows, goats, especially broiler chickens, which are in great demand by the public as broilers. In the maintenance of broiler chickens need special care because broiler chickens are susceptible to disease so that the growth of chickens will be hampered, one of which is temperature and humidity which can affect the growth of chickens. The problem faced is that farmers more often predict temperature and humidity conditions just by feeling the heat in the cage.

In this final project, an IoT-based chicken coop controller and temperature controller is designed using a DHT11 sensor and a website so that it can make it easier to check and monitor the temperature of the cage at a distance. The sensor has an accuracy rate of 97.8% in the morning test, 98.0% at night testing. QoS testing (delay and throughput) was also carried out to determine the quality of the network used by the device. The results of the average delay and throughput obtained are 0.159 s and 31.44 Kb/s between 10.00 – 11.30, while between 01.00 – 02.35 are 0.203 s and 21.08 Kb/s.

The website can display in 4 forms, namely temperature data, humidity data, ldr, and graphs of the last 10 data based on the results of the last inspection stored on databases.000webhost.com in realtime. Although the system designed is not adequate to be applied directly to monitoring the temperature of the chicken coop, the tool designed is integrated with IoT, so that monitoring the temperature of the chicken coop can be done remotely as long as it is connected to the internet.

Keywords: DHT11 sensor, temperature and humidity controller of the enclosure, fan and lights.