

ABSTRACT

Lamps are an equipment that most houses have because they play an important role in daily life. Lights can help homeowners light up the room especially at night. Every year the need for housing continues to increase, and that has an impact on the increasing use of electricity, resulting in excessive expenses. One example of excessive use of electricity is forgetting to turn off lights and other electronic equipment while leaving the house. This can be addressed by automating the device in the home or commonly referred to as the Smart Home.

In this research will be created a system that can automate a home device such as lights. The purpose of this final task is to create an automation system on the device that can make predictions according to the habits of the room. With the algorithm used is CART, user habit data recorded will be processed into a dataset of information and the data will be processed by the system to make predictions that later the data will be retrieved by the device. So that the device can run according to the habits of the room. The result of this research is that the system runs as planned, and the predicted results show that the more data, the smaller the accuracy result.

The results obtained from this project were the system running 100% as planned, and the results obtained in the first test 93% on both lamps, the second test 88% on both lamps and the third test 83% on the internal lamp and 87% on the outside light. From the prediction results show that the more data, the greater the accuracy result.

Keywords: *Smart Home, CART, Lights, Habits*