

## ABSTRACT

*Lighting system is a system that is needed by everyone. Whether in the form of street lighting, vehicles, houses and for decoration. With the lights, human activities can run 24 hours non-stop. Higher activity that requires lighting, then the energy used is also higher. From these idea then created lighting regulation system so that lights can adjust the lighting as desired.*

*LED lights are lights that can produce twice as much light from regular lamps with the same power consumption. So in this final project, designed a lighting system using LED Strip RGBW by using NodeMCU as microcontroller that intergrated with ESP8266. The lights can be controlled on, off and color as needed using Android smartphone with internet connection and connected with database from Google Firebase Realtime Database.*

*The results from this LED lighting can helping in human work and save energy. In manual mode get the average delay 4,55 seconds with the average data packets is 0,60 Kb and the power is 9,6 Watt. The LED Lighting system can provide realtime control and scheduling services.*

***Keyword : LED, Smartphone Android, , Internet.***