

ABSTRACT

The average area in Asia has a tropical climate, including Indonesia, which only has two seasons, namely the rainy season and the dry season. However, over time, the change of seasons from the rainy season to the dry season and vice versa is increasingly erratic due to the influence of global warming, so that the climate in Indonesia in the last 5 years often causes local rain in certain areas in Indonesia, including the city of Bandung and its surroundings. located in West Java province.

The final project will be an application using the Android operating system and a website. This application will be used to monitor two weather conditions, namely rainy and non-rainy conditions. The monitoring of the two weather conditions is carried out at three points that have the potential to experience local rain events along the Ciganitri road to Telkom University. Monitoring of the two weather conditions is also carried out in real-time, which means it would like to allow users to directly monitor two weather conditions at three different locations.

The simulation results and functionality testing show that all system functions, both the website and the Android application, can run 100% as they should. Applications that have been designed and developed can display the information obtained in each location. That can ensure each information is different at each location The application Website performance scores 55 based on ratings from Google Lighthouse. It means that the website scores quite well when viewed from the Google Lighthouse rating range. Testing the compatibility of android applications using the AppChecker application results that the minimum operating system required to install a rain detection application on an Android device is version 4.0 (Ice Cream Sandwich). The results of the rain detector test are considered pretty accurate because the difference between the measurement results of the rain detector and the measuring instrument used by the measurement reference is not much different. It noted that the average relative error of the DHT11 sensor is 8.35% when compared to the reference measurement. it means the measurement error on the DHT11 sensor is relatively low.

Keywords: *Local Rain, Website, Real-Time.*