ABSTRACT

The research conducted this time is a monitoring of the solar panel system in Citeureup Village that prioritizes IoT (Internet of Things), namely mobile applications. This research has succeeded in producing an output, namely "SOPAN (Solar Panel)" which is an android application that is integrated with Antares and measuring tools include the UNO Wifi R3 + ESP8266 Microcontroller as a data processing tool, and also uses several sensors that have been tested for 5 days of use. by taking samples of AC and DC voltage parameters and AC current which have an average error value of 1.8% and an accuracy value of 98.2%. On receiving monitoring data, there is a delay of 1-3 seconds to be displayed on the application. In the power management section, the load control section gets a delay of 10-13 seconds to turn the load on and off, the controlled load is a 6V lamp and a 45V mini pump.

Key Word: *Solar Panel, Arduino, IoT, Mobile Application.*