## DESIGN AND DEVELOPMENT OF ELECTRICAL POWER CONSUMPTION MONITORING AND AUTOMATIC DISCONTINUE BASED ON THE INTERNET USING ESP8266 WIFI MODULE AND PZEM-004T SENSOR

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## ABSTRACT

The development of modern residential types around the campus has caused problems in monthly electricity bills. In general, the cost of a room electricity bill is determined based on the total bill on the electricity meter occupancy account divided by the number of rooms. How to determine the cost of electricity bills for each room is felt to be unfair. From the problems mentioned above, the authors designed a prototype system for measuring electrical power consumption in each room in a specific residence whose measurement results can be accessed via a smartphone or PC electric user using the web. The purpose of this study is to apply and measure electrical power consumption measurement tools. and internet-based automatic power breakers with development research methods to develop a new product or perfect an existing product. From the results of this prototype research can be applied to determine the monitoring of voltage (V), Flow (A), Power (W), power consumption in so many hours (kWh), Power Factor (cos  $\pi$ ), Frequency (Hz). In addition, this prototype can also disconnect power automatically when the user has not paid the bill on the specified date.

Keyword : sensor PZEM-004T, modul wifi ESP8266, Relay, WEB.