REAL-TIME MONITORING OF ENERGY METER USING CLOUD COMPUTING

The project "Real-Time Monitoring of Energy Meters Using Cloud Computing" aims to develop an automatic remote meter reading system that helps to obtain meter reading when desired so that meter readers don't need to visit each customer for the consumed energy data collection and to distribute the bill slips. Many times errors like extra bill amount, or notification from electric board even though the bills are paid are common errors. To overcome this drawback a system can be developed that will eliminate the human effort that requires for to take the bills and avoid human errors. The project contains 3 units: hardware unit to record energy consumption, communication unit to transmit recorded details to a remote server, software(web portal) unit to process and display to both client and the electricity board. Users can keep track of their daily usages while the electricity board can track and charge via the web portal. The microcontroller-connected hardware contains a WiFi module used for internet connectivity. With the help of internet connectivity, the recorded data that is outed from the microcontroller will be passed to the web server. The server will achieve database connectivity with a cloud service for data storage. The imported data will be stored in the cloud space and later be presented to the web application/ mobile interface as per the user request. In the application side there exist two types of users; Consumers and electricity board. Consumers can access their usage information, bill status by login into their consumer account and also can pay bills from there themselves. The data will be presented to the user in different formats and help to track the information in detail with graphs. While each electricity section can track their consumer's information, each user's electricity consumption, issue bills, etc.

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