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Smart Electric Billing System

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Abstract: Electricity is the heart of today's world. And now the world is moving towards digital so electricity is a very potential aspect. Generation and supply of electricity is the primary task of electricity board but it is also important to measure the power used by the consumer that is taking readings and generate the bills. In current state taking a reading and generating bills is manual work. It is very time- consuming. Power theft is one of the biggest problems in India. If a user did not pay the bills on time then the electricity board worker cut the power supply manually. In this case, sometimes fraud done by the user or that worker which leads to the loss of electricity board. To avoid such defects in the billing system, we proposed a wireless system for smart electric billing system using IOT (Internet of Things).The project smart electric billing system provides a cost-efficient manner of electricity billing. The present energy billing systems are discrete, less accurate, high in cost and slow. They are also time and labour consuming". This system measures the power consumption also.

I. INTRODUCTION

The project "Smart Electricity Billing System" is divided in to Five modules i.e. Registration Module, Login Module, Meter Reading And Photo Upload Module , Acceptance Module ,Bill Generation and Consumption Module. Now a day's world is moving towards automatic wireless technologies, which prefer degrading Human efforts. But the current procedure to the billing of Electricity is not a fully automated system. A meter reader visited a house, does the meter reading and then manually calculates the volume and note down the reading. The reading of the meter is increment which is used to generate the Electricity Bill. Smart Electricity meter and Billing system does the same task without Human Efforts.

II. MODULE IDENTIFICATION

After careful analysis the system has been identified to have the following modules:

A. Registration Module
B. Login Module.
C. Meter Reading And Photo upload Module.
D. Acceptance Module.
E. Bill generation and Consumption Module

III. MODULE DESCRIPTION

A. Registration Page

In this module a new user can register his / her details . New Users details are stored in the database and the existing details are obtained from the same for checking at the time of login. The user details are automatically Added to the admin's address book during the registration itself. While Registration user has to add all details like meter number ,contact number ,division ,board ,etc.

B. Login Page

Once the user has registered or if they already have an Id and Password, they can enter through the login portal and can access the application. This module welcomes the user and provides the options for accessing other modules.

C. Meter Reading And Photo upload

This is the most primary module of the application. In this we are going to add meter reading number manually an even by using photo upload through mobile gallery. This both options are set for getting meter reading because to get approval from the admin and check whether the meter readings are correct or not.

D. Acceptance From Admin

Admin compares the manually entered readings and the photo uploaded of meter are accurate or not. If the comparison is true then it generates the bill and send to user.

E. Bill Generation and Consumption

After the acceptance, the bill is generated and displayed to user. The comparison of consumption of meter readings between last reading and current reading.

IV. LITERATURE SURVEY

T El-Djazairy, B J Beggs and I F Stewart (June 1997). This paper represent the out of output an examine which show that the development of the GSM (Global System for Mobile Communication) network as a low cost, global carrier of digital telecommunications signals provides exciting opportunities for novel applications such as the handling of power system metering and load management telemetry. As the use of GSM(Global System for Mobile Communication) for telephony becomes more extended, it is inevitable that costs will be driven lower, and it is also inevitable that this medium for the transfer of telemetry data P.K. Lee and L.L. Lai, Fieee (June 2007) In this paper, the authors discuss the way to adopt the cost effective GPRS applications. Although there have been lots of theories and concepts on the GPRS applications but the real applications applying to a huge network, distributed power generation or building energy/power distribution monitoring are limited. The authors concentrate the application of the GPRS to this on-line system application and the techniques. A practical scheme is proposed and its use to real-life system will be introduced. A practical implementation for an wireless GPRS on-line Power Quality Monitoring System will be demonstrate. Results and advantage to the end users in some practical applications will be discussed.

V. CONCLUSION

Electricity is the one of the important necessary of human being. Which is mostly used in different industries , domestics as well as agricultural purpose.

The Smart Electricity Billing System, which can control the electricity billing on consumer side to avoid delay of bill. Smart electricity billing system is a concept to display the consumer electricity in units and in your daily currency .If bill is lost,The users are not bound to pay excesses amount of money . It can reduce problems associated with billing consumers living in remote areas. this Smart electricity billing system will be more reliable and user friendly.

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