

Southeast University (SEU)
Department of Computer Science & Engineering (CSE)



Database Design Lab (CSE3012)

Electricity Bill Management

Date : 08/30/2022

Submitted To: Mr. Nahin Kumar Dey

Submitted By: Kamrul Hasan
ID: 2017000000250

Project Overview

The aim of my project is Electricity Bill management System is to develop a system that is meant to partially computerize the work performed the electricity board like generating monthly bill , record of consuming unit of energy , store record of the customer and previous unpaid record. There are two type of users available in the project. First one is the customer and the second one is the Admin. Customer users have limited Access rights to access the system while admin users have full control over the system.

There are mainly four entities for the project. Each of them is described below:

Database Tables	Description
Admin	This is the head entity, every other entity regulation and data are managed by this entity this is very proactive
Consumer	The consumer is the entity who uses the electricity whether for domestic daily purpose and for commercial purpose in the industries and factories to run the machines.
Employees	The employee entity contributes in proper calculation and coordinating the work along with establishing proper connection with the consumers
Electricity Bill	The electricity bill entity holds the database of all the generated bills of consumers every month, it even associates the amount which the consumer is requested to pay.

Functionality

The database allow the technicians to do the following functions:

Consumer : This actor is responsible for the payment of the bill on time and gives feedback as required about the service, he can also connect with the admin directly if he faces any system issue. This feature is provided on the home screen of the consumer dashboard.

Employees : The employee manages the data of the consumers and also the bill management along with the queries of the consumer, the user interface allows the employee to access the data of the employees which is required also he can connect with the admin as per requirement.

The administrator handles all the operations and monitors them.

Customer/ Audience

The main customers for the database are the Consumers who are Using the electricity. But we don't have an audience. The administration tracks the activity of the whole system.

Current System:

In the current scenario the electricity personnel goes to each premises to note down the readings of the meters and then after receiving the data the board employees than calculate the used units amount and then send a printed electricity bill to be distributed by the electricity board personnel at every doorstep. After that, the consumer as per the last date of the bill goes to the electricity board office and pays the amount at the counter.

This system is hectic as the whole work is to be done manually and every month, sometimes due to any error the readings to be noted down are mendaciously calculated which requires a staunch process of investigation and it will be concluded in many days. Also there are chances of corruption in the process because all the work is delegated to different people and there's no coordination among the people.

The process is also very lousy for the consumer also he needs to visit the office every

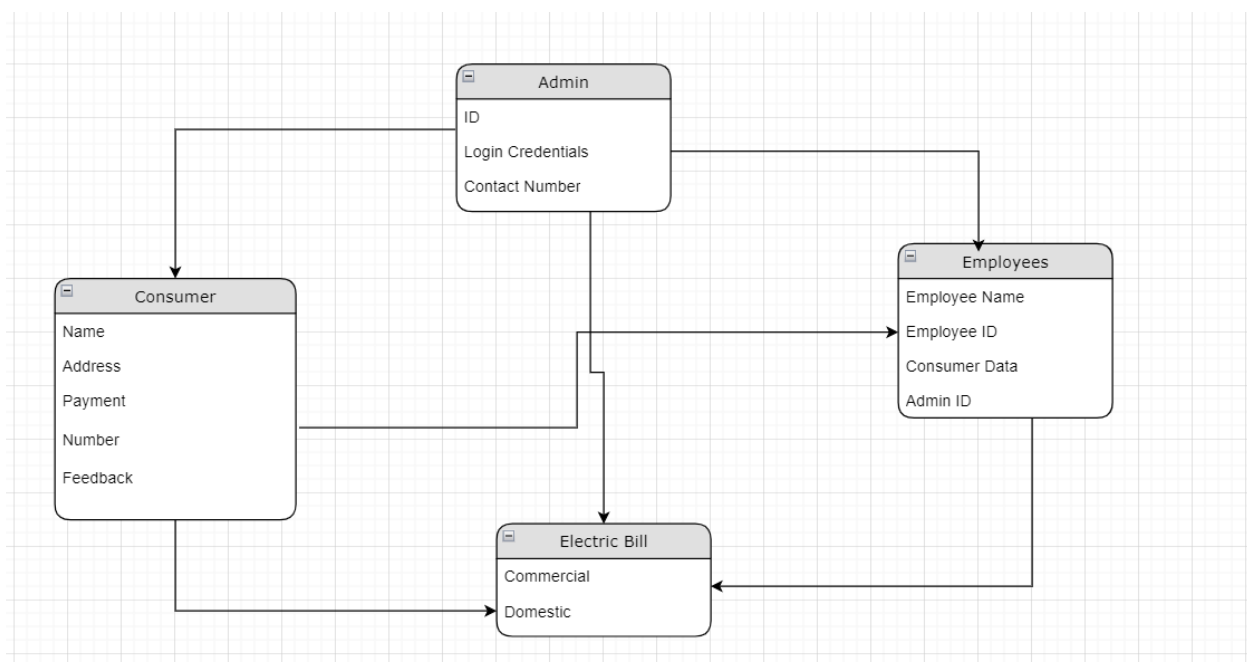
month before due date and many times he forgets the due date and pays the extra amount as penalty and if a consumer wants to repine for mishap then it will be addressed by delaying the process which will goes on without any result or conclusion till then the consumer suffers. The process has become obsolete and needs to be automated.

Proposed System:

The whole world is shifting from manual to automated, in every sector the technology is gaining the access and automating all the functions of every industry and companies. This system is designed keeping in consideration the desideratum of employees, consumers and the admin with. In this system the admin is the head ascendancy who regulates and manages the whole system, it has access to control the accounts of every consumer and employees as well. Now the system also contains a database of the employees and their circadian work. The admin keeps an ocular perceiver on every detail and modifies wherever required. Now the employees can access the account of consumers to calculate the readings and other work, but they don't have access to open the account of any other employees.

Similarly, the consumer has access to open and manage his account but he cannot open the account of any other consumer, but the admin is the head entity, he can access anyone's account. The system provides felicitous reading of the consumer and gives him the option to pay the bill online. The system also sends a vigilant before due date to the consumer to remind him.

Schema Diagram



**Figure: Schema Diagram of Electricity Bill
Management System**