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**TOPIC : SEM V PROJECT SYNOPSIS**

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**ELECTRICA**

**ELECTRICITY BILL MANAGEMENT SYSTEM**

**PROJECT GUIDE: Ms DRISHTI SHRIMAL**

**PROJECT DEADLINE: 30/9/2021**

**PROJECT SYNOPSIS**

* **Title :**  **Electricity Bill Management System (Electrica)**
* **Statement about the Problem**

## [Digital transformation](https://perfectial.com/services/digital-transformation/) is often viewed as an implementation of digital technologies into all areas of business in order to build more sustainable relationships and better understand the needs of customers.

## Electricity consumption is increasing day by day so proper management of the bills and the payment is required.

## If there is any unexpected hike in the electricity consumption the consumer is not notified

## Consumer does not gets a copy of the electricity bill through e-mail.

## Consumer should get Information from the Electricity board about any power outage situation.

## The fraud and the defaulter consumers should be warned.

## Bill payment should be managed properly.

* **Why is the particular topic chosen?**
* India is the world's [third largest producer](https://en.wikipedia.org/wiki/List_of_countries_by_electricity_production) and [third largest consumer](https://en.wikipedia.org/wiki/List_of_countries_by_electricity_consumption) of electricity. During the [fiscal year](https://en.wikipedia.org/wiki/Fiscal_year) (FY) 2019-20, the gross electricity generated by utilities in India was 1,383.5 [TWh](https://en.wikipedia.org/wiki/TWh" \o "TWh) and the total electricity generation (utilities and non utilities) in the country was 1,598 TWh.
* This increasing requirement of the electricity has to be managed which will reduce the workload.
* **Objective and scope of the Project**
  + The main objective of this project is to make the bill generation computerized.
  + Storing data of bill generated in the database and fetching it according to the requirement.
  + Maintaining consumers (Adding, Deleting, Updating).
  + Sending bill to the consumers through e-mail, and also printing at the admins end.
  + Sending WhatsApp alerts if any power outage is detected.
  + High power consumption alerts.
  + Power consumption report generation.
  + Generate defaulters list and send warning through e-mail.
  + Fraud customer report generation.
  + Direct bill payment for consumers.
  + Sending payment acknowledgement through e-mail.
* **Methodology (Including the summery of the project)**
* Project will have a home window where all the operation will be present like adding new consumer, Editing consumer details, Enter reading, Generate bill, Send Bill, Send Alert, Generate defaulter and fraud consumer list, Bill payment
* In add consumer section the admin can add a new user into the system and if any entry was wrong then it can be edited later in the edit consumer section.
* Admin can enter the meter readings is the enter reading section. After entering the meter readings other readings will be generated automatically.
* Generating the bill by entering the consumer id in generate bill section and thereby sending bill to the consumer.
* Admin can see the defaulters and the fraud consumer list in the generate defaulter and fraud consumer list section and send warning to that consumers through e-mail
* Bill payment section and sending receipt to the consumer through e-mail

* **Hardware & Software to be used**

**Software :**

* Python 3.9.6
* Sqlite3
* Pycharm
* Browser for Sqlite3

**Hardware :**

* Any laptop or Desktop computer
* **Testing Technologies used**
* Testing using **Pycharm**
* Software model : **Waterfall mode**l
* **What contribution would the project make?**
* Electricity Billing System will help to manage the details of Electricity, Bill, Connections, Store Record, Consumer.
* It manages all the information about Electricity, Electricity Board, Consumer.
* The project is totally built at administrative end and thus only administrator is guaranteed the access
* The purpose of the project is to build a software to reduce the manual work for managing the Electricity , Bill, Electricity Board, Connections.
* It tracks all the details about the Connections, Store Records, Consumers.
* Provide consumer a hassle free experience while receiving the bills

and during the money payment.

* **References**
* <https://www.python.org/>
* <https://www.youtube.com/>
* <https://stackoverflow.com/>
* <https://www.geeksforgeeks.org/>
* <https://www.w3schools.com/>
* <https://www.tutorialspoint.com/>
* <https://www.learnpython.org/>
* **Conclusion**

Electrica is a software tool which is capable of doing all the functionality for maintaining the Electricity bill using the latest technologies