**CHAPTER 1**

**INTRODUCTION**

This project entitled **“Electricity Bill Management System”** aims to generate electricity bill with all the charges and penalty. Manual system that is employed is extremely laborious and quit inadequate. It only makes the process more difficult and harder. So, we aim to develop a system that is mean to partially computerized the work performed in the Electricity Board like generating monthly electricity bill, record of consuming unit of energy, store record of the customer and previous unpaid record. This has been developed to overwrite the problems prevailing in the practicing manual system. This software is supported to eliminate in some cases reduce the hardship faced by this existing system. Moreover, this system is designed for the particular need of the company to carry out operations in a smooth and effective manner.

**CHAPTER 2**

**LITERATURE REVIEW AND PROPOSED SOLUTION**

| **S. N.** | **Paper title &**  **publication details** | **Name of the authors** | **Technical ideas / algorithms used in the paper & advantages** | **Shortfalls/disadvantages &**  **Solution provided by the proposed system** |
| --- | --- | --- | --- | --- |
| 1 |  |  |  |  |
| 2 |  |  |  |  |

**CHAPTER 3**

**REQUIREMENTS SPECIFICATION**

Requirements specification is a specification of software requirements and hardware requirements required to do the project.

**3.1 Hardware Requirements Specification**

Hardware Requirements are the hardware resources that are need to do the project work. These resources are a computer resource provides functions and services to do the project. Hardware resources required for our project are shown below.

* Processor : Intel Core i5 or above
* RAM : >=8GB
* Hard disk : Minimum 10 GB
* Device: Smartphone with Android version above 7.0

**3.2 Software Requirements Specification**

Software Requirements are the software resources that are need to do the project work. These resources are installed on a computer in order to provide functions, services, hardware accessing capabilities to do the project.

In our project we used the following software resources.

**3.3 Functional Requirements**

Functional requirements specify a function that system or a system component must be able to perform. It can be documented in various ways.

* Sign Up: The user should be able to setup a new account.
* Sign In: All the users and admin should be able to log onto the system by a email and password for each profile.
* Update Profile: Users of the system should be able to update their profile information including changing of password.
* Pay Bill: Users should be able to pay their electricity bills.
* View Bill: Users should be able view their electricity bill at the beginning of the month.
* Logout: Both the users and admin should be able to log out of the system.
* Calculate: The system must be able to calculate the bill of the users.
* Make Complaint: The customers should be able to make and submit complaints.
* Process Complaint: The admin should be able to process the users complaint.

**3.4 Non-Functional Requirements:**

* Realibilty: Database updating should follow transaction processing to avoid data inconsistency.
* Availabilty: The project will be deployed on a public shared server so it will be available all the time and will be accessible anywhere of the world using internet.
* Security: We have implemented a lot of security mechanism to avoid to hack the system by outer world.
* Maintainabilty: It is very easy to maintain the system. The system has been developed on php so anyone who has the knowledge of php, can easily maintain the system.
* Portability: Yes this system is portable and we can switch the servers very easily.
* Browser Compatibilty: The project being web based required compatibility with at least the popular web browsers. Microsft windows XP and above, Linux and Macintosh being the current popular operating system and Microsoft Internet Explorer, Mozilla Firefox, Opera, Safari and Google Chrome being the currently popular web browsers.

**CHAPTER 4**

**SYSTEM DESIGN**

**4.1 Data Flow Diagram**

**4.2 Use case Diagram**

**4.3 Class Diagram**

**4.4 Entity-Relationship Diagram**

The entity-relationship diagram, also known as the E-R Diagram, is a high level database design, which shows the database in a diagrammatic approach. It consists of entities, relationships, attributes and associations. The E-R Diagram for the project is shown in the figure 3.1 below:

**4.5 Module Description**

**CHAPTER 5**

**IMPLEMENTATION**

**5.1 Tools and Technologies Used**

**PYTHON:**

**PyQt:**

**VISUAL STUDIO:**

**CHAPTER 6**

**SYSTEM TESTING**

**CHAPTER 7**

**RESULTS AND DISCUSSIONS**

**CHAPTER 7**

**CONCLUSION AND FUTURE SCOPE**

**REFERENCES**

1. Steven Holzner, PHP: the Complete Reference, Prentice Hall, 3 Edition, 1998
2. Luke Welling & Laura Thompson ,PHP & MySQL Web development
3. Ramakrishnan, Database Management Systems 3rd Edition

**APPENDICES**

1. **SAMPLE CODE**
2. **SNAPSHOTS**