Computer Project Report

***PROJECT REPORT ON***

***ELECTRICITY BILLING SYSTEM***

**By:**

**Priya Ghosh**

**(CLASS: 12D**

**Roll No. 30)**

**Adviser:**

**Mr. Aminder Kaur Saluja**

**(Department of Computer Science)**



Jawahar Vidya Mandir, Shyamali

Doranda, Ranchi, Jharkhand 834002

**Certificate**

This is to certify that Ms. Priya Ghosh, CBSE Roll No:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ has successfully completed the project Work entitled **ELECTRICITY BILLING SYSTEM** in the subject Computer Science (083) laid down in the regulations of CBSE for the purpose of Practical Examination in Class XII to be held in Jawahar Vidya Mandir, Shmayali on\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**(Mr. Aminder Kaur Saluja)**

***(Department Of Computer Science)***

**Signature of External Examiner**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Examiner Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Acknowledgment**

I would like to express my profound gratitude to my project guide, **Mr. Aminder Kaur Saluja** for his guidance and support during my thesis work. I benefited greatly by working under his guidance. It was his effort for which I am able to develop a detailed insight on this subject and special interest to study further. His encouragement motivation and support has been invaluable throughout my studies at JVM, Shmayali, Ranchi.

Finally, I must express my very profound gratitude to my parents for providing me with unfailing support and continuous encouragement throughout the years of my study. This accomplishment would not have been possible without them.

My apologies and heartfelt gratitude to all who have assisted me yet have not been acknowledged by name.

Thank you.

**CONTENT**

1. **INTRODUCTION……………………………………………………………5**
2. **EXISTING SYSTEM………………………………………………………….6**
3. **PROPOSED SYSTEM………………………………………………………..6**
4. **PROJECT DETAILED DESCRIPTION……………………………………..9**
5. **DESCRIPTION AND MODULE OF EMS…………………………………..10**
6. **HARDWARE & SOFTWARE REQUIREMENT……………………………13**
7. **SOURCE CODE………………………………………………………………14**
8. **OUTPUT……………………………………………………………………...23**
9. **CONCLUSION……………………………………………………………….28**
10. **BIBLIOGRAPHY……………………………………………………………..29**

**Introduction**

The primary concern of this Electricity billing System project is to make a system which will help any organization to maintain the Electricity bill information. The user can easily operate this system as it will provide the user-friendly interface. This project will make the entire management system automate to increase the speed of the management system, further it will reduce the cost of management by reducing the number of persons required to maintain any information. While the development of the system will be simple and allow for the expansion of the project in the future as per the requirement.

An Electricity bill is a very important data of any Electricity Disbtrubuter organization. Without the Any previous electricity bill data, there would not be any proper functioning of organization. Data are the backbone of any company. The Electricity billing system is an application that will track the records all the Electricity bill data of the organization. This will be one of the interesting projects that one can work on and implement in real time world.

This software will manage the whole company Employee with Bill payed data details like their which employ take how many amount of bill & details of customer . When the employee opens his PC, the details will be marked automatically registered using this software.. Even the admin has the right to view everyone’s information.

**Existing system**

In the present Electricity bill System of data management, some person maintains the data manually, which required a high amount of time as there are so many people work in the organization. The organization keeps the record of all the employes and Bill with customer details in the paper which is not a secure way of maintaining the data. As there is a high amount of register in which information is stored consume a lot of space in the organization while retrieving any information from that many files consume huge time and it is not an easy process.

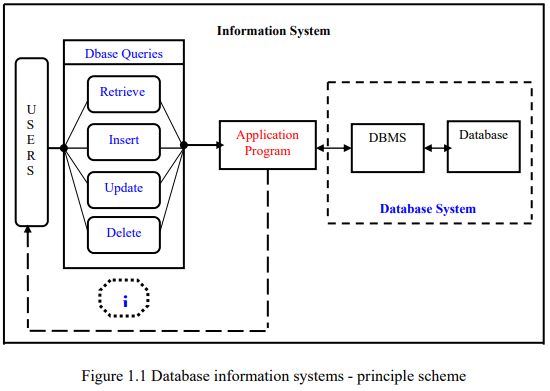
**Proposed system**

This Electricity Billing System project will help the organization with the management of the information of the employes and Bill payment along with Customer Details. The system will centralize the management system and will provide different options through access to data will become accessible. The system will be based on the internet so that any user can use it from any place with ease. The Electricity Billing System software will make a report of each employee of the organization at the end of the month so that the organization will have information about the work of each employee. This Electricity Billing System will not only reduce the time but as well it will make the system efficient.

Data storing is easier. Paper work will be reduced and the company staffs spend more time on monitoring the progress. The system is user friendly and easy to use. All the important data’s will be stored in the database and it avoids any miscalculation.  
  
•    This system will reduce the complexity of Electricity billing   
 System.  
  
•    By using this system we can easily maintain all the records about

“ON EMPLOYEES” or “OFF EMPLOYEES”.  
  
•    It will reduce searching time.  
  
•    It can be easily handled by the person who have elementary know  
  
•    ledge of computer because it provides a user friendly environment.  
  
•    It’s hardware and software configuration is not very costly that means

**FEASIBILITY STUDY:-**  
The feasibility study of this project has revealed the project as follows: -  
  
**ECONOMIC FEASIBILITY**  
 The project has shown the economic feasibility by the study of the fact that by using this software the increased number of the consumers can be given service effectively and efficiently and can save a lot time and saving time means saving money. The cost  and benefit analysis has shown that cost  that  have incurred  in developing the project is less than the benefits that the project is going to provide once it is developed, so this project has passed  the feasibility test.  
 **BEHAVIORAL FEASIBILITY**  
The working staff members are also interested in this project, as it will help them to do work with ease and efficiently without complexity, so they supported the development of this project with full enthusiasm. This shows the behavioral feasibility of the project.  
  
**TECHNICAL FEASIBILITY**  
Technical feasibility centers on the existing computer system (Hardware, Software etc.) and to what extent it supports the existing system. As the existing system computer system is viable so there is no matter of technical feasibility that is   the system is technically feasible.  
  
**TIME FEASIBILITY**  
It is the determination of whether a proposed project can be implemented fully within stipulated time frame. The project was decided to be done in three months and was thought to be feasible enough.

****

**Project’s Detailed Description:**

***1) Objective/ Vision:***

This project is aimed at developing Elecgtricty Biling System that allows to automate or computerize all Accepting payment with data operations

***2) Users of the System:***

* Admins
* Regular Employees
* Accountants
* Managers

***3) Functional requirements***

* Create initial setup which includes: Generating company information (includes creating departments, company history, etc.) Generating employee information (adding/deleting/updating employee with payment done information,) Generating unique employee ID for each employee
* User management
* Role-based user menus
* Generating Reports

***4) Non-functional requirements***

* Simple UI
* Generic Coding

***5) User interface priorities: console***

***6) Technologies to be used:***

Python, and SQLite for database generation

**Description and Modules of Electricty billing System**

**Employee Module**

The main purpose of this module is provide all the functionality related to employee and Payment with all customer details. It tracks all the information of the employee and customer. We have developed all types of CRUD (Create, Read, Update and Delete) operations of the employee.

**Features of Employee Module:**

* **Admin can add new employee records**
* **Admin can see the list of employee details**
* **Admin can edit and update the record of the employee and accepted payment.**
* **Admin can delete the records of the employee**

**Functionality performed by admin user**

Some of the functionality performed by the admin are as follows:

**Manage Employee**

* **Adding new employee**
* **Edit the exiting employee**
* **View profile of the employee**
* **Listing of all employee**

**Reports of the project**

* **Report of all Employee**
* **Report of all Customer and their Electriciry bill.**
* **Report of all Project**

**Technology used in the project Electricity Billing System.**

* **Python (frontend) : All the business logic has been implemented in Python**
* **MySQL : SQLite database has been used as database for the project**

**HARDWARE AND SOFTWARE REQUIREMENTS**

* PROCESSOR : PENTIUM(ANY) OR AMD

ATHALON (3800+- 4200+ DUAL CORE)

* MOTHERBOARD : 1.845 OR 915,995 FOR PENTIUM

K9MM-V VIA K8M800+8237R PLUS CHIPSET FOR AMD ATHALON

* RAM : 512 MB+
* Hard disk : SATA 40 GB OR ABOVE
* VI. CD/DVD r/w multi drive combo: (If back up required)
* VIII. MONITOR 14.1 or 15 -17 inch
* IX. Key board and mouse

**Supported Operating System**

We can configure this projecton following operating system

* **Windows: This project can easily be configured on windows operating system. For running this project on windows system, you will have to install Python 3.0+**
* **Linux : We can run this project on all version of Linux operating system**
* **Mac : We can also easily configured this project on Mac Operating system**

**Source Code**

**import mysql.connector as sql**

**conn=sql.connect(host="localhost", user="root", passwd="2099", database="electricity\_data1")**

**mycursor=conn.cursor()**

**if conn.is\_connected():**

**print("Conection With Database Establised Successfully")**

**else:**

**print("Conection With Database Failed XXX")**

**print("Welcome to Ranchi electricity board")**

**c1=conn.cursor()**

**choice = 0**

**while choice != 3:**

**print("1.CREATE YOUR ACCOUNT")**

**print("2.LOG IN")**

**print("3.EXIT")**

**choice=int(input("ENTER YOUR CHOICE:"))**

**if choice ==1:**

**cust\_name=input("Enter the consumer name :")**

**account\_no=int(input("enter your User ID given by electricity board:"))**

**password=int(input("Enter your Passkey :"))**

**SQL\_insert="insert into Log\_in values('"+cust\_name+"',"+str(account\_no)+","+str (password)+")"**

**c1.execute(SQL\_insert)**

**conn.commit()**

**print("ACCOUNT CREATED")**

**if choice==2:**

**print('')**

**print('Enter your Credentials')**

**cust\_name=input('Enter your name : ')**

**print('')**

**account\_no=int(input('Enter your User ID given by electricity board: '))**

**print(' ')**

**password=int(input('Enter your Passkey : '))**

**print(' ')**

**c1=conn.cursor()**

**c1.execute('select \* from Log\_in')**

**data=c1.fetchall()**

**count=c1.rowcount**

**for row in data:**

**if (cust\_name in row) and (account\_no in row):**

**print(' ')**

**print(' ')**

**print("WELCOME TO Ranchi electricity board")**

**print(' ')**

**print(' ')**

**print('TO SEE DETAILS of cunsumer PRESS :1')**

**print(' ')**

**print('TO UPDATE DETAILS PRESS :2')**

**print(' ')**

**print('TO EXIT PRESS :3')**

**print(' ')**

**print('TO pay the bill :4')**

**print(' ')**

**print('TO SEE your Details :5')**

**print(' ')**

**print('WANT TO RATE US ? :6')**

**print(' ')**

**c2=int(input('enter your choice : '))**

**if (c2==1):**

**c1=conn.cursor()**

**c1.execute('select \* from Log\_in')**

**data=c1.fetchall()**

**count=c1.rowcount**

**print('Details of all employees is',count)**

**print("Details of all employees are arranged as User Name/ID/Passkey")**

**for row in data:**

**print(row)**

**print("VISIT AGAIN")**

**elif (c2==2):**

**print('')**

**print('TO UPDATE FILL THIS')**

**print('')**

**empName = input("Enter name")**

**update = input("Enter new name")**

**sqlFormula = "UPDATE Log\_in SET cust\_name=%s WHERE cust\_name = %s"**

**c1.execute(sqlFormula,(update,empName))**

**conn.commit()**

**print('YOUR DETAILS ARE SUCESSFULLY UPDATED')**

**elif (c2==3):**

**print('THANK YOU FOR VISITING')**

**elif(c2==4):**

**f\_name=input("enter the your name")**

**units=int(input("enter the units consumed in a month"))**

**bill=int(input("enter the bill cost:"))**

**cust\_name=input("enter Consumer Name:")**

**phone\_no=int(input("Enter Consumer phone no:"))**

**SQL\_insert="insert into consumer\_details values("+"'"+f\_name+"'"+","+"'"+str(units)+"'"+","+"'"+str(bill)+"'"+","+"'"+cust\_name+"'"+","+str(phone\_no)+")"**

**c1.execute(SQL\_insert)**

**conn.commit()**

**print("payment Successfull")**

**elif(c2==5):**

**c1=conn.cursor()**

**c1.execute('select \* from consumer\_details ')**

**data=c1.fetchall()**

**count=c1.rowcount**

**print('total bill of this month is',count)**

**for row in data:**

**print(row)**

**print("VISIT AGAIN")**

**elif (c2==6):**

**print('RATE US FOR SERVICE')**

**rating=int(input("On the Scale of 10 how would you like to rate us:"))**

**print('THANK FOR RATING')**

**else:**

**print("ERROR,ERROR...........")**

**if choice==3:**

**print("THANK YOU FOR VISITING")**

**cl.close**

**DATA BASE CREATION:**

import mysql.connector as sql

conn = sql.connect(

host="localhost",

user="root",

password="2099"

)

if conn.is\_connected():

print("sucessfully connected")

conn.cursor().execute("CREATE DATABASE electricity\_data1")

print("Database Successfully Created")

conn.cursor().execute("USE electricity\_data1")

conn.cursor().execute('create table log\_in(cust\_name varchar(65), account\_no int, password int)')

print("Log\_in\_table created")

conn.cursor().execute('create table consumer\_details(f\_name varchar(65),units int,bill int,cust\_name varchar(65), phone\_no bigint)')

print("Consumer\_details created")

conn.commit()

print("DONE")

**OUTPUT**

**ADD YOUR SCREEN SHOTS HERE**

Conclusion

In this report, an information system’s development has been presented. It was emphasized on the basic steps, consequently taken during the project’s development course as a particular attention was turned to the basic operative functions performed upon the data into the database. The report’s content comprises the whole task solution, starting from the programming environments have been selected, going through the database, the application’s analyze and construction, and finishing with the code-implementation and test-samples, shown separately in Appendix chapters.

As a future work, some additional stuff could be implemented and integrated into the application code making it much more reliable and flexible; especially what concerns a Order for instance.

Apparently, the role of such systems is basic and essential within each company that wants to keep a really good control and record concerning its personnel data, functionality and performance on all levels in its structure. Every organization, in nowadays, has the necessity of managing its staff on a really good level as the staff has definitely the greatest merit of building up a company as such as it is. The well managed staff means giving the appropriate financial award-ness and all kind of benefits as such as they have been deserved. That’s why the development of such systems is not just a programming business – a lot of people are ordinarily involved in such projects and one of the basic requirements is the reliability of the system, especially what concerns the storage of data and all of the operations that will be performed upon it.

**Bibliography**

1. *Computer science With Python - Class XI By : Sumita Arora*
2. Employee Management System by Kancho Dimitrov Kanchev
3. International Journal of Scientific & Engineering Research Volume 9, Issue 2, February-2018 ISSN 2229-5518 on “Electricity billing System” by Madya Ansari, Maviya Shaikh, Ansari Abdul Basit, Jigna Waghela
4. A RESEARCH PAPER ON “STUDY OF ELECTRICITY BILLING SYSTEM” D. B. Bagul, Ph. D “Director”‚ RJSPM, Institute of Computer and Management Research,Alandi‚ Pune
5. A Research Study on Employee Appraisal System Case of Hong Kong and Shanghai Banking Corporation (Hsbc Bank) Dr.Lalita Mishra [PH.D, UGC NET QUALIFIED] Guest Lecturer K.R.G. Govt. Pg College

*Websites*

1. [*www.studentproject.com*](http://www.studentproject.com)