**ELECTRICITY BILL MANAGEMENT**

 **SYSTEM**

 **Team strength:-4**

 **Team members:-Manish Kumar 1133(GL)**

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 **Project guide:- Mrs. Ashwini joshi.**

***System Requirements:***

***Hardware requirements: 1.i3 processor and above.***

 ***2.2 GB DDR3 RAM***

***Software requirements: 1.Windows Xp O.S. and above.***

 ***2.Notepad Editor***

 ***3.Oracle 9i(SQL Plus)***

**SCOPE**

Aim: project store, information of the electricity consumer of a particular area in the database.

SCOPE:

 Electricity the most important, project (electricity bill management system) is totally based on the management

For electricity bill. An electricity bill is a bill for consumption of electric energy by any consumer. This project will give the information about the consumer from a database table; will store the required information of the consumer.

 Project keeps the information of the employees who work for the electricity department to run department efficiently. Relation called employee which give the information about the employee.

 Project is totally based on electricity bill, bill can calculate only when the consumption of electricity is known. Relation electricity consumption give the information about the electricity consume in particular area by the consumer.

Project will gives the information about the equipment used by electricity department in the area.

Electricity department uses different types of equipment to setup the electricity supply in particular area, relation called equipments will give the information about the equipment that has used in the area, the total investment done by the department in setup the electricity devices can be known.

Project will give the information about the consumer amount that was paid in previous month and is to be paid in the current month. Relation called unit, store the information about the consumer that how many unit are used by the current month and also will keep the information about the previous month with the required information.

 If electricity department want to keep information about the defaulter i.e. consumer who have used the electricity without paying charge. Table defaulter, stored the information about the defaulter consumer .so that electricity department can take the charge of the unit consumption by the defaulter.

The cost of electricity consumption is varied according to

Areawise, the cost paid by the urban area will be varied as we go to the rural area. Table cost estimate will give the information of the area and also the per unit charge to be paid by the consumer.

 Finally project (electricity bill management system)will give the information about the consumer’s bill with name ,address ,cost per unit chagre,current bill, previous bill, unit consume by the consumer.

 ERD (ENTITY RELATIONSHIP DIAGRAM)

EQUIPMENT

MAINTAIN

COMPLAIN

MANAGE

GIVE

 M 1

 1 1 1

KEEPS

 PAY

GENRATES

BILL

EMPLOYEE

DEFAULTER

ARE

CUSTOMER

 DEPARTMENT

KEEPS

 1 M

SUPPLY

 1 M

 1 1

 ISA

ELECTRICITY

1 1

CONSUME

m M

DOMESTIC

COMMERCIAL

 1 1

FIG:ERD of electricity bill management system.

 **NORMALISATION**

**UNNORMALISED DATA ARE:**

**Cust\_name**

 **Cust\_type**

**Unit\_consume**

**Bill**

**Prev-mon-unit**

**Cur\_mon\_ unit**

**Equip-name**

**No.equip**

**Equip price**

**Allotted equip**

**Emp\_name**

**Emp\_salary**

**Emp\_type**

**Cust\_id (p k)**

**Bill­\_id(p k)**

**Cust\_address**

**Emp\_address**

 **Emp\_id (p k)**

***NORMALISTION OF TABLE THROUGH 1NF***

The definition of 1NF says that all the attribute in a relation have atomic i.e

Simple and indivisible values from their respective domains.

|  |  |
| --- | --- |
| **REPEATING FIELD** | **NON-REPEATING FIELD** |
| **Cust\_name** **Cust\_type****Unit\_consume** **Bill****Prev-mon-unit** **Cur\_mon\_ unit****Equip-name****No.equip****Equip price****Allotted equip****Emp\_name****Emp\_salary****Emp\_type** | **Cust\_id (p k)****Bill­\_id(p k)****Cust\_address** **Emp\_address**  **Emp\_id (p k)**  |

 **Normalisation of relation through 2NF**

***A relation is said to be in 2NF if it is in 1NF and every non key attribute of the relation is fully dependent on the key attribute .***

|  |  |  |
| --- | --- | --- |
| **CUSTOMER** | **EQUIPMENT DETAILS** | **EMPLOYEE** |
| **Cust\_Id (p.k)****Cust\_name****Cust\_address****Cust\_type****Bill\_id (p.K)****Unit\_consume****Bill****Prev\_mon\_unit****Curr\_mon\_unit****Prev\_mon\_bill****Curr\_mon\_bill** | **Equipment\_name (p.k)****Equipment\_price****No\_ equipment****Allotted Equip****Total\_price** | **Emp\_id (p.k)****Emp\_name****Emp\_address****Emp\_sal****Emp\_type** |

 ***NORMALISATION THROUGH 3rd NF***

***Third normal form is applied when the relation are in 2Nf and there is a non key***

***Attribute that depends on the primary key .***

**Customer**

|  |  |
| --- | --- |
| **Cust\_id** | **Varchar(5) PRIMARY KEY** |
| **Cust\_name** | **Varchar(20)** |
| **Cust\_add** | **Varchar(30)** |
| **Cust\_type** | **Varchar(10)** |

**Bill**

|  |  |
| --- | --- |
| **Cust\_id**  | **Varchar(5) PRIMARY KEY** |
| **Bill\_id** | **Varchar(5) PRIMARY KEY** |
| **Unit\_consume** | **Number** |
| **Bill** | **Number** |
| **Prev\_mon\_unit** | **Number** |
| **Curr\_mon\_unit** | **Number** |
| **Prev\_mon\_bill** | **Number** |

**Order\_details**

|  |  |
| --- | --- |
| **Order\_id** | **Varchar(5) PRIMARY KEY** |
| **Cust\_id** | **Varchar(5) PRIMARY KEY** |
| **Equipment\_name** | **Varchar(10) FOREIGN KEY** |
| **No\_equip** | **Number** |
| **Alloted\_equip** | **Number** |
| **Total\_equip** | **Number** |

**EQUIP\_DETAILS**

|  |  |
| --- | --- |
| **Equip\_name** | **Varchar(5) PRIMARY KEY** |
| **Equip\_price** | **Number** |

**QUERY IN SQL PLUS**

1): display the whole records of the customer

 SQL> select \* from e\_cust;

2): display the total no of consumer for department.

 SQL> select count(\*) "total consumer" from e\_cust

3: select the total no of default customer

 SQL> select count(defaulter) from e\_cust where defaulter='y’;

4: select the different city in which dept supply electricity;

 SQL> select distinct(cust\_add) from e\_cust;

5:display the maximum previous month unit of the customer

 SQL> select max(prev\_mon\_unit) from e\_bill;

6: display the name of customer whose records is present in the electricty

 bill department

SQL> select \* from e\_cust,e\_bill where e\_cust.cust\_id=e\_bill.cust\_id;

7: display the name of customer prev\_mon\_bill with their id;

 sQL> select prev\_mon\_bill,cust\_id from e\_bill,e\_cust where e\_cust.cust\_id=e\_bill.cust\_id;

9:ques: display the name of customer with their respective current month bill and

 previous month unit

 SQL> select cust\_name "name",curr\_mon\_bill "current mont bill",prev\_mon\_unit

 "previous unit"from e\_cust,e\_bill where e\_cust.cust\_id=e\_bill.cust\_id

 /

10:ques: disply the total bill of all the customer

 SQL> select cust\_name"name",prev\_mon\_bill "previous bill",

 curr\_mon\_bill "current month bill" ,curr\_mon\_bill+prev\_mon\_bill "total" from e\_cust,e\_bill wher

 e e\_cust.cust\_id=e\_bill.cust\_id

 /

11:ques: display the total income of the department in the current month

SQL> select sum(curr\_mon\_bill+prev\_mon\_bill) from e\_cust,e\_bill where e\_cust.cust\_id=e\_bill.cust\_id;

12: display the toal expenditure done by the department in employ salary;

 SQL> select sum(e\_sal)"expenditure" from e\_emp;

11: dislay the employee with maximum salary and also the employee with minimum salary

 SQL> select max(e\_sal) "maximum",min(e\_sal)"minimum salary" from e\_emp

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13: display the total income done by the by setting the equipment

 SQL> select sum(equip\_price) from e\_equip;

14 ques: change the record of the employee whose id is 001

SQL> update e\_emp set e\_name='parveen' where e\_id='001'

 2 /

15: display the name of the customer whose name starts with b;

 SQL> select cust\_name from e\_cust where cust\_name like 'b%';

16 display the employee name with their salar according to group by

 SQL> select e\_name,sum(e\_sal) from e\_emp group by e\_name

 2 /

17:quest: display the defaulter name with caught date and current month bill

 SQL> select cust\_name,caught\_date,curr\_mon\_bill from e\_cust,e\_bill,e\_defaulter where e\_cust.cust\_id=

e\_bill.cust\_id and e\_cust.cust\_id=e\_defaulter.cust\_id;

18:display the total records used in the table

SQL> select \* from tab;

19:display the name of all domestic customer

 SQL> select cust\_id,bill\_id,cust\_type from e\_bill where cust\_type='domestic';

20:DISPLAY THE NAME OF ALL THE COMMERCIAL CUSTOMER

 SQL> select cust\_id,bill\_id,cust\_type from e\_bill where cust\_type='commercial';

21:display the records of a paritculer bill id

QL> select \* from e\_bill where bill\_id='001s';

22:display the total nuumber of paricular area in the records;

SQL> select count(cust\_add) from e\_cust where cust\_add='mumbai';

23:display the total no ofwho caught as defaulter at particular date;

SQL> select count(cust\_name) from e\_cust,e\_defaulter where caught\_date='12-may-2012'

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24: display cust\_name,cust\_type,bill\_rate for a particular type;

SQL> select cust\_id,cust\_name,cust\_type,bill\_rate from e\_cust,domm\_cust where e\_cust.cust\_id=domm\_c

ust.dom\_cust\_id and e\_cust.cust\_type='domestic';

25:disply the total equipment cost

SQL> select sum(no\_equip\*equip\_price) from e\_equip;

26:display equipment name whose quantity is greater than 5

SQL> select equip\_name from e\_equip where no\_equip>5;