**TITLE**

***ELECTRICITY BILL GENERATION SYSTEM***

**GOALS & OBJECTIVES**

**The main goal of this project is to develop a computerized billing management for ELECTRICITY.**

**HARDWARE & SOFTWARE SPECIFICATIONS**

1. **Minimum Hardware Specifications: -**

* **Processor: Pentium Dual Core.**
* **RAM : 1GB.**
* **Hard Disk: 160GB.**

1. **Minimum Software Specifications: -**

* **Operating System: WINDOWS XP.**
* **Front End : JDK 1.6.**
* **Back End : Oracle 10g.**

**E-R MODEL**

**Introduction To E-R model: -**

1. **Entity/Relationship approach is one of the most well-known modeling methods developed by P.Chen in 1976 - many variations since then..**
2. **ENTITY: An Entity is the real-world object that can be distinctly identified (or) It is an object which is meaningful to the organization about which there is a need to record data.**
3. **ATTRIBUTE: An attribute defines the property of the ‘Entity’.**

**Example: - In STUDENT entity, Student\_Id is the attribute which defines the property of the STUDENT entity.**

**Attribute Types—**

* ***Simple*: Simple attributes are of atomic type.**

**Example:- tel#; part-color; basic-salary;**

* ***Composite:* Composite attributes are the child attributes of Simple attributes.**

**Example:- address = (apt#, block#, road name, postal code)**

* ***Single Valued:* Single Value associated with an attribute.**

**Example:- In STUDENT entity Student\_Id is a single & unique attribute value.**

* ***Multi Valued*: In Multi Valued attributes, values will be more than one.**

**Example:- University degree attribute may contain B.Eng., M.Eng., or Ph.D.**

* ***Derived:*- These attributes are derivable from parent attributes.**

**Example:- age from birthdate.**

* **Key:- An attribute whose value is unique for each entity.**

**Example: Matric# is key of STUDENT entity type.**

**Key can be composite attribute.**

**Example: CarReg# can be (CarPlate#, State).**

**ENTITIES & THEIR CORRESPONDING ATTRIBUTES IN ELECTRICITY BILL GENERATION SYSTEM:**

* CUSTOMER-

1. Customer\_unc\_no(CUSTOMER\_UNC\_NUMBER(PRIMARY KEY))
2. Customer\_serv\_no(CUSTOMER\_SERVICE\_NUMBER)
3. Customer\_name(CUSTOMER\_NAME)
4. Customer\_address(CUSTOMER\_ADDRESS)
5. Customer\_trs\_code(CUSTOMER TRS CODE)
6. Customer\_phase(CUSTOMER PHASE)
7. Customer\_category(CUSTOMER CATEGORY)

* METER-

1. Meter\_no(METER NUMBER(PRIMARY KEY))
2. Meter\_status(METER STATUS)
3. Meter\_Prev\_Reading(METER PREVIOUS READING)
4. Meter\_Pres\_Reading(METER PRESENT READING)

* PAYS-

1. Customer\_unc\_no(CUSTOMER\_UNC\_NUMBER(FOREIGN KEY))
2. Bill\_No(BILL NUMBER(FOREIGN KEY))
3. Pdate(PAY DATE)
4. Pamnt(PAY AMOUNT)

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| CUSTOMER |  |
| Customer\_unc\_no  Customer\_serv\_no  Customer\_name  Customer\_address  Customer\_trs\_code  Customer\_phase  Customer\_category | PAYS  Pdate, Pamnt |
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| BILL |  |
| Bill\_No  Bill\_Month\_Range  Bill\_Reading\_Date  Bill\_Section  Bill\_Distribution  Bill\_Usage\_Charges  Bill\_Customer\_Charges  Bill\_Due\_Date  Bill\_Date\_Of\_Disconnection |  |
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HAS

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| --- | --- |
| METER |  |
| Meter\_No  Meter\_Status  Meter\_Prev\_Reading  Meter\_Pres\_Reading |  |
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