**Tables creation-**

**ELECTRICITY BOARD**

CREATE TABLE ELECTRICITY\_BOARD

(ELECTRICITYB\_ID VARCHAR2(60) PRIMARY KEY,

EBOARD\_NAME VARCHAR2(60),

STATUS VARCHAR(60)

)

**ADMIN**

CREATE TABLE ADMIN

(ADMIN\_ID VARCHAR2(60) PRIMARY KEY,

ADMIN\_NAME VARCHAR2(60),

TYPE VARCHAR2(30),

LOGIN\_ID VARCHAR2(60),

PASSWORD VARCHAR2(60)

)

**CUSTOMER**

CREATE TABLE CUSTOMER

(CUSTOMER\_ID VARCHAR2(60) PRIMARY KEY,

CUST\_NAME VARCHAR2(60),

TYPE VARCHAR2(60),

STATUS VARCHAR2(60)

)

**ACCOUNT**

CREATE TABLE ACCOUNT

(CUST\_IDF1 VARCHAR2(60),

ACCOUNT\_ID VARCHAR2(60) PRIMARY KEY,

STATUS VARCHAR2(60),

K\_NUMBER NUMBER,

BALANCE\_AMT NUMBER,

FOREIGN KEY(CUST\_IDF1) REFERENCES CUSTOMER(CUSTOMER\_ID)

)

**TARIFF**

CREATE TABLE TARIFF

(TARIFF\_ID VARCHAR2(60) PRIMARY KEY,

TARIFF\_TYPE VARCHAR2(60)

)

**BILLING**

CREATE TABLE BILLING

(BILL\_NO NUMBER PRIMARY KEY,

P\_MODE VARCHAR2(60),

P\_DATE DATE,

BILL\_AMOUNT NUMBER,

PAID\_AMOUNT NUMBER,

CUST\_IDF2 VARCHAR2(60),

ACCOUNT\_IDF1 VARCHAR2(60),

FOREIGN KEY(CUST\_IDF2) REFERENCES CUSTOMER(CUSTOMER\_ID),

FOREIGN KEY(ACCOUNT\_IDF1) REFERENCES ACCOUNT(ACCOUNT\_ID)

)

**INVOICE**

CREATE TABLE INVOICE

(INVOICE\_ID VARCHAR2(60) PRIMARY KEY,

READING\_DATE DATE,

PRESENT\_READING NUMBER,

PREVIOUS\_READING NUMBER,

CONSUMPTION\_UNIT NUMBER,

FIXED\_CHARGE NUMBER,

ENERGY\_CHARGE NUMBER,

NET\_AMT NUMBER DEFAULT 0,

UNITS NUMBER,

ACCOUNT\_IDF2 VARCHAR2(60),

ELECTRICITYB\_IDF2 VARCHAR2(60),

TARIFF\_IDF1 VARCHAR2(60),

FOREIGN KEY(ACCOUNT\_IDF2) REFERENCES ACCOUNT(ACCOUNT\_ID),

FOREIGN KEY(ELECTRICITYB\_IDF2) REFERENCES ELECTRICITY\_BOARD(ELECTRICITYB\_ID),

FOREIGN KEY(TARIFF\_IDF1) REFERENCES TARIFF(TARIFF\_ID)

)

**DDL COMMANDS**

1. ALTER TABLE CUSTOMER ADD(STATE VARCHAR2(60), CITY VARCHAR2(60), PINCODE NUMBER)
2. DESCRIBE ADMIN
3. DESCRIBE ELECTRICITY\_BOARD
4. DESCRIBE ACCOUNT
5. DESCRIBE TARIFF
6. DESCRIBE CUSTOMER
7. DESCRIBE BILLING
8. DESCRIBE INVOICE

/////////////////////////////

ALTER TABLE INVOICE DROP(CONSUMPTION\_UNIT)

///////////////////////////

INSERT INTO I1 VALUES('IC8','22-JAN-22',1000,200,1500,6400,7900,800)

//////////////////////////

DROP PROCEDURE INSERTION3

////////////////////////////

CREATE TABLE ALIAS AS SELECT \* FROM CUSTOMER

/////////////////////////

CREATE VIEW A1 AS SELECT ACCOUNT\_ID NAME FROM ACCOUNT

///////////////////////

INSERT INTO A1 VALUES('AC8')

//////////////////////

CREATE VIEW I1 AS SELECT \* FROM INVOICE

///////////////////////

ALTER TABLE TARIFF ADD(TARIFF\_AMT NUMBER)

////////////////////

ALTER TABLE BILLING RENAME TO BILL

//////////////////

**DML**

SELECT MAX(NET\_AMT) FROM INVOICE

///////////////////////////

CREATE ROLE SUPER\_ADMIN

GRANT ALL ON INVOICE TO SUPER\_ADMIN

GRANT ALL ON BILLING TO SUPER\_ADMIN

///////////////////////////

SELECT \* FROM CUSTOMER WHERE CUST\_NAME LIKE 'S%'

//////////////////////////

SELECT \* FROM CUSTOMER WHERE STATUS='ACTIVE'

//////////////////////////

UPDATE ACCOUNT SET K\_NUMBER=783421 WHERE ACCOUNT\_ID='AC6'

////////////////////////

UPDATE ADMIN SET PASSWORD='USER123' WHERE ADMIN\_ID='AD44'

///////////////////////

DELETE FROM A1 WHERE ACCOUNT\_ID='AC7'

//////////////////////

SELECT \* FROM INVOICE WHERE UNITS=0

/////////////////////

SELECT AVG(NET\_AMT) FROM INVOICE

////////////////////////

SELECT \* FROM CUSTOMER WHERE STATE='UTTAR PRADESH'

////////////////////////

UPDATE INVOICE SET UNITS=900 WHERE INVOICE\_ID='IC66'

///////////////////////

UPDATE ELECTRICITY\_BOARD SET ELECTRICITYB\_ID='CE123' WHERE EBOARD\_NAME='CENTRAL'

///////////////////

INSERT INTO TARIFF VALUES('ABC90','COMMERCIAL')

INSERT INTO TARIFF VALUES('ABC91','DOMESTIC')

INSERT INTO TARIFF VALUES('ABC92','INDUSTRIAL')

///////////

INSERT INTO ELECTRICITY\_BOARD VALUES('ABC90','CENTRAL','ACTIVE')

INSERT INTO ELECTRICITY\_BOARD VALUES('NI456','NORTHENR','ACTIVE')

INSERT INTO ELECTRICITY\_BOARD VALUES('SI789','SOURTHERN','ACTIVE')

//////////

INSERT INTO ADMIN VALUES('AD44','NANDINI','TAX','NAND30','PASSWORD')

INSERT INTO ADMIN VALUES('AD45','NARDEEP','CENTRAL','NARD31','PASSWORD')

INSERT INTO ADMIN VALUES('AD46','SAHLINI','BILING','SHAL32','PASSWORD')

INSERT INTO ADMIN VALUES('AD47','RAHUL','ACCOUNTING','RAHL33','PASSWORD')

/////////////////////

INSERT INTO ACCOUNT VALUES('12ABC','AC1','ACTIVE',123456,1000)

INSERT INTO ACCOUNT VALUES('89FEG','AC2','ACTIVE',654321,0)

INSERT INTO ACCOUNT VALUES('23STU','AC3','ACTIVE',347891,2000)

INSERT INTO ACCOUNT VALUES('78UVW','AC4','ACTIVE',982367,700)

INSERT INTO ACCOUNT VALUES('49IJK','AC5','ACTIVE',120060,3500)

INSERT INTO ACCOUNT VALUES('65XYZ','AC6','PASSIVE',120181,10000)

INSERT INTO ACCOUNT VALUES('31DEF','AC7','PASSIVE',101135,50000)

/////////////////////////////

**PLSQL**

CREATE OR REPLACE TRIGGER TRIG

AFTER INSERT ON CUSTOMER

BEGIN

DBMS\_OUTPUT.PUT\_LINE('CUSTOMER ADDED IN SLECTRICITY SYSTEM');

END;

//////////////////

CREATE OR REPLACE PROCEDURE INSERTION(CUSTOMER\_ID VARCHAR2, CUST\_NAME VARCHAR2, TYPE VARCHAR2, STATUS VARCHAR2, STATE VARCHAR2, CITY VARCHAR2, PINCODE NUMBER) IS

BEGIN

INSERT INTO CUSTOMER VALUES(CUSTOMER\_ID, CUST\_NAME, TYPE, STATUS, STATE, CITY, PINCODE);

END INSERTION;

//////////////

DECLARE

CUSTOMER\_ID VARCHAR2(60):=:ENTER\_CUSTOMER\_ID;

CUST\_NAME VARCHAR2(60):=:ENTER\_CUSTOMER\_NAME;

TYPE VARCHAR2(60):=:ENTER\_CUSTOMER\_TYPE;

STATUS VARCHAR2(60):=:ENTER\_CUSTOMER\_STATUS;

STATE VARCHAR2(60):=:ENTER\_CUSTOMER\_STATE;

CITY VARCHAR2(60):=:ENTER\_CUSTOMER\_CITY;

PINCODE NUMBER:=:ENTER\_CUSTOMER\_PINCODE;

BEGIN

INSERTION(CUSTOMER\_ID,CUST\_NAME,TYPE,STATUS,STATE,CITY,PINCODE);

END;

///////////////////////////////////

CREATE OR REPLACE PROCEDURE INSERTION2(BILL\_NO NUMBER,P\_MODE VARCHAR2,P\_DATE DATE, BILL\_AMOUNT NUMBER, PAID\_AMOUNT NUMBER, CUST\_IDF2 VARCHAR2, ACCOUNT\_IDF1 VARCHAR2) IS

BEGIN

INSERT INTO BILLING VALUES(BILL\_NO,P\_MODE,P\_DATE, BILL\_AMOUNT, PAID\_AMOUNT, CUST\_IDF2, ACCOUNT\_IDF1);

END INSERTION2;

/////////////////////////////////

DECLARE

BILL\_NO NUMBER:=:ENTER\_BILL\_NO;

P\_MODE VARCHAR2(60):=:ENTER\_PAYMENT\_MODE;

P\_DATE DATE:=:ENTER\_PAYMENT\_DATE;

BILL\_AMOUNT NUMBER:=:ENTER\_BILL\_AMOUNT;

PAID\_AMOUNT NUMBER:=:ENTER\_PAID\_AMOUNT;

CUST\_IDF2 VARCHAR2(60):=:ENTER\_CUSTOMER\_ID;

ACCOUNT\_IDF1 VARCHAR2(60):=:ENTER\_ACCOUNT\_ID;

BEGIN

INSERTION2(BILL\_NO,P\_MODE,P\_DATE,BILL\_AMOUNT,PAID\_AMOUNT,CUST\_IDF2,ACCOUNT\_IDF1);

END;

/////////////////////////////////

CREATE OR REPLACE PROCEDURE INSERTION3(INVOICE\_ID VARCHAR2, READING\_DATE DATE, PRESENT\_READING NUMBER, PREVIOUS\_READING NUMBER, FIXED\_CHARGE NUMBER, ENERGY\_CHARGE NUMBER, NET\_AMT NUMBER, UNITS NUMBER, ACCOUNT\_IDF2 VARCHAR2, ELECTRICITYB\_IDF2 VARCHAR2, TARIFF\_IDF1 VARCHAR2) IS

BEGIN

INSERT INTO INVOICE VALUES(INVOICE\_ID,READING\_DATE, PRESENT\_READING, PREVIOUS\_READING, FIXED\_CHARGE, ENERGY\_CHARGE, NET\_AMT, UNITS, ACCOUNT\_IDF2, ELECTRICITYB\_IDF2,TARIFF\_IDF1);

END INSERTION3;

////////////////////////////////

DECLARE

INVOICE\_ID VARCHAR2(60):=:ENTER\_INVOICE\_ID;

READING\_DATE DATE:=:ENTER\_READING\_DATE;

PRESENT\_READING NUMBER:=:ENTER\_PRESENT\_READING;

PREVIOUS\_READING NUMBER:=:ENTER\_PREVIOUS\_READING;

FIXED\_CHARGE NUMBER:=:ENTER\_FIXED\_CHARGE;

ENERGY\_CHARGE NUMBER:=:ENTER\_ENERGY\_CHARGE;

NET\_AMOUNT NUMBER:=:ENTER\_NET\_AMOUNT;

UNITS NUMBER:=:ENTER\_UNITS\_CONSUMED;

ACCOUNT\_IDF2 VARCHAR2(60):=:ENTER\_ACCOUNT\_ID;

ELECTRICITYB\_IDF2 VARCHAR2(60):=:ENTER\_ELECTRICITY\_BOARD\_ID;

TARIFF\_IDF1 VARCHAR2(60):=:ENTER\_TARIFF\_ID;

BEGIN

INSERTION3(INVOICE\_ID, READING\_DATE, PRESENT\_READING, PREVIOUS\_READING, FIXED\_CHARGE, ENERGY\_CHARGE, NET\_AMOUNT, UNITS, ACCOUNT\_IDF2, ELECTRICITYB\_IDF2, TARIFF\_IDF1);

END;

/////////////////////////////

DECLARE

UNITS\_CAL INVOICE.UNITS%TYPE;

PRE\_READING INVOICE.PREVIOUS\_READING%TYPE;

CURRENT\_READING INVOICE.PRESENT\_READING%TYPE;

INVOICE\_NUMBER INVOICE.INVOICE\_ID%TYPE;

BEGIN

INVOICE\_NUMBER:=:ENTER\_INVOICE\_ID;

SELECT PREVIOUS\_READING, PRESENT\_READING INTO PRE\_READING, CURRENT\_READING FROM INVOICE WHERE INVOICE\_ID=INVOICE\_NUMBER;

UNITS\_CAL:=CURRENT\_READING-PRE\_READING;

UPDATE INVOICE SET UNITS=UNITS\_CAL WHERE INVOICE\_ID=INVOICE\_NUMBER;

END;

/////////////////////////////////////////

DECLARE

UNIT INVOICE.UNITS%TYPE;

UNIT\_CHARGE INVOICE.ENERGY\_CHARGE%TYPE;

FIX\_CHARGE INVOICE.FIXED\_CHARGE%TYPE;

NET\_AMOUNT INVOICE.NET\_AMT%TYPE;

INVOICE\_NUM INVOICE.INVOICE\_ID%TYPE;

BEGIN

INVOICE\_NUM:=:ENTER\_INVOICE\_ID;

SELECT UNITS, ENERGY\_CHARGE, FIXED\_CHARGE, NET\_AMT INTO UNIT, UNIT\_CHARGE, FIX\_CHARGE, NET\_AMOUNT FROM INVOICE WHERE INVOICE\_ID=INVOICE\_NUM;

UNIT\_CHARGE:=UNIT\*8;

UPDATE INVOICE SET ENERGY\_CHARGE=UNIT\_CHARGE WHERE INVOICE\_ID=INVOICE\_NUM;

NET\_AMOUNT:=FIX\_CHARGE+UNIT\_CHARGE;

UPDATE INVOICE SET NET\_AMT=NET\_AMOUNT WHERE INVOICE\_ID=INVOICE\_NUM;

END;

**TO GET ENTITY RELATION DIAGRAM USE THE FOLLOWING LINK-**

<https://dbdiagram.io/d>

THE CODE IS –

TABLE ELECTRICITY\_BOARD

{ELECTRICITYB\_ID VARCHAR2(60) [PK]

EBOARD\_NAME VARCHAR2(60)

STATUS VARCHAR(60)

}

TABLE ADMIN

{ADMIN\_ID VARCHAR2(60) [PK]

ADMIN\_NAME VARCHAR2(60)

TYPE VARCHAR2(30)

LOGIN\_ID VARCHAR2(60)

PASSWORD VARCHAR2(60)

}

TABLE CUSTOMER

{CUSTOMER\_ID VARCHAR2(60) [PK]

CUST\_NAME VARCHAR2(60)

TYPE VARCHAR2(60)

STATUS VARCHAR2(60)

}

TABLE ACCOUNT

{CUST\_IDF1 VARCHAR2(60)

ACCOUNT\_ID VARCHAR2(60) [PK]

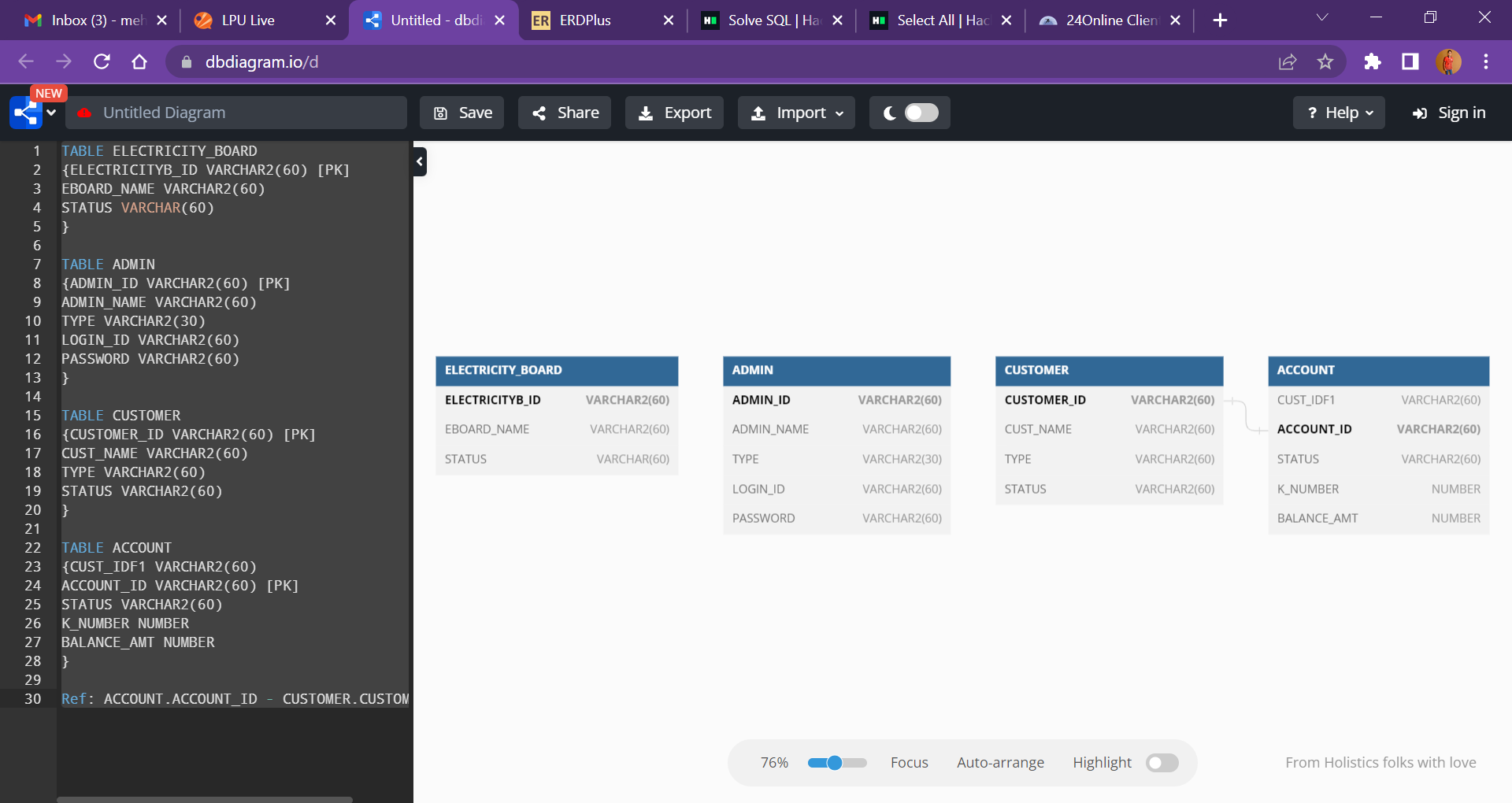
STATUS VARCHAR2(60)

K\_NUMBER NUMBER

BALANCE\_AMT NUMBER

}

Ref: ACCOUNT.ACCOUNT\_ID - CUSTOMER.CUSTOMER\_ID



**ANOTHER LINK-**

**https://erdplus.com/**