International Islamic University Chittagong

Department of Computer Science & Engineering

Submitted To

Associate Professor, Mohammad Aman Ullah

Department of Computer Science & Engineering

Course Code: CSE-2424

Course Title: Database Management System Lab

Submitted By

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Electricity Bill System

Introduction

Electricity management system will keep bill records, update participants & admins information, will notify if any changes occur in the electricity board. A summarized user list can be viewed by monitoring the user details. With the feedback option, user can complain for electricity problems & load-shedding in their area. There are different modules for admin & users. One can easily contact with the admin panel. It is an efficient system that manages, stores, updates & processes accurate information. Its purpose is to manage various functions and processes necessary to operate the data efficiently. It manages the payment details & transactions online with account details. Admins job lessens because it records all the status of the user & payments. This system maintains a centralized database of all electricity bill related data & supports various functions and processes. It provides a quality service with proper surveys which users can access without any difficulty.

Drawbacks of Existing System

The existing electricity bill system contains manual paperwork. This process is time-consuming & requires workers for several tasks like writing the data each time, finding errors, and checking availability. There is a possibility of error in the data or problems may occur while maintaining the system. When staff or employee makes a blander, the whole system will suffer. It takes time & man force to search for the user's information manually. It contains less security for saving data and some data may be lost due to mismanagement. The employee costing is also high as per the budget.

Hence, it is more convenient for a user to utilize an online application that provides accuracy & detailed work. They rather not waste their time on pen-paper-based tasks. Electricity bill Management System automates the bill function, collect information of users, update & manage the participants. The objective of this system is to manage all the data of the user bill activities & provide services accordingly. A user-friendly system with the purpose of managing various functions and processes necessary to operate the data efficiently is needed. The project includes effectively managing all the processed data with enhanced performance & carries out the perfect vision of e-business.

ERD
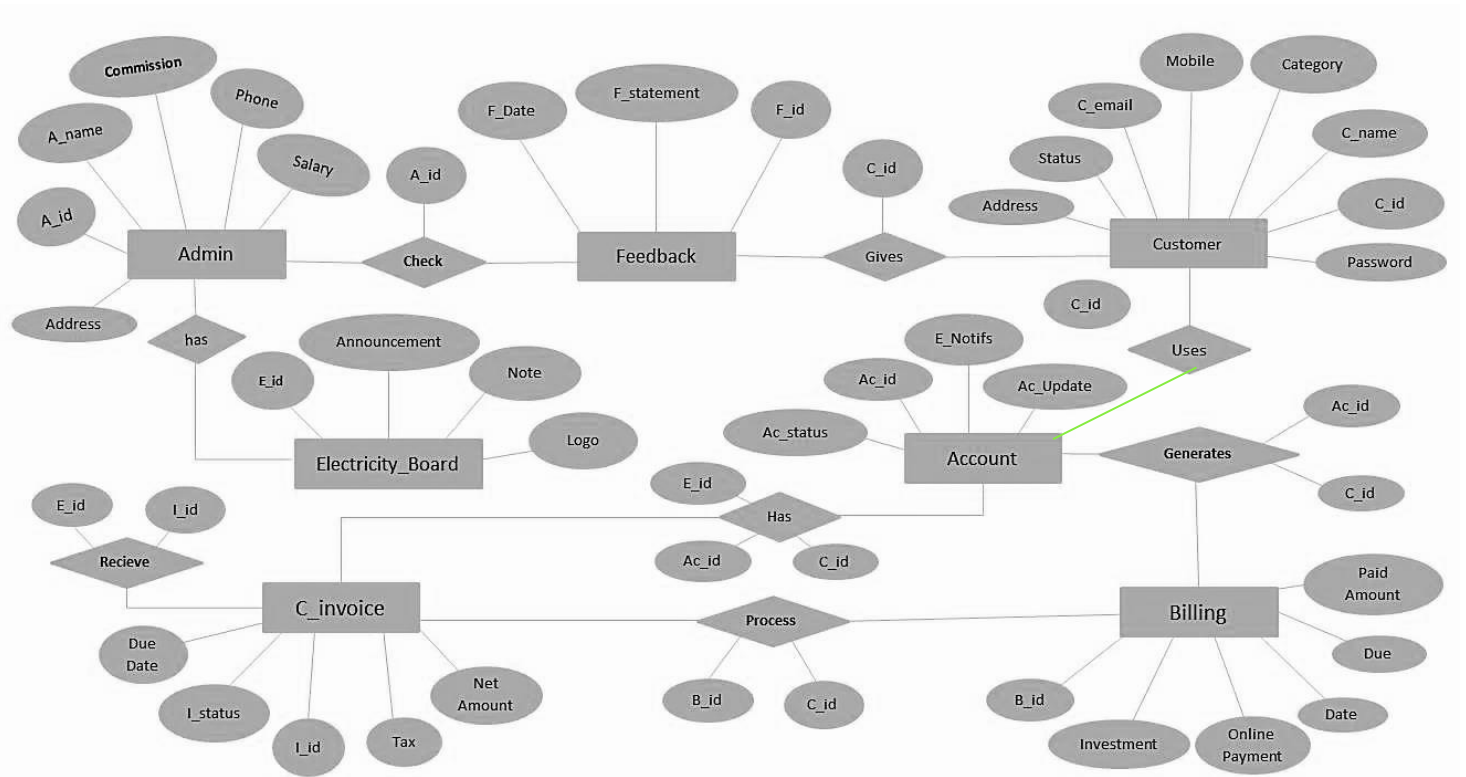
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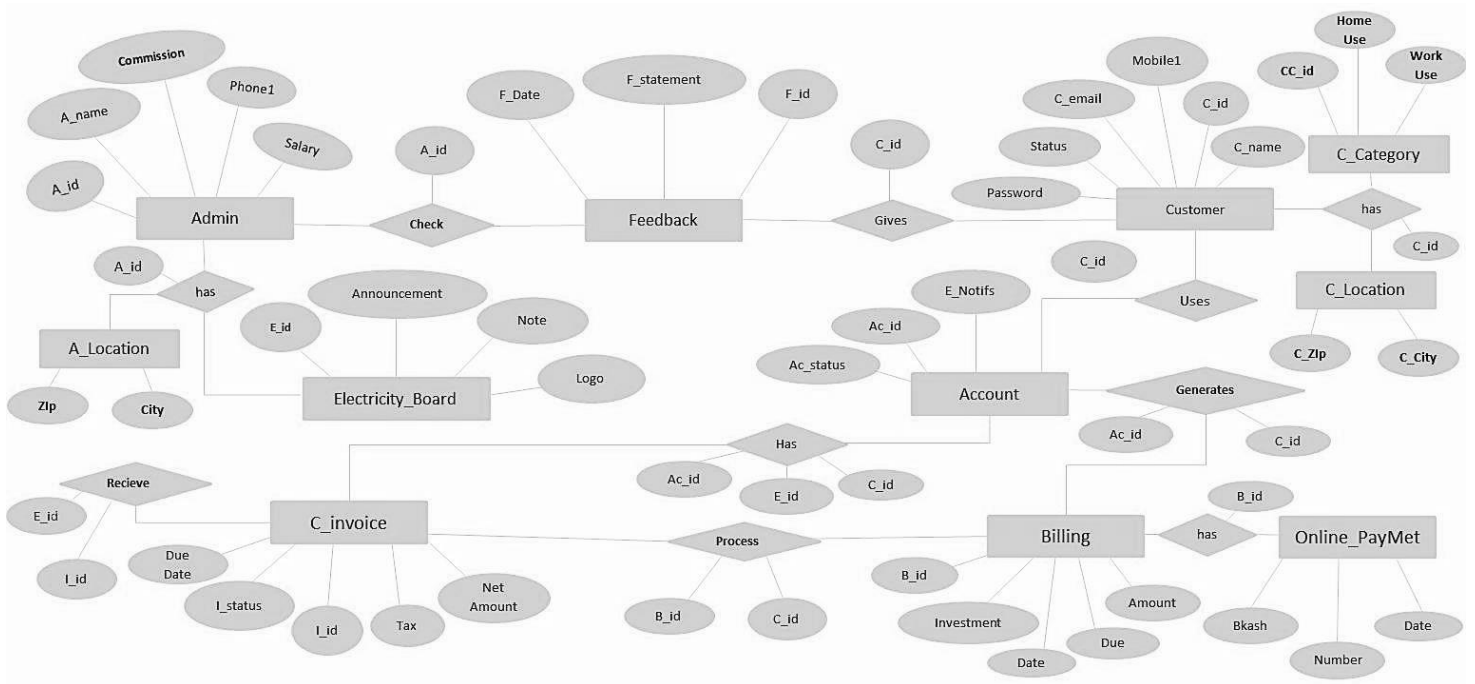
SCHEMA

ADMIN (**A_ID**, A_NAME, SALARY, COMMISSION, PHONE1, PHONE2, EMAIL, PASSWORD)

A_LOCATION (**A_ID**, ZIP_CODE, CITY, STREET)

ELECTRICITY_BOARD (**E_ID**, NOTE, ANNOUNCEMENT, LOGO)

CUSTOMER (**C_ID**, C_NAME, MOBILE1, MOBILE2, C_STATUS, C_EMAIL, C_PASSWORD)

C_LOCATION (**C_ID**, C_ZIP, C_CITY, C_STREET)

C_CATEGORY (**CC_ID**, **C_ID**, HOUSEHOLDUSAGE, BUSINESSUSAGE, OTHERS, UNITPRICE)

FEEDBACK (**F_ID**, F_STATEMENT, F_DATE, **C_ID**, **A_ID**)

ACCOUNT (**AC_ID**, AC_STATUS, **C_ID**, **E_ID**, AC_UPDATE, E_NOTIFS)

BILLING (**B_ID**, **AC_ID**, **C_ID**, PAYMENT, PREV_DUE, INVESTMENT, BILL_DATE, OTHER)

ONLINE_PAYMETHOD (**O_ID**, **B_ID**, **C_ID**, AMOUNT, NAGAD_ID, BKASH_ID, PAYPAL_ID, PAY_DATE, P_NUMBER)

C_INVOICE (**I_ID**, **E_ID**, **AC_ID**, I_STATUS, TAX, FIXED_CHARGE, PRESENT_READING, PREVIOUS_READING, PRE_BALANCE, DUE_DATE, NET_AMOUNT, CONCESSION, REPORT, ENERGY_BILL, METER_BILL, P_DATE, PREV_DUE)

TABLE

1. ADMIN

SQL

```
CREATE TABLE  "ADMIN"
  (       "A_ID" VARCHAR2(20) NOT NULL ENABLE,
          "A_NAME" VARCHAR2(100) NOT NULL ENABLE,
          "SALARY" NUMBER(20,0) NOT NULL ENABLE,
          "COMMISSION" NUMBER(20,4),
          "PHONE1" NUMBER(11,0) NOT NULL ENABLE,
          "PHONE2" NUMBER(11,0),
          "EMAIL" VARCHAR2(50) NOT NULL ENABLE,
          "PASSWORD" NUMBER(20,0) NOT NULL ENABLE,
           CONSTRAINT "ADMIN_PK" PRIMARY KEY ("A_ID") ENABLE,
           CONSTRAINT "ADMIN_UK1" UNIQUE ("PHONE1", "PHONE2") ENABLE
  )
```

2. A_LOCATION

SQL

```
CREATE TABLE  "A_LOCATION"
  (       "A_ID" VARCHAR2(20) NOT NULL ENABLE,
          "ZIP_CODE" NUMBER(20,0) NOT NULL ENABLE,
          "CITY" VARCHAR2(100) NOT NULL ENABLE,
          "STREET" VARCHAR2(100),
           CONSTRAINT "A_LOCATION_FK" FOREIGN KEY ("A_ID")
            REFERENCES  "ADMIN" ("A_ID") ENABLE
  )
```

3. ELECTRICITY_BOARD

SQL

```
CREATE TABLE  "ELECTRICITY_BOARD"
  (       "E_ID" VARCHAR2(20) NOT NULL ENABLE,
          "NOTE" VARCHAR2(1000) NOT NULL ENABLE,
          "ANNOUNCEMENT" VARCHAR2(100),
          "LOGO" VARCHAR2(50),
```

```
              CONSTRAINT "ELECTRICITY_BOARD_PK" PRIMARY KEY ("E_ID") ENABLE
  )
```

4. CUSTOMER

SQL

```
CREATE TABLE  "CUSTOMER"
  (        "C_ID" VARCHAR2(50) NOT NULL ENABLE,
           "C_NAME" VARCHAR2(50) NOT NULL ENABLE,
           "MOBILE1" NUMBER(11,0) NOT NULL ENABLE,
           "MOBILE2" NUMBER(11,0),
           "C_STATUS" VARCHAR2(50),
           "C_EMAIL" VARCHAR2(50) NOT NULL ENABLE,
           "C_PASSWORD" NUMBER(25,0) NOT NULL ENABLE,
            CONSTRAINT "CUSTOMER_PK" PRIMARY KEY ("C_ID") ENABLE,
            CONSTRAINT "CUSTOMER_UK1" UNIQUE ("MOBILE1", "MOBILE2") ENABLE
  )
```

5. C_LOCATION

SQL

```
CREATE TABLE  "C_LOCATION"
  (        "C_ZIP" NUMBER(20,0) NOT NULL ENABLE,
           "C_STREET" VARCHAR2(100),
           "C_CITY" VARCHAR2(100) NOT NULL ENABLE,
           "C_ID" VARCHAR2(20) NOT NULL ENABLE,
            CONSTRAINT "CLOCATION_FK2" FOREIGN KEY ("C_ID")
             REFERENCES  "CUSTOMER" ("C_ID") ENABLE
  )
```

6. C_CATEGORY

SQL

```
CREATE TABLE  "C_CATEGORY"
  (        "CC_ID" VARCHAR2(50) NOT NULL ENABLE,
           "C_ID" VARCHAR2(50) NOT NULL ENABLE,
           "HOUSEHOLDUSAGE" NUMBER(1,0),
           "BUSSINESSUSAGE" NUMBER(1,0),
           "OTHERS" VARCHAR2(100),
           " UNITPRICE" NUMBER(8,2),
            CONSTRAINT "C_CATEGORY_PK" PRIMARY KEY ("CC_ID") ENABLE,
            CONSTRAINT "C_CATEGORY_FK" FOREIGN KEY ("C_ID")
             REFERENCES  "CUSTOMER" ("C_ID") ENABLE
```

)

7. ACCOUNT

SQL

```
CREATE TABLE  "ACCOUNT"
   (     "AC_ID" VARCHAR2(20) NOT NULL ENABLE,
         "AC_STATUS" VARCHAR2(50),
         "C_ID" VARCHAR2(20) NOT NULL ENABLE,
         "E_ID" VARCHAR2(20),
         "AC_UPDATE" VARCHAR2(1000),
         "E_NOTIFS" VARCHAR2(100),
          CONSTRAINT "ACCOUNT_PK" PRIMARY KEY ("AC_ID") ENABLE,
          CONSTRAINT "ACCOUNT_FK" FOREIGN KEY ("C_ID")
           REFERENCES  "CUSTOMER" ("C_ID") ENABLE,
          CONSTRAINT "ACCOUNT_FK2" FOREIGN KEY ("E_ID")
           REFERENCES  "ELECTRICITY_BOARD" ("E_ID") ENABLE
   )
```

8. FEEDBACK

SQL

```
CREATE TABLE  "FEEDBACK"
   (     "F_ID" VARCHAR2(50) NOT NULL ENABLE,
         "F_STATEMENT" VARCHAR2(4000) NOT NULL ENABLE,
         "F_DATE" DATE,
         "C_ID" VARCHAR2(20) NOT NULL ENABLE,
         "A_ID" VARCHAR2(20) NOT NULL ENABLE,
          CONSTRAINT "FEEDBACK_PK" PRIMARY KEY ("F_ID") ENABLE,
          CONSTRAINT "FEEDBACK_FK" FOREIGN KEY ("C_ID")
           REFERENCES  "CUSTOMER" ("C_ID") ENABLE,
          CONSTRAINT "FEEDBACK_FK2" FOREIGN KEY ("A_ID")
           REFERENCES  "ADMIN" ("A_ID") ENABLE
   )
```

9. BILLING

SQL

```
CREATE TABLE  "BILLING"
   (     "B_ID" VARCHAR2(50) NOT NULL ENABLE,
```

```
        "AC_ID" VARCHAR2(20) NOT NULL ENABLE,
        "C_ID" VARCHAR2(50) NOT NULL ENABLE,
        "PAYMENT" NUMBER(30,4) NOT NULL ENABLE,
        "PREV_DUE" NUMBER(20,2),
        "INVESTMENT" NUMBER(20,2),
        "BILL_DATE" DATE NOT NULL ENABLE,
        "OTHER" VARCHAR2(100),
         CONSTRAINT "BILLING_PK" PRIMARY KEY ("B_ID") ENABLE,
         CONSTRAINT "BILLING_FK" FOREIGN KEY ("AC_ID")
          REFERENCES  "ACCOUNT" ("AC_ID") ENABLE,
         CONSTRAINT "BILLING_FK2" FOREIGN KEY ("C_ID")
          REFERENCES  "CUSTOMER" ("C_ID") ENABLE
   )
```

10. ONLINE_PAYMETHOD

SQL

```
CREATE TABLE  "ONLINE_PAYMETHOD"
   (      "O_ID" VARCHAR2(50) NOT NULL ENABLE,
         "B_ID" VARCHAR2(50),
         "C_ID" VARCHAR2(50) NOT NULL ENABLE,
         "AMOUNT" NUMBER(30,4) NOT NULL ENABLE,
         "NAGAD_ID" VARCHAR2(50),
         "BKASH_ID" VARCHAR2(50),
         "PAYPAL_ID" VARCHAR2(50),
         "PAY_DATE" DATE NOT NULL ENABLE,
         "P_NUMBER" NUMBER(12,0) NOT NULL ENABLE,
          CONSTRAINT "BILLING_METHOD_PK" PRIMARY KEY ("O_ID") ENABLE,
          CONSTRAINT "BILLING_METHOD_FK" FOREIGN KEY ("B_ID")
           REFERENCES  "BILLING" ("B_ID") ENABLE,
          CONSTRAINT "BILLING_METHOD_FK2" FOREIGN KEY ("C_ID")
           REFERENCES  "CUSTOMER" ("C_ID") ENABLE
   )
```

11. INVOICE

SQL

```
CREATE TABLE  "C_INVOICE"
   (      "I_ID" VARCHAR2(50) NOT NULL ENABLE,
         "E_ID" VARCHAR2(20) NOT NULL ENABLE,
         "AC_ID" VARCHAR2(20) NOT NULL ENABLE,
```

```sql
    "I_STATUS" VARCHAR2(20),
    "TAX" NUMBER(10,2),
    "FIXED_CHARGE" NUMBER(10,2),
    "PRESENT_READING" NUMBER(10,2) NOT NULL ENABLE,
    "PREVIOUS_READING" NUMBER(10,2) NOT NULL ENABLE,
    "PRE_BALANCE" NUMBER(10,2),
    "DUE_DATE" DATE NOT NULL ENABLE,
    "NET_AMOUNT" NUMBER(10,2) NOT NULL ENABLE,
    "CONCESSION" NUMBER(10,2),
    "REPORT" VARCHAR2(200),
    "ENERGY_BILL" NUMBER(10,2),
    "METER_BILL" NUMBER(10,2),
    "P_DATE" DATE,
    "PREV_DUE" NUMBER(10,2),
     CONSTRAINT "C_INVOICE_PK" PRIMARY KEY ("I_ID") ENABLE,
     CONSTRAINT "C_INVOICE_FK" FOREIGN KEY ("E_ID")
      REFERENCES  "ELECTRICITY_BOARD" ("E_ID") ENABLE,
     CONSTRAINT "C_INVOICE_FK2" FOREIGN KEY ("AC_ID")
      REFERENCES  "ACCOUNT" ("AC_ID") ENABLE
)
```

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
1.ADMIN

EDIT	A_ID	A_NAME	SALARY	COMMISSION	PHONE1	PHONE2	EMAIL	PASSWORD
	311330	Tasfia Tabassum	15000	.32	3827983271	9823827343	tasfia01@gmail.com	624512
	311348	sadia haque	25000	.09	6437601234	8473201526	sadia54@yahoo.com	932783
	311389	Farzana Kabir	35000	-	9839271280	-	farzana25@gmail.com	489347
	311310	Nishi Akhter	35000	.9	1032138923	-	Nishi23@gmail.com	489390
	311320	Fouzia Amin	40000	2.4	7239871012	1920936721	fouzia34@gmail.com	623978
	311312	Kahinoor Akhi	15020	.23	989437901	906356555	kohi234@gmail.com	398728
	311342	Afia humaira	25500	.12	9082367346	2387092380	humaira623@gmail.com	329189
	311372	Shamima Rahman	30000	.15	2398773262	2309823837	shamima19@gmail.com	269187
	311399	Tapu Akhter	40000	.21	2981732786	-	akhter42@gmail.com	348789
	311376	Nusrat Jahan	40000	.18	2378276510	2916799289	nusrat50@gmail.com	439089
	311381	Israt Jahan	32000	-	2871892790	-	israt52@yahoo.com	382187
	311319	Kamrun Nessa	15000	.98	8274676381	1029340984	kamrunnessa@gmail.com	732832
	311328	Noor Zahan	35500	2.09	9089854323	-	zahan23@gmail.com	909234
	311323	Afsana Rahim	50000	.5	8723679328	-	afsana@yahoo.com	987239

row(s) 1 - 14 of 14

2.A_LOCATION

EDIT	A_ID	ZIP_CODE	CITY	STREET
	311348	4330	Chittagong	Hathazari
	311342	4378	chittagong	battali
	311319	1207	dhaka	mohammadpur
	311376	1360	dhaka	demra
	311310	4225	chittagong	halishahar
	311320	1231	dhaka	uttara
	311323	4202	chittagong	pahartoli
	311330	4216	chittagong	halishahar
	311372	4219	chittagong	custom
	311399	1223	dhaka	motijheel
	311381	1330	dhaka	joypara
	311328	1343	dhaka	savar
	311312	1215	dhaka	tejgaon
	311389	4376	Chittagong	Anawara
			row(s) 1 - 14 of 14	

3.ELECTRICITY_BOARD

EDIT	E_ID	NOTE	ANNOUNCEMENT	LOGO
📝	12345	Dear valued customers, we are currently working on your complaints. Please stay with us.	-	http://elcboard/logo
📝	90120	We have reviewed your areas electricity problem & delay; we are taking this matter seriously.	-	-
📝	56070	Firstly, we apologize for the problem causing in your area. We'll try to be more responsive too.	We'll contact you soon.	-
📝	45812	Our logistic department is working on your account, 211205.	Let us know if you have any account problem	-
📝	11670	Our logistic department is working on your complaint, 211216.	-	https://www.opw.com/
📝	12305	Please make sure to contact us. Contact Info : 0179876521	We have reviewed your areas electricity problem & delay; we are taking this matter seriously.	-
📝	642650	Updated Rules: https://www.eb.com	Let us know if you are facing any problem	-
📝	45610	If you're facing problem on online payment, contact on +12345678.	211213, contact us!	12305
📝	81170	Payment Due	211204	12305
📝	11120	Feel free to reach out with any questions.	-	-
📝	11340	We apologize that our services have not been up to your expectations.	Please bear with us & we'll try to fix these problems.	-
📝	90010	Please check the due date of payment.	There's a fine of 500/- after the due date of payment.	-
📝	98120	211259,contact us. you're taking too long for the answer	-	https://www.eof.com
📝	11840	Kindly Contact us for payment problem.	-	https://www.jk.com/
📝	11230	We're sorry for the delay of account loading. **Accounts are on work**	Kindly try logging in few minutes later.	-
			row(s) 1 - 15 of 19 ⊙	

Download

4.CUSTOMER

EDIT	C_ID	C_NAME	MOBILE1	MOBILE2	C_STATUS	C_EMAIL	C_PASSWORD
	211201	Tuhina Mahi	1862712312	1829938921	Inactive	tmahi@123.gmail.com	423667
	211204	aysha saima	2647863216	1730298302	Active	saimaakter@gmail.com	634638
	211245	Takia Nova	4439820984	-	Active	novataki@yahoo.com	8949394
	211203	Promi Barua	1885703091	2183782929	Inactive	promi67@gmail.com	280031
	211210	Sabrina Hossain	932809343	4329873412	Active	hossainsabrina@gmail.com	847674
	211224	Maksura Nuha	1867874320	1728290055	Active	nuharabbani01@gmail.com	224390
	211282	Tehsim Fariha	1261930320	-	Inactive	Tehsim17@gmail.com	943890
	211259	Shafia Huma	1921972817	1092098932	Active	ShafiaNur@gmail.com	129388
	211205	sabrina yesmin	78238623786	27617672673	Active	saba23@gmail.com	832673
	211213	Aktar Rumi	389823971	231487676	Inactive	rumie@yahoo.com	493284
	211216	Manarat Shopnil	3782467861	3487638932	Inactive	manarat@yahoo.com	942781
	211235	Anika Nawer	2038930141	-	Active	Anika12@gmail.com	347821
	211263	Sabrina Mostafa	1512323930	-	Inactive	mostafasabrin@yahoo.com	219647
	211202	Fariha Zannat	1832787723	-	Inactive	zannat451@gmail.com	620421
	211253	Samiha Sharif	9387409071	4307896035	Active	samiha50@gmail.com	672382

row(s) 1 - 15 of 17 ⊙

EDIT	C_ID	C_NAME	MOBILE1	MOBILE2	C_STATUS	C_EMAIL	C_PASSWORD
	211260	Nova Tahisn	4988748010	-	Active	Nova489@gmail.com	984379
	211672	Fatema Tarin	9271897301	1238719221	Active	Tarin607@gmail.com	198729

⊙ row(s) 16 - 17 of 17

Download

5.C_LOCATION

EDIT	C_ZIP	C_STREET	C_CITY	C_ID
	4335	uttara	dhaka	211245
	1219	khilgaon	dhaka	211210
	4225	kulshi	chittagong	211205
	6250	bagmara	chittagong	211216
	1321	nawabganj	dhaka	211202
	1230	uttara	dhaka	211672
	1211	lalbagh	dhaka	211235
	6220	mohanpur	rajshahi	211263
	4335	fatehabad	chittagong	211204
	4218	epz	chittagong	211224
	4378	battali	chittagong	211259
	4212	chagaon	chittagong	211213
	6230	tanor	rajshahi	211253
	1217	ramna	dhaka	211260
	4350	fatikchari	chittagong	211201
	row(s) 1 - 15 of 17 ▶			

Download

EDIT	C_ZIP	C_STREET	C_CITY	C_ID
	1360	demra	chittagong	211203
	4371	patia	chittagong	211282
	◀ row(s) 16 - 17 of 17			

Download

6. C_CATEGORY

EDIT	CC_ID	C_ID	HOUSEHOLDUSAGE	BUSSINESSUSAGE	OTHERS	UNITPRICE
	1010	211201	1	0	-	5.61
	1020	211202	1	0	-	5.61
	1040	211204	1	0	-	5.61
	2030	211282	1	0	-	5.61
	1030	211203	0	1	-	8.91
	1050	211205	0	1	-	8.91
	2020	211224	0	1	-	8.91
	2050	211216	1	0	-	5.61
	3030	211253	0	1	-	8.91
	3050	211260	1	0	-	5.61
	2010	211245	0	1	-	8.91
	2040	211259	0	1	-	8.91
	3010	211263	0	1	-	8.91
	3060	211672	1	0	-	5.61
	1060	211213	1	0	-	5.61

EDIT	CC_ID	C_ID	HOUSEHOLDUSAGE	BUSSINESSUSAGE	OTHERS	UNITPRICE
	1090	211210	1	0	-	5.61
	3000	211235	1	0	-	5.61

row(s) 16 - 17 of 17

7. ACCOUNT

EDIT	AC_ID	AC_STATUS	C_ID	E_ID	AC_UPDATE	E_NOTIFS
	61010	Payment Due	211224	12305	Fine 15% will be added after 16-Nov-2022	We sincerely apologies for the inconvinence.
	71020	Payment Due	211263	11110	Fine 15% will be added after 16-Nov-2022	Check if you're facing any account problem.
	711730	Paid	211253	11780	-	We'll contact you soon.
	71040	Paid	211216	11120	-	-
	61020	Payment Due	211203	81170	Fine 15% will be added after 16-Nov-2022	For questions & further assistance, reply to this message or call us at +7859778910
	61030	Payment Due	211210	642650	Fine 15% will be added after 16-Nov-2022	-
	61040	Paid	211259	98120	-	Kindly send us the location of your office.
	61050	Paid	211205	45812	-	Check the latest notification with link.
	71000	Payment Due	211213	45610	Fine 15% will be added after 16-nov-2022	-
	710720	Payment Due	211202	11230	Fine 15% will be added after 16-Nov-2022	-
	61060	Paid	211201	411501	-	-
	71010	Paid	211235	11340	-	-
	71050	Payment Due	211672	11670	Fine 500/- will be added after 16-NOV-22	Contact us at +12345678
	61070	Paid	211204	56070	-	Please contact us if you face any problem.
	61080	Paid	211245	12345	-	Valued customer,Thank you for contacting Queen Industries by email.

EDIT	AC_ID	AC_STATUS	C_ID	E_ID	AC_UPDATE	E_NOTIFS
	61090	Payment Due	211282	90120	Fine 15% will be added after 16-nov-2022	Kindly check the new rules.
	71060	Paid	211260	11120	-	We'll contact you soon, provide us your area location as well.

row(s) 16 - 17 of 17

8. FEEDBACK

EDIT	F_ID	F_STATEMENT	F_DATE	C_ID	A_ID
	511590	Frequent loadshedding at XY Office, GEC circle	14-DEC-22	211253	311342

	511510	Customer service is amazing	17-JUN-22	211213	311328
	511530	not enough electricity available to meet the demand of all customers	15-JAN-22	211205	311372
	511540	Good Service	23-NOV-22	211210	311320
	511520	Too much loadhsedding in our area	12-DEC-22	211224	311319
	511560	Excessive electricity problem in office, please take action	25-JUL-22	211259	311376

9. BILLING

EDIT	B_ID	AC_ID	C_ID	PAYMENT	PREV_DUE	INVESTMENT	BILL_DATE	OTHER
	1240	71040	211216	1500.3	170.3	-	12-OCT-22	-
	1260	61030	211210	0	1450.5	0	08-DEC-22	-
	1280	61050	211205	2178.5	1270.45	0	13-NOV-22	-
	1320	71010	211235	2450	0	800	02-NOV-22	-
	1340	61070	211204	3480.2	1610.2	1050.2	03-NOV-22	-
	1370	61090	211282	0	2348.9	-	09-NOV-22	-
	1230	711730	211253	1340	230	-	05-NOV-22	-
	1250	61020	211203	0	2190.3	0	16-NOV-22	-
	1290	71000	211213	3000.5	2930.9	1400.4	15-NOV-22	-
	1300	710720	211202	0	3900.2	2500.2	16-NOV-22	Fine 500/- will be added
	1310	61060	211201	1980.5	0	500	12-NOV-22	-
	1350	61080	211245	8280.9	0	5000	15-NOV-22	-
	1210	61010	211224	2130	4350	0	21-OCT-22	-
	1220	71020	211263	1290	230.9	0	11-SEP-22	-
	1270	61040	211259	3205	1405.3	-	12-NOV-22	-

row(s) 1 - 15 of 17 ▶

EDIT	B_ID	AC_ID	C_ID	PAYMENT	PREV_DUE	INVESTMENT	BILL_DATE	OTHER
	1330	71050	211672	0	1340.6	0	16-NOV-22	-
	1380	71060	211260	5430	2230.8	2230.8	05-NOV-22	-

◀ row(s) 16 - 17 of 17

10. ONLINE_PAYMETHOD

EDIT	O_ID	B_ID	C_ID	AMOUNT	NAGAD_ID	BKASH_ID	PAYPAL_ID	PAY_DATE	P_NUMBER
📄	9120	1220	211259	3205	akn235	-	-	12-NOV-22	78238623786
📄	9130	1230	211253	1340.2	-	jen240	-	05-NOV-22	9387409071
📄	9150	1310	211201	1980.5	-	mahi89	-	12-NOV-22	1829938921
📄	9160	1350	211245	8280.5	-	taki1190	-	15-NOV-22	4439820984
📄	9110	1210	211235	2450	-	nhr1234	-	02-NOV-22	1728290055
📄	9140	1240	211260	5430	mn0162	-	-	05-NOV-22	3487638932
📄	9170	1370	211204	3480	-	-	wzk123	03-NOV-22	1261930320

row(s) 1 - 7 of 7

11. C_INVOICE

EDIT	I_ID	E_ID	AC_ID	I_STATUS	TAX	FIXED_CHARGE	PRESENT_READING	PREVIOUS_READING	PRE_BALANCE	DUE_DATE	NET_AMOUNT	CONCESSION	REPORT	ENERGY_BILL	METER_BILL	P_DATE	PREV_DUE
📄	9020	12345	61080	Paid	414.4	550	750	650	5000	16-NOV-22	8280.5	.1	10% concession	3860	4420	15-NOV-22	0
📄	9040	56070	61070	Paid	154.2	250	250	150	1050.2	16-NOV-22	3480	0	Previous due paid	1480	1440	03-NOV-22	1610.2
📄	9030	45812	61050	Paid	108.92	150	450	550	0	16-NOV-22	2178.5	0	Paid with previous due	655	628	13-NOV-22	895.5
📄	9080	11340	71010	Paid	122.5	230	350	250	800	16-NOV-22	2450	0	-	1340	1110	02-NOV-22	-
📄	9060	98120	61040	Paid	160.25	450	650	550	0	16-NOV-22	3205	0	Paid with previous due	955	845	12-NOV-22	1405.3
📄	9070	11120	71050	Paid	271.54	350	750	650	2230.8	16-NOV-22	5430	0	Paid with previous due.	2940.5	2488.5	05-NOV-22	2230.8
📄	9010	411501	61060	Paid	74.5	80	330	230	500	16-NOV-22	1980.5	0	Paid 1500/- with fine	950	530.5	12-NOV-22	0
📄	9050	11780	711730	Paid	67.2	90	250	150	0	16-NOV-22	1340.2	0	Amount paid with previous due	590	520	05-NOV-22	230

row(s) 1 - 8 of 8

EDIT	I_ID	E_ID	AC_ID	I_STATUS	TAX	FIXED_CHARGE	PRESENT_READING	PREVIOUS_READING	PRE_BALANCE	DUE_DATE	NET_AMOUNT	CONCESSION	REPORT
	9020	12345	61080	Paid	414.4	550	750	650	5000	16-NOV-22	8280.5	.1	10% concession
	9040	56070	61070	Paid	154.2	250	250	150	1050.2	16-NOV-22	3480	0	Previous due paid
	9030	45812	61050	Paid	108.92	150	450	550	0	16-NOV-22	2178.5	0	Paid with previous due
	9080	11340	71010	Paid	122.5	230	350	250	800	16-NOV-22	2450	0	-
	9060	98120	61040	Paid	160.25	450	650	550	0	16-NOV-22	3205	0	Paid with previous due
	9070	11120	71060	Paid	271.54	350	750	650	2230.8	16-NOV-22	5430	0	Paid with previous due.
	9010	411501	61060	Paid	74.5	80	330	230	500	16-NOV-22	1980.5	0	Paid 1500/- with fine
	9050	11780	711730	Paid	67.2	90	250	150	0	16-NOV-22	1340.2	0	Amount paid with previous due

PREVIOUS_READING	PRE_BALANCE	DUE_DATE	NET_AMOUNT	CONCESSION	REPORT	ENERGY_BILL	METER_BILL	P_DATE	PREV_DUE
650	5000	16-NOV-22	8280.5	.1	10% concession	3860	4420	15-NOV-22	0
150	1050.2	16-NOV-22	3480	0	Previous due paid	1480	1440	03-NOV-22	1610.2
550	0	16-NOV-22	2178.5	0	Paid with previous due	655	628	13-NOV-22	895.5
250	800	16-NOV-22	2450	0	-	1340	1110	02-NOV-22	-
550	0	16-NOV-22	3205	0	Paid with previous due	955	845	12-NOV-22	1405.3
650	2230.8	16-NOV-22	5430	0	Paid with previous due.	2940.5	2488.5	05-NOV-22	2230.8
230	500	16-NOV-22	1980.5	0	Paid 1500/- with fine	950	530.5	12-NOV-22	0
150	0	16-NOV-22	1340.2	0	Amount paid with previous due	590	520	05-NOV-22	230

row(s) 1 - 8 of 8

DML Statement for Individual Table

1. **Show list of Electricity Board**

   SQL

   Select *
   From Electricity_Board

E_ID	NOTE	ANNOUNCEMENT	LOGO
12345	Dear valued customers, we are currently working on your complaints. Please stay with us.	-	http://elcboard/logo
90120	We have reviewed your areas electricity problem & delay; we are taking this matter seriously.	-	-
56070	Firstly, we apologize for the problem causing in your area. We'll try to be more responsive too.	We'll contact you soon.	-
45812	Our logistic department is working on your account, 211205.	Let us know if you have any account problem	-
11670	Our logistic department is working on your complaint, 211216.	-	https://www.opw.com/
12305	Please make sure to contact us. Contact Info : 0179876521	We have reviewed your areas electricity problem & delay; we are taking this matter seriously.	-
642650	Updated Rules: https://www.eb.com	Let us know if you are facing any problem	-
45610	If you're facing problem on online payment, contact on +12345678.	211213, contact us!	12305
81170	Payment Due	211204	12305
11120	Feel free to reach out with any questions.	-	

2. Show admins id, name & salary whose salary is greater than 20000

SQL

Select A_ID, A_NAME, Salary

From ADMIN

Where Salary>20000

A_ID	A_NAME	SALARY
311348	sadia haque	25000
311389	Farzana Kabir	35000
311310	Nishi Akhter	35000
311320	Fouzia Amin	40000
311342	Afia humaira	25500
311372	Shamima Rahman	30000
311399	Tapu Akhter	40000
311376	Nusrat Jahan	40000
311381	Israt Jahan	32000
311328	Noor Zahan	35500

3. Show Addresses of all Admin

SELECT *

From A_Location

A_ID	ZIP_CODE	CITY	STREET
311348	4330	Chittagong	Hathazari
311342	4378	chittagong	battali
311319	1207	dhaka	mohammadpur
311376	1360	dhaka	demra
311310	4225	chittagong	halishahar
311320	1231	dhaka	uttara
311323	4202	chittagong	pahartoli
311330	4216	chittagong	halishahar
311372	4219	chittagong	custom
311399	1223	dhaka	motijheel

4. Show Feedback of users with date

SQL

Select F_DATE, F_STATEMENT, C_ID

From Feedback

F_DATE	F_STATEMENT	C_ID
14-DEC-22	Frequent load-shedding at XY Office, GEC circle	211253
17-JUN-22	Customer service is amazing	211213
15-JAN-22	not enough electricity available to meet the demand of all customers	211205
23-NOV-22	Good Service	211210
12-DEC-22	Too much load-shedding in our area	211224
25-JUL-22	Excessive electricity problem in office, please take action	211259

5. Find Customer whose name includes "HA"

SQL

select *

22

from CUSTOMER

where c_name LIKE '%ha'

C_ID	C_NAME	MOBILE1	MOBILE2	C_STATUS	C_EMAIL	C_PASSWORD
211224	Maksura Nuha	1867874320	1728290055	Active	nuharabbani01@gmail.com	224390
211282	Tehsim Fariha	1261930320	-	Inactive	Tehsim17@gmail.com	943890

6. Find a customer's ID & Updates using their Account Number

SQL

select c_id,ac_update

from Account

C_ID	AC_UPDATE
211224	Fine 15% will be added after 16-Nov-2022
211263	Fine 15% will be added after 16-Nov-2022
211253	-
211216	-
211203	Fine 15% will be added after 16-Nov-2022
211210	Fine 15% will be added after 16-Nov-2022
211259	-
211205	-
211213	Fine 15% will be added after 16-nov-2022
211202	Fine 15% will be added after 16-Nov-2022

7. Find customer who has household categories.

SQL

select c_id, cc_id, unitprice, INSTR(HOUSEHOLDUSAGE, '1')

from C_category

C_ID	CC_ID	UNITPRICE	INSTR(HOUSEHOLDUSAGE,'1')
211201	1010	5.61	1

211202	1020	5.61	1
211204	1040	5.61	1
211282	2030	5.61	1
211216	2050	5.61	1
211260	3050	5.61	1

8. Show list of customer's account id who have tax greater than 100/-

SQL

select AC_ID, TAX

from C_INVOICE

where TAX>100

AC_ID	TAX
61080	414.4
61070	154.2
61050	108.92
71010	122.5
61040	160.25
71060	271.54

9. Show all customers who has paid bill.

SQL

select AC_ID, AC_STATUS

from Account

where AC_STATUS='Paid'

AC_ID	AC_STATUS
711730	Paid
71040	Paid
61040	Paid
61050	Paid
61060	Paid
71010	Paid
61070	Paid
61080	Paid

71060	Paid

10.Show all customers who has paid bill in online method.

SQL

select *

from ONLINE_PAYMETHOD

O_ID	B_ID	C_ID	AMOUNT	NAGAD_ID	BKASH_ID	PAYPAL_ID	PAY_DATE	P_NUMBER
9120	1220	211259	3205	akn235	-	-	12-NOV-22	78238623786
9130	1230	211253	1340.2	-	jen240	-	05-NOV-22	9387409071
9150	1310	211201	1980.5	-	mahi89	-	12-NOV-22	1829938921
9160	1350	211245	8280.5	-	taki1190	-	15-NOV-22	4439820984
9110	1210	211235	2450	-	nhr1234	-	02-NOV-22	1728290055
9140	1240	211260	5430	mn0162	-	-	05-NOV-22	3487638932
9170	1370	211204	3480	-	-	wzk123	03-NOV-22	1261930320

11. Show list of customers who stays in Dhaka

SQL

select *

from C_LOCATION

where C_CITY= 'dhaka'

C_ZIP	C_STREET	C_CITY	C_ID
4335	uttara	dhaka	211245
1219	khilgaon	dhaka	211210
1321	nawabganj	dhaka	211202
1230	uttara	dhaka	211672
1211	lalbagh	dhaka	211235
1217	ramna	dhaka	211260

12. Find list of customers who uses electricity for official use.

SQL

select *

from C_Category

where BUSSINESSUSAGE= '1'

CC_ID	C_ID	HOUSEHOLDUSAGE	BUSSINESSUSAGE	OTHERS	UNITPRICE
1030	211203	0	1	-	8.91
1050	211205	0	1	-	8.91
2020	211224	0	1	-	8.91
3030	211253	0	1	-	8.91
2010	211245	0	1	-	8.91
2040	211259	0	1	-	8.91
3010	211263	0	1	-	8.91

DML Statement from Multiple Tables

1. **Show the customer's Account ID, status & feedbacks who have given a feedback.**

   SQL

   select AC_ID, F_STATEMENT, AC_STATUS

   from ACCOUNT a, FEEDBACK f

   where f.c_id= f.c_id

AC_ID	F_STATEMENT	AC_STATUS
61010	Frequent load-shedding at XY Office, GEC circle	Payment Due
61010	Customer service is amazing	Payment Due
61010	not enough electricity available to meet the demand of all customers	Payment Due
61010	Good Service	Payment Due
61010	Too much load-shedding in our area	Payment Due
61010	Excessive electricity problem in office, please take action	Payment Due
71020	Frequent load-shedding at XY Office, GEC circle	Payment Due
71020	Customer service is amazing	Payment Due
71020	not enough electricity available to meet the demand of all customers	Payment Due
71020	Good Service	Payment Due

2. **Show the list of accounts status, amount & date who paid the bills.**

   SQL

   select C_ID, AC_STATUS, NET_AMOUNT, P_DATE

from ACCOUNT a, C_INVOICE b

where a.ac_id= b.ac_id

C_ID	AC_STATUS	NET_AMOUNT	P_DATE
211245	Paid	8280.5	15-NOV-22
211204	Paid	3480	03-NOV-22
211205	Paid	2178.5	13-NOV-22
211235	Paid	2450	02-NOV-22
211259	Paid	3205	12-NOV-22
211260	Paid	5430	05-NOV-22
211201	Paid	1980.5	12-NOV-22
211253	Paid	1340.2	05-NOV-22

3. **Show all the data from both table Electricity Board & Account who have made a complaint with replies .**

SQL

select *

from ELECTRICITY_BOARD left outer join ACCOUNT on (ELECTRICITY_BOARD.E_ID=ACCOUNT.E_ID)

E_ID	NOTE	ANNOUNCEMENT	LOGO	AC_ID	AC_STATUS	C_ID	E_ID	AC_UPDATE	E_NOTIFS
11110	We will update you as soon as the info changes. Thanks for your patience!	-	-	71020	Payment Due	211263	11110	Fine 15% will be added after 16-Nov-2022	Check if you're facing any account problem.
11120	Feel free to reach out with any questions.	-	-	71040	Paid	211218	11120	-	-
11120	Feel free to reach out with any questions.	-	-	71060	Paid	211260	11120	-	We'll contact you soon, provide us your area location as well.
11230	We're sorry for the delay of account loading. **Accounts are on work**	Kindly try logging in few minutes later.	-	710720	Payment Due	211202	11230	Fine 15% will be added after 16-Nov-2022	-
11340	We apologize that our services have not been up to your expectations.	Please bear with us & we'll try to fix these problems.	-	71010	Paid	211235	11340	-	-
11670	Our logistic department is working on your complaint, 211218.	-	https://www.opw.com/	71050	Payment Due	211672	11670	Fine 500/- will be added after 18-NOV-22	Contact us at +12345678
11780	It looks like the electricity problem on your area will take time.	-	-	711730	Paid	211253	11780	-	We'll contact you soon.
11840	Kindly Contact us for payment problem.	-	https://www.jk.com/	-	-	-	-	-	-
11890	Contact us at +12345678	-	https://www.bk.com/	-	-	-	-	-	-
12305	Please make sure to contact us. Contact Info : 0179876521	We have reviewed your areas electricity problem & delay; we are taking this matter seriously.	-	61010	Payment Due	211224	12305	Fine 15% will be added after 16-Nov-2022	We sincerely apologies for the inconvinence.

More than 10 rows available. Increase rows selector to view more rows.

4. **Show account & billing information of ID 61080.**

SQL

select *

from BILLING natural join ACCOUNT where AC_ID in (select AC_ID

from C_INVOICE natural join BILLING

where AC_ID='61080');

AC_ID	C_ID	B_ID	PAYMENT	PREV_DUE	INVESTMENT	BILL_DATE	OTHER	AC_STATUS	E_ID	AC_UPDATE	E_NOTIFS
61080	211245	1350	8280.9	0	5000	15-NOV-22	-	Paid	12345	-	Valued customer,Thank you for contacting Queen Industries by email.

1 rows returned in 0.02 seconds   CSV Export

5. **Show all feedback of a customer Email 'nuharabbani01@gmail.com'**

SQL

select *
from FEEDBACK
natural join CUSTOMER
where C_ID IN (select C_ID from CUSTOMER where C_EMAIL='nuharabbani01@gmail.com');

C_ID	F_ID	F_STATEMENT	F_DATE	A_ID	C_NAME	MOBILE1	MOBILE2	C_STATUS	C_EMAIL	C_PASSWORD
211224	511520	Too much loadhsedding in our area	12-DEC-22	311319	Maksura Nuha	1867874320	1728290055	Active	nuharabbani01@gmail.com	224390

Sub-Queries

1. **Find a customer by a specific zip code 4225**

SQL

select *

from CUSTOMER C, C_LOCATION l

where c.c_id=l.c_id and l.c_id in (select c_id from C_LOCATION where C_ZIP=4225)

C_ID	C_NAME	MOBILE1	MOBILE2	C_STATUS	C_EMAIL	C_PASSWORD	C_ZIP	C_STREET	C_CITY	C_ID
211205	sabrina yesmin	78238623786	27617672673	Active	saba23@gmail.com	832673	4225	kulshi	chittagong	211205

1 rows returned in 0.02 seconds   CSV Export

2. **Show Admin name & Id of the Feedback given to 311328.**

SQL

Select A_ID,A_NAME

 from ADMIN

 where A_ID=(

 select A_ID

 from FEEDBACK

 where A_ID ='311328') ;

A_ID	A_NAME
311328	Noor Zahan

3. **Find information of FEEDBACK given by a customer, Aktar Rumi' & Mobile No 389823971 given to an admin.**

SQL

select *

from FEEDBACK

where C_ID=(

select C_ID

from CUSTOMER

where C_NAME ='Aktar Rumi' and MOBILE1='389823971');

F_ID	F_STATEMENT	F_DATE	C_ID	A_ID
511510	Customer service is amazing	17-JUN-22	211213	311328

4. **Find payment information of the B_ID 1350**

SQL

SELECT*
FROM ONLINE_PAYMETHOD WHERE B_ID=(SELECT B_ID FROM BILLING WHERE B_ID=1350);

O_ID	B_ID	C_ID	AMOUNT	NAGAD_ID	BKASH_ID	PAYPAL_ID	PAY_DATE	P_NUMBER
9160	1350	211245	8280.5	-	taki1190	-	15-NOV-22	4439820984

5. **Show Notice of Electricity Board to Customer with E_ID 45812**

SQL
SELECT NOTE, ANNOUNCEMENT
FROM ELECTRICITY_BOARD
WHERE E_ID = (SELECT E_ID FROM ACCOUNT WHERE E_ID=45812);

NOTE	ANNOUNCEMENT
Our logistic department is working on your account, 211205.	Let us know if you have any account problem

PL/SQL

1. Write a program in PL/SQL which takes the data from ADMIN database and increase salary by 500.

```
DECLARE
  ROWS number(2);
BEGIN
  UPDATE ADMIN
  SET salary = salary + 1000;
  IF sql%notfound THEN
    dbms_output.put_line('NOT FOUND');
  ELSIF sql%found THEN
    ROWS := sql%rowcount;
    dbms_output.put_line( ROWS ||' '||'ADMIN SELECTED FOR SALARY
INCREMENT');
  END IF;
END;
```

14 ADMIN SELECTED FOR SALARY INCREMENT

1 row(s) updated.

2. Write a program in PL/SQL that takes the data from ADMIN and show those ADMINS who have the same salary as ' sadia haque'

```
DECLARE
 CURSOR addm IS
   select A_ID, A_NAME, SALARY, a.A_ID, CITY
   from ADMIN a, A_LOCATION l
   where a.A_ID=l.A_ID and salary=(Select salary
                   from ADMIN
                 where A_NAME = 'sadia haque');
 acc addm%rowtype;

 BEGIN
  OPEN addm;
  LOOP
   FETCH addm INTO acc;
   EXIT WHEN addm%notfound;
   dbms_output.put_line('Name : ' || acc.A_NAME);
   dbms_output.put_line('Salary : ' || acc.SALARY);
  END LOOP;
  CLOSE addmloc;
 END;
```

3. Write a program in PL/SQL to Search the name of the employee with salary between 15000 to 30000

```
DECLARE
a ADMIN.A_ID%type;
n ADMIN.A_NAME%type;
s ADMIN.SALARY%type;
BEGIN
```

```
SELECT A_ID, A_NAME, SALARY INTO a,n,s
FROM ADMIN
WHERE A_ID=311348;
IF s between 15001 and 30000 THEN
dbms_output.put_line('Name :'||n);
ELSIF s<=20000 THEN
dbms_output.put_line('Name :'||n);
ELSE
dbms_output.put_line('The record doesnot match');
END IF;
END;
```

```
Name :sadia haque

Statement processed.
```

4. Show a PL/SQL of Customer Name & Mobile number, Given ID 211224

```
DECLARE
xy CUSTOMER%rowtype;
BEGIN
 select * INTO xy
 FROM CUSTOMER
 WHERE C_ID=211224;
 dbms_output.put_line('Name : '||xy.C_NAME ||' '||'MOBILE :'||xy.MOBILE1);
END;
```

```
Name : Maksura Nuha MOBILE :1867874320

Statement processed.
```

5. SHOW in PL/SQL, FEEDBACK INFORMATION of ID 511590.

```
DECLARE
k FEEDBACK%rowtype;

BEGIN

SELECT * INTO k
```

FROM FEEDBACK

WHERE F_ID=511590;

dbms_output.put_line('INFORMATION OF FEEDBACK: '|| 'ID '||k.F_ID ||' '||'FEEDBACK: '||k.F_STATEMENT||' '||'DATE : '||k.F_DATE||' '||'C_ID : '||k.C_ID||' '||'F_ID: '||
    k.A_ID);

END;

```
INFORMATION OF FEEDBACK:  ID 511590 FEEDBACK: Frequent loadshedding at XY Office, GEC circle DATE : 14-DEC-22 C_ID : 211253 F_ID: 311342

Statement processed.
```