

Taller #1

Realizar una base de datos relacional de la imagen adjuntada a continuación, en el cuál aplique los conceptos aprendidos durante la clase sobre Lenguaje de manipulación de datos (DML) y Lenguaje de definición de datos (DDL)

1. Realizar el diagrama entidad relación.



2. Realizar la base de datos
3. Realizar el proceso de DML y DDL en la base de datos.

DDL

crear base de datos

```
CREATE DATABASE GT;
```

```
USE GT; # seleccionar base de datos
```

#CREACION DE TABLAS

```

MariaDB [GT]> CREATE TABLE ENTIDADES (
-> id INT PRIMARY KEY,
-> COMERCIO VARCHAR(50),
-> NAME VARCHAR(50),
-> COUNTRY VARCHAR(50),
-> CITY VARCHAR(50),
-> ROL_id INT,
-> BIT_id INT
-> );
Query OK, 0 rows affected (0.028 sec)

MariaDB [GT]> CREATE TABLE CLIENTES (
-> ID INT NOT NULL PRIMARY KEY,
-> NAME VARCHAR(100),
-> CONTACT VARCHAR(30),
-> CREDITLIMIT DECIMAL(10,2));
Query OK, 0 rows affected (0.014 sec)

MariaDB [GT]> CREATE TABLE ENTIDADES_CLIENTES (
-> ID INT PRIMARY KEY,
-> entidad_id INT,
-> cliente_id INT,
-> FOREIGN KEY (entidad_id) REFERENCES ENTIDADES(id),
-> FOREIGN KEY (cliente_id) REFERENCES CLIENTES(ID));
Query OK, 0 rows affected (0.010 sec)
    
```

```

MariaDB [GT]> DESCRIBE ROL;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ROL_id | int(11) | NO | PRI | NULL | |
| BANE | varchar(100) | YES | | NULL | |
| TYPE | varchar(100) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.001 sec)

MariaDB [GT]> DESCRIBE BITACORA;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| BIT_id | int(11) | NO | PRI | NULL | |
| FECHA | date | YES | | NULL | |
| HORA | time | YES | | NULL | |
| DESCRIPTION | varchar(255) | YES | | NULL | |
| EVENT | varchar(255) | YES | | NULL | |
| ENT_ID | int(11) | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.001 sec)

MariaDB [GT]> DESCRIBE PERFIL;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ID | int(11) | NO | PRI | NULL | |
| FIRTNNAME | varchar(100) | YES | | NULL | |
| LASTNAME | varchar(100) | YES | | NULL | |
| COUNTRY | varchar(100) | YES | | NULL | |
| EMAIL | varchar(100) | YES | | NULL | |
| CLIEN_ID | int(11) | YES | MUL | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.001 sec)
    
```

CREACION DE RELACIONES

```

MariaDB [GT]> ALTER TABLE TRANSACCIONES
  -> ADD CONSTRAINT fk_clientes
  -> FOREIGN KEY (CLIEND_ID)
  -> REFERENCES CLIENTES(ID);
Query OK, 0 rows affected (0.031 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [GT]> ALTER TABLE PERFIL
  -> ADD CLIEN_ID INT;
Query OK, 0 rows affected (0.019 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [GT]> ALTER TABLE PERFIL
  -> ADD CONSTRAINT fk_clientes
  -> FOREIGN KEY (CLIEN_ID)
  -> REFERENCES CLIENTES(ID);
ERROR 1005 (HY000): Can't create table 'GT`.`PERFIL` (errno:121 "Duplicate key on write or update")
MariaDB [GT]> ALTER TABLE PERFIL
  -> ADD CONSTRAINT fk_perfiles
  -> FOREIGN KEY (CLIEN_ID)
  -> REFERENCES CLIENTES(ID);
Query OK, 0 rows affected (0.033 sec)
Records: 0 Duplicates: 0 Warnings: 0

```

```

MariaDB [GT]> ALTER TABLE ENTIDADES
  -> DROP FOREIGN KEY fk_bitarocas;
Query OK, 0 rows affected (0.043 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [GT]> ALTER TABLE ENTIDADES
  -> DROP COLUMN BIT_id;
Query OK, 0 rows affected (0.047 sec)
Records: 0 Duplicates: 0 Warnings: 0

# CREACION DE TABLAS

MariaDB [GT]> ALTER TABLE BITACORA
  -> ADD ENT_ID INT;
Query OK, 0 rows affected (0.017 sec)
Records: 0 Duplicates: 0 Warnings: 0

```

```

MariaDB [GT]> ALTER TABLE BITACORA
  -> ADD CONSTRAINT fk_ent
  -> FOREIGN KEY (ENT_ID)
  -> REFERENCES ENTIDADES(id);
Query OK, 0 rows affected (0.030 sec)
Records: 0 Duplicates: 0 Warnings: 0

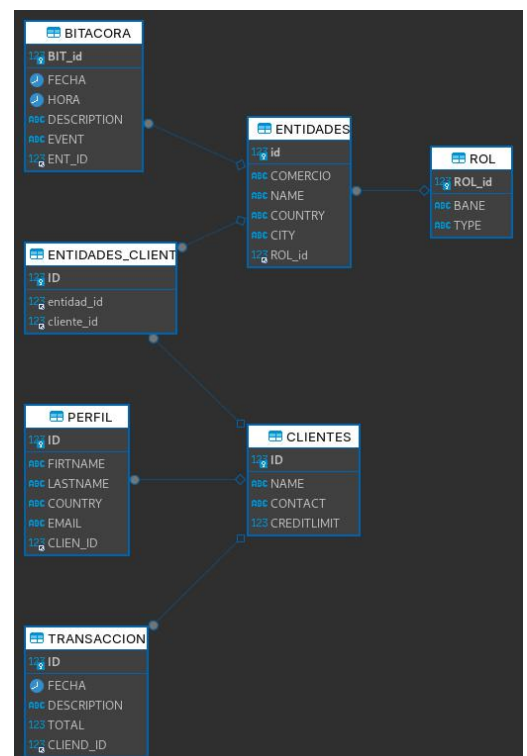
```

luego de todas las relaciones y creacion de tablas -->

```

MariaDB [GT]> SHOW TABLES;
+-----+
| Tables_in_GT |
+-----+
| BITACORA      |
| CLIENTES      |
| ENTIDADES     |
| ENTIDADES_CLIENTES |
| PERFIL        |
| ROL           |
| TRANSACCIONES |
+-----+
7 rows in set (0.000 sec)

```



DML

#manipulacion de datos

```
Pages ▾
MariaDB [GT]> SELECT * FROM GT.ENTIDADES;
+-----+-----+-----+-----+-----+-----+
| id | COMERCIO | NAME | COUNTRY | CITY | ROL_id |
+-----+-----+-----+-----+-----+-----+
| 1 | BG MAÑANITAS | JOSEFINA VERGARA | PANAMA | PANAMA | 1 |
| 2 | BG 24DIC | AMABLE CRUZ | PANAMA | PANAMA | 1 |
| 3 | XTRA 24DIC | ANTONIO SOLIS | PANAMA | PANAMA | 4 |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.001 sec)
```

```
MariaDB [GT]> SELECT * FROM GT.ROL;
+-----+-----+-----+
| ROL_id | BANE | TYPE |
+-----+-----+-----+
| 1 | BANCO GENERAL | SF |
| 2 | SCOTIA BANK | SF |
| 3 | CREDICORP BANK | SF |
| 4 | SUPER XTRA | VA |
+-----+-----+-----+
```

#manipulacion de datos

```
MariaDB [GT]> SELECT * FROM CLIENTES;
Empty set (0.000 sec)
```

```
MariaDB [GT]> INSERT INTO CLIENTES (ID,NAME,CONTACT,CREDITLIMIT) VALUE (
-> 1,'BRYAN CRUZ','60513722',1000000);
Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [GT]> INSERT INTO CLIENTES (ID,NAME,CONTACT,CREDITLIMIT) VALUE
-> (2,'FERNANDO','3242342',12314),
-> (3,'MIGUEL','394934',150.25),
-> (4,'ANTONIA VERGARA','123124',90000);
Query OK, 3 rows affected (0.006 sec)
```

Records: 3 Duplicates: 0 Warnings: 0

#manipulacion de datos

```
MariaDB [GT]> INSERT INTO ENTIDADES_CLIENTES (ID,entidad_id,cliente_id) VALUE
-> (1,1,1),
-> (2,1,2),
-> (3,1,4),
-> (4,3,3);
Query OK, 4 rows affected (0.005 sec)
```

Records: 4 Duplicates: 0 Warnings: 0

```
MariaDB [GT]> SELECT * FROM CLIENTE
Empty set (0.000 sec)
```

```
MariaDB [GT]> INSERT INTO CLIENTES
-> 1,'BRYAN CRUZ','60513722',10
Query OK, 1 row affected (0.003 sec)
```

```
MariaDB [GT]> INSERT INTO CLIENTES
-> (2,'FERNANDO','3242342',12314)
```

```
MariaDB [GT]> INSERT INTO PERFIL (ID,FIRSTNAME,LASTNAME,COUNTRY,EMAIL,CLIEN_ID) VALUE
-> (1,'BRYAN','CRUZ','PANAMA','BRYAN.CRUZ@UIP:EDU.PA',1),
-> (2,'FERNANDO','GONZALES','PANAMA','FEGONZALES@GMAIL.COM',2),
-> (3,'MIGUEL','CASTRELLON','USA','MIGCASTR21@OUTLOOK.ES',3),
-> (4,'ANTONIA','VERGARA','PANAMA','ANVEQWEE@GMAIL.COM',4);
Query OK, 4 rows affected (0.004 sec)
```

Records: 4 Duplicates: 0 Warnings: 0

```
+-----+-----+-----+-----+-----+-----+
| ID | FIRSTNAME | LASTNAME | COUNTRY | EMAIL | CLIEN_ID |
+-----+-----+-----+-----+-----+-----+
| 1 | BRYAN | CRUZ | PANAMA | BRYAN.CRUZ@UIP:EDU.PA | 1 |
| 2 | FERNANDO | GONZALES | PANAMA | FEGONZALES@GMAIL.COM | 2 |
| 3 | MIGUEL | CASTRELLON | USA | MIGCASTR21@OUTLOOK.ES | 3 |
| 4 | ANTONIA | VERGARA | PANAMA | ANVEQWEE@GMAIL.COM | 4 |
+-----+-----+-----+-----+-----+-----+
```

```
MariaDB [GT]> SELECT COUNT(*) FROM GT.TRANSACCIONES;
```

```
+-----+
| COUNT(*) |
+-----+
|          0 |
+-----+
```

```
1 row in set (0.000 sec)
```

DML

#manipulacion de datos

```
MariaDB [GT]> SELECT * FROM GT.ENTIDADES;
```

```
MariaDB [GT]> INSERT INTO TRANSACCIONES (ID,FECHA,DESCRIPTION,TOTAL,CLIEND_ID) VALUES
```

```
-> (1,'2024-01-27','pago de mensualidad por servicios financieros',200,1),
```

```
-> (2,'2024-01-27','pago de mensualidad internet',45.63,2),
```

```
-> (3,'2024-01-27','pago de quincena',150,3);
```

```
Query OK, 3 rows affected (0.004 sec)
```

```
Records: 3 Duplicates: 0 Warnings: 0
```

```
MariaDB [GT]> SELECT * FROM TRANSACCIONES;
```

```
+-----+-----+-----+-----+-----+
| ID | FECHA | DESCRIPTION | TOTAL | CLIEND_ID |
+-----+-----+-----+-----+-----+
| 1 | 2024-01-27 00:00:00 | pago de mensualidad por servicios financieros | 200.00 | 1 |
| 2 | 2024-01-27 00:00:00 | pago de mensualidad internet | 45.63 | 2 |
| 3 | 2024-01-27 00:00:00 | pago de quincena | 150.00 | 3 |
+-----+-----+-----+-----+-----+
```

```
3 rows in set (0.000 sec)
```

esto muestra todos los perfiles de clientes de las entidades con roles de tipo SF

```
MariaDB [GT]> SELECT *
```

```
-> FROM PERFIL
```

```
-> INNER JOIN ROL ON PERFIL.CLIEN_ID = ROL.ROL_id
```

```
-> WHERE ROL.TYPE = 'SF';
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+
| ID | FIRNAME | LASTNAME | COUNTRY | EMAIL | CLIEN_ID | ROL_id | BANE | TYPE |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | BRYAN | CRUZ | PANAMA | BRYAN.CRUIZ@UIP.EDU.PA | 1 | 1 | BANCO GENERAL | SF |
| 2 | FERNANDO | GONZALES | PANAMA | FEGONZALES@GMAIL.COM | 2 | 2 | SCOTIA BANK | SF |
| 3 | MIGUEL | CASTRELLON | USA | MIGCASTR21@OUTLOOK.ES | 3 | 3 | CREDICORP BANK | SF |
+-----+-----+-----+-----+-----+-----+-----+-----+
```