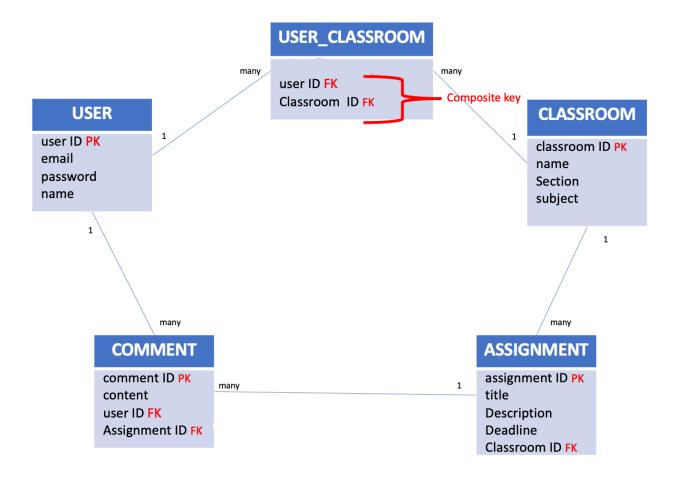
C2-S5-PRACTICE

NOTE: check your **THEORY slides** to answer those questions!

EXERCISE 1 – GOOGLE CLASSROOM DATABASE



Here is the Entity Relation Diagram of the Google Classroom Database you designed in Chapter 1. You are now going to put it in MySQL!

Q1 – Write a statement to create the google classroom database, and to tell MySQL you are now working with it.

```
MariaDB [(none)]> create database googleclassroom;
Query OK, 1 row affected (0.011 sec)
MariaDB [(none)]> use googleclassroom;
Database changed
```

Q2 – For each table (USER, USER_CLASSROOM, CLASSROOM, ASSIGNMENT, COMMENT), complete the following arrays, by specifying for each attribute:

- o The attribute type (SQL type) and size
- o Can be null or not?
- o Is a primary key or foreign keys?

- USER TABLE

Attribute name	Type / size	Can be Null?	Key
UserID	int	Not null	Primary key
name	Varchar(100)	Not null	
email	Varchar(100)	Null	
password	Varchar(100)	Null	

USER_CLASSROOM TABLE

Attribute name	Type / size	Null?	Кеу
User ID	Int	NOT NULL	Foreign key
Classroom ID	Int	NOT NULL	Foreign key

CLASSROOM TABLE

Attribute name	Type / size	Null?	Key
Classroom ID	Int	Not null	Primary key
Name	Varchar(100)	Not null	
Section	Varchar(100)	Null	
Subject	Varchar(100)	Not null	

ASSIGNMENT TABLE

Attribute name	Type / size	Null?	Key
Assignment ID	Int	Not null	Primary key
Title	Varchar(100)	Not null	
Description	Varchar(255)	Null	
Deadline	Date	Null	
Classroom Id	int	Not null	Foreign key

COMMENT TABLE

Attribute name	Type / size	Null?	Key
Comment id	int	Not null	Primary key
Content	Varchar(255)	Not null	
User Id	int	Not null	Foreign key
Assignment ID	Int	Not null	Foreign key

Q3 – Write the SQL statement to create the 5 tables with appropriate properties.

WARNING: Create the tables in the right order to respect the Foreign Key constraints.

USER TABLE

```
MariaDB [googleclassroom]> create table user(
    -> UserID int auto_increment primary key,
    -> name varchar(100) NOT NULL,
    -> email varchar(100),
    -> password varchar(100)
    -> );
Query OK, 0 rows affected (0.017 sec)
MariaDB [googleclassroom]> desc user;
 Field
                           | Null | Key | Default | Extra
            Type
 UserID
             int(11)
                            NO
                                   PRI
                                         NULL
                                                    auto_increment
             varchar(100)
 name
                            NO
                                         NULL
  email
             varchar(100)
                            YES
                                          NULL
           varchar(100)
  password
                            YES
                                         NULL
 rows in set (0.005 sec)
```

CLASSROOM TABLE

USER CLASSROOM TABLE

ASSIGNMENTT TABLE

```
MariaDB [googleclassroom]> create table assignment(
   -> assignmentID int auto_increment,
   -> title varchar(100) NOT NULL,
   -> description varchar(255),
   -> deadline date,
   -> classroomID int NOT NULL,
   -> PRIMARY KEY(assignmentID),
   -> FOREIGN KEY(classroomID) REFERENCES classroom(classroomID)
   -> );
Query OK, 0 rows affected (0.024 sec)
MariaDB [googleclassroom]> desc assignment;
                             | Null | Key | Default | Extra
Field
              Type
 assignmentID | int(11)
                              NO
                                    | PRI | NULL
                                                    auto_increment
              varchar(100)
 title
                              NO
                                           NULL
 description
              varchar(255)
                              YES
                                           NULL
 deadline
                date
                              YES
                                           NULL
 classroomID | int(11)
                             NO MUL NULL
 rows in set (0.014 sec)
```

COMMENT TABLE

```
MariaDB [googleclassroom]> create table comment(
   -> commentID int auto increment primary key,
    -> content varchar(255) NOT NULL,
   -> userID int NOT NULL,
   -> assignmentID int NOT NULL,
   -> FOREIGN KEY (userID) REFERENCES user(userID),
   -> FOREIGN KEY (assignmentID) REFERENCES assignment(assignmentID)
   -> );
Query OK, 0 rows affected (0.024 sec)
MariaDB [googleclassroom]> desc comment;
                             | Null | Key | Default | Extra
 Field
               Type
 commentID
              int(11)
                             NO
                                      PRI
                                            NULL
                                                      auto_increment
              | varchar(255)
| int(11)
 content
                             NO
                                            NULL
 userID
                                      MUL |
                                            NULL
                              NO
 assignmentID | int(11)
                             NO
                                    MUL NULL
4 rows in set (0.015 sec)
```

Q4 – Write statements to insert at least 3 records in each table.

USER TABLE

CLASSROOM TABLE

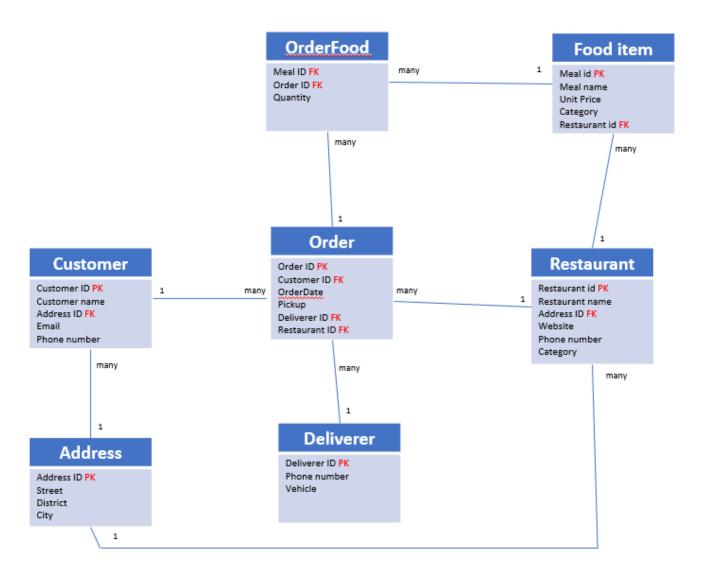
USER CLASSROOM TABLE

ASSIGNMENT TABLE

CONTENT TABLE

EXERCISE 2 – FOODPANDA DATABASE

Here is the Entity Relation Diagram of the Foodpanda Database you designed in Chapter 1. You are now going to put it in MySQL!



Q1 – Write a statement to create the Foodpanda database, and to tell MySQL you are now working with it.

```
MariaDB [(none)]> create database Foodpanda;
Query OK, 1 row affected (0.012 sec)
MariaDB [(none)]> use Foodpanda;
Database changed
MariaDB [Foodpanda]>
```

Q2 – For each table of the database, complete the following array, by specifying for each attribute:

- o The attribute type (SQL type) and size
- o Can be null or not?
- o Is a primary key or foreign keys?

1. Address Table

Attribute name	Type / size	Null?	Key
addressID	Int	Not NULL	Primary key
street	Varchar (100)	Not null	
district	Varchar (100)	Not null	
city	Varchar (100)	Not null	

2. Customers Table

Attribute name	Type / size	Null?	Key
customerID	Int	NOT NULL	Primary key
customerName	Varchar (100)	NOT NULL	
addressID	Varchar (100)	NULL	FOREIGN KEY
email	Varchar (100)	Null	
phoneNumber	Varchar (100)	NOT NULL	

3. Deliverers Table:

Attribute name	Type / size	Null?	Key
delivererID	int	NOT NULL	Primary key
phoneNumber	Varchar (100)	NOT NULL	
vehicle	Varchar (100)	NULL	

4. Restaurants Table:

Attribute name	Type / size	Null?	Key
restaurantID	Int	NOT NULL	Primary key
restaurantName	Varchar (100)	NOT NULL	
addressID	Varchar (100)	NULL	Foreign key
website	Varchar (100)	NULL	
phoneNumber	Varchar (100)	NOT NULL	
category	Varchar (100)	NULL	

5. Food_items Table:

Attribute name	Type / size	Null?	Key
mealID	Int	NOT NULL	Primary key
mealName	Varchar (100)	NOT NULL	
unitPrice	Varchar (100)	NOT NULL	
category	Varchar (100)	NOT NULL	
restaurantID	Int	NULL	Foreign key

6. Orders Table:

Attribute name	Type / size	Null?	Key
orderID	int	NOT NULL	Primary key
customerID	Int	NOT NULL	Foreign key
orderdate	date	NOT NULL	
pickUp	Varchar (100)	NULL	
restaurantID	Int	NOT NULL	Foreign key
delivererID	int	NOT NULL	Foreign key

7. Order food Table:

Attribute name	Type / size	Null?	Key
mealID	Int	NOT NULL	Foreign key
orderID	int	NOT NULL	Foreign key
quantity	Int	NOT NULL	

Q3 – Write the SQL statement to create the tables with appropriate properties.

<u>WARNING</u>: Create the tables in the right order to respect the Foreign Key constraints.

Address table

```
MariaDB [Foodpanda]> create table Address(
   -> addressID int primary key auto_increment,
   -> street varchar(100) NOT NULL,
   -> districtt varchar(100) NOT NULL,
   -> city varchar(100) NOT NULL
   -> );
Query OK, 0 rows affected (0.032 sec)
MariaDB [Foodpanda]> desc Address;
                         | Null | Key | Default | Extra
 Field
           Type
 addressID | int(11)
                         NO
                                | PRI | NULL
                                                auto_increment
           | varchar(100) | NO
                                        NULL
 street
 districtt | varchar(100)
                         NO
                                        NULL
 city | varchar(100) | NO
                                      NULL
 rows in set (0.016 sec)
```

customers table

```
MariaDB [Foodpanda]> create table customers(
   -> customerID int primary key,
   -> customerName varchar(100) NOT NULL,
   -> addressID int,
   -> email varchar(100),
   -> phoneNumber varchar(100),
   -> FOREIGN KEY (addressID) REFERENCES Address(addressID)
Query OK, 0 rows affected (0.027 sec)
MariaDB [Foodpanda]> desc customers;
 Field
              Type
                             | Null | Key | Default | Extra
              int(11)
 customerID
                             NO
                                    | PRI | NULL
               varchar(100)
 customerName
                              NO
                                           NULL
 addressID
                int(11)
                              YES
                                     MUL
                                           NULL
 email
               varchar(100)
                              YES
                                           NULL
              | varchar(100) | YES
                                          NULL
 phoneNumber
 rows in set (0.015 sec)
```

Deliverers table

```
MariaDB [Foodpanda]> create table deliverers(
    -> delivererID int primary key auto_increment,
    -> phoneNumber varchar(100) NOT NULL,
    -> vehicle varchar(100)
    -> );
Query OK, 0 rows affected (0.049 sec)
MariaDB [Foodpanda]> desc deliverers;
 Field
                              | Null | Key | Default | Extra
              Type
 delivererID | int(11)
phoneNumber | varchar(
                                                       auto_increment
                                     | PRI | NULL
                              NO
                varchar(100)
                               NO
                                            NULL
 vehicle | varchar(100) | YES
                                           NULL
 rows in set (0.016 sec)
```

Restaurants tables

```
MariaDB [Foodpanda]> create table restaurants(
   -> restaurantID int auto_increment,
   -> restaurantName varchar(100) NOT NULL,
   -> addressID int,
   -> website varchar(100),
   -> phoneNumber varchar(100),
   -> category varchar(100),
    -> FOREIGN KEY(addressID) REFERENCES Address(addressID),
    -> PRIMARY KEY(restaurantID)
Query OK, 0 rows affected (0.036 sec)
MariaDB [Foodpanda]> desc restaurants;
 Field
                         | Null | Key | Default | Extra
                Type
                                       PRI | NULL
 restaurantID | int(11)
                               NO
                                                        auto increment
 restaurantName | varchar(100) | NO
                                              NULL
                                      MUL
 addressID
                 int(11)
                                 YES
                                              NULL
                 varchar(100)
 website
                                              NULL
                                 YES
 phoneNumber | varchar(100) | YES
category | varchar(100) | YES
                                              NULL
                                              NULL
6 rows in set (0.015 sec)
```

Food items tables

```
MariaDB [Foodpanda]> create table Food_item(
   -> mealID int auto increment,
   -> mealName varchar(100) NOT NULL,
   -> unitPrice varchar(100) NOT NULL,
   -> category varchar(100) NOT NULL,
   -> restaurantID int,
   -> PRIMARY KEY(mealID),
   -> FOREIGN KEY (restaurantID) REFERENCES restaurants(restaurantID)
   -> );
Query OK, 0 rows affected (0.023 sec)
MariaDB [Foodpanda]> desc Food item;
 Field
                            | Null | Key | Default | Extra
              Type
                                   PRI NULL
 mealID
               int(11)
                                                    auto increment
               varchar(100) | NO
 mealName
                                           NULL
 unitPrice
              varchar(100)
                            NO
                                           NULL
 category
              varchar(100)
                            NO
                                           NULL
 restaurantID | int(11)
                             YES
                                   MUL NULL
```

Orders tables

```
MariaDB [Foodpanda]> create table orders(
   -> orderID int auto_increment primary key,
    -> customerID int NOT NULL,
    -> orderDate date NOT NULL,
   -> pickUp varchar(100),
   -> restaurantID int NOT NULL,
   -> delivererID int NOT NULL,
   -> FOREIGN KEY(customerID) REFERENCES customers(customerID),
   -> FOREIGN KEY(restaurantID) REFERENCES restaurants(restaurantID),
    -> FOREIGN KEY(delivererID) REFERENCES deliverers(delivererID)
    -> );
Query OK, 0 rows affected (0.025 sec)
MariaDB [Foodpanda]> DESC orders;
                              | Null | Key | Default | Extra
 Field
               Type
 orderID
               | int(11)
                                                      auto increment
                               NO
                                      PRI
                                            NULL
 customerID
               int(11)
                               NO
                                      MUL
                                            NULL
 orderDate
                date
                               NO
                                            NULL
                varchar(100)
                               YES
                                            NULL
 pickUp
 restaurantID
                int(11)
                               NO
                                      MUL
                                            NULL
 delivererID | int(11)
                               NO
                                      MUL | NULL
 rows in set (0.014 sec)
```

Order food table

Q4 – Write statements to insert between 2 and 4 records in each table.

Address table

customers table

deliverers table

restaurant table

Food-item table

Order table

Order food table