GBD03 Task

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EXERCISE 1

Writes SQL instructions necessary to create the database from the following relational model that corresponds to the Mouro Restaurant:

```
DROP DATABASE IF EXISTS MouroRestaurant;


CREATE DATABASE MouroRestaurant;


USE MouroRestaurant;


CREATE TABLE EMPLOYESS (

ID VARCHAR(9) NOT NULL,

Name VARCHAR(25),

LastName VARCHAR(50),

Address VARCHAR(50),

City VARCHAR(30),

Phone VARCHAR(9),

CP VARCHAR(5),

EntryDate DATE,

Category VARCHAR(25),

Salary DECIMAL(5,2),

PRIMARY KEY (ID)

)ENGINE=InnoDB;
```

```
CREATE TABLE COOKS (
ID VARCHAR(9) NOT NULL,
Title VARCHAR(25),
Speciality VARCHAR(25),
PRIMARY KEY(ID)

)ENGINE=InnoDB;

CREATE TABLE ADMINISTRATION (
ID VARCHAR(9) NOT NULL,
Position VARCHAR(25),
PRIMARY KEY(ID)
)ENGINE=InnoDB;

CREATE TABLE WAITERS (
ID VARCHAR(9) NOT NULL,
Turn VARCHAR(10),
years TINYINT,
incharge_ID VARCHAR(9) NOT NULL,
PRIMARY KEY(ID)
)ENGINE=InnoDB;

CREATE TABLE DININGROOM (
CodeD VARCHAR(5) NOT NULL,
Name VARCHAR(25),
```

```
Capacity VARCHAR(3),
NTables VARCHAR(3),
Location VARCHAR(20),
PRIMARY KEY (CodeD)
)ENGINE=InnoDB;

CREATE TABLE TABLES (
CodeT VARCHAR(5) NOT NULL,
CodeD VARCHAR(5) NOT NULL,
Nseats VARCHAR(4),
Waiter_ID VARCHAR(9) NOT NULL,
PRIMARY KEY (CodeT,CodeD)
)ENGINE=InnoDB;

CREATE TABLE Make (
CodeT VARCHAR(5) NOT NULL,
CodeD VARCHAR(5) NOT NULL,
Nreservation INT NOT NULL,
NseatsR VARCHAR(4),
PRIMARY KEY (CodeT,CodeD,Nreservation)
)ENGINE=InnoDB;

CREATE TABLE RESERVATIONS (
Nreservation INTEGER AUTO_INCREMENT NOT NULL,
Dtreservation DATE,
Name VARCHAR(80),
```

```
Dtreserved DATETIME,
LunchDinner SET("Lunch", "Dinner"),
Npeople VARCHAR(4),
Various TEXT(200),
PRIMARY KEY (Nreservation)
)ENGINE=InnoDB;

CREATE TABLE BILLS (
NBill INT AUTO_INCREMENT NOT NULL,
DateB DATE,
CodeT VARCHAR(5) NOT NULL,
CodeD VARCHAR(5) NOT NULL,
PRIMARY KEY (NBill)
)ENGINE=InnoDB;

CREATE TABLE Include (
NBill INTEGER AUTO_INCREMENT NOT NULL,
CodeDs VARCHAR(4),
Units INTEGER,
PRIMARY KEY (NBill,CodeDs)
)ENGINE=InnoDB;

CREATE TABLE DISHES (
CodeDs VARCHAR(4) NOT NULL,
Name VARCHAR(25),
Description TEXT(200),
```

```
Type VARCHAR(10),
Price DECIMAL(3,2),
PRIMARY KEY (CodeDs)
)ENGINE=InnoDB;

CREATE TABLE Contain (
CodeDS VARCHAR(4) NOT NULL,
CodePr VARCHAR(4) NOT NULL,
Amount TINYINT,
PRIMARY KEY (CodeDs,CodePr)
)ENGINE=InnoDB;

CREATE TABLE PRODUCTS (
CodePr VARCHAR(5) NOT NULL,
Description TEXT(150),
Stock TINYINT,
BaseUnit TINYINT,
PriceU DECIMAL(3,2),
Category VARCHAR(15),
CodeSp VARCHAR(5) NOT NULL,
PRIMARY KEY (CodePr)
)ENGINE=InnoDB;

CREATE TABLE SUPPLIERS (
CodeSp VARCHAR(5) NOT NULL,
Address VARCHAR(30),
```

```
Zip VARCHAR(5),

Phone VARCHAR(9),

Fax VARCHAR(9),

Contact VARCHAR(20),

PRIMARY KEY (CodeSp)

)ENGINE=InnoDB;



ALTER TABLE COOKS

ADD CONSTRAINT fkCook_1 FOREIGN KEY(ID) REFERENCES EMPLOYESS(ID) ON DELETE CASCADE ON UPDATE CASCADE;


ALTER TABLE ADMINISTRATION

ADD CONSTRAINT fkADM_1 FOREIGN KEY(ID) REFERENCES EMPLOYESS(ID) ON DELETE CASCADE ON UPDATE CASCADE;


ALTER TABLE WAITERS

ADD CONSTRAINT fkWAIT_1 FOREIGN KEY(ID) REFERENCES EMPLOYESS(ID) ON DELETE CASCADE ON UPDATE CASCADE,

ADD CONSTRAINT fkWAIT_2 FOREIGN KEY(incharge_ID) REFERENCES EMPLOYESS(ID) ON DELETE CASCADE ON UPDATE CASCADE;


ALTER TABLE TABLES

ADD CONSTRAINT fkTAB_1 FOREIGN KEY(CodeD) REFERENCES DININGROOM(CodeD) ON DELETE CASCADE ON UPDATE CASCADE,

ADD CONSTRAINT fkTAB_2 FOREIGN KEY(Waiter_ID) REFERENCES WAITERS(ID) ON DELETE CASCADE ON UPDATE CASCADE;
```

ALTER TABLE Make

ADD CONSTRAINT fkMake_1 FOREIGN KEY(CodeT) REFERENCES TABLES(CodeT) ON DELETE CASCADE ON UPDATE CASCADE,

ADD CONSTRAINT fkMake_2 FOREIGN KEY(CodeD) REFERENCES DININGROOM(CodeD) ON DELETE CASCADE ON UPDATE CASCADE,

ADD CONSTRAINT fkMake_3 FOREIGN KEY(Nreservation) REFERENCES RESERVATIONS(Nreservation) ON DELETE CASCADE ON UPDATE CASCADE;

ALTER TABLE BILLS

ADD CONSTRAINT fkBills_1 FOREIGN KEY(CodeT,CodeD) REFERENCES TABLES(CodeT,CodeD) ON DELETE CASCADE ON UPDATE CASCADE;

ALTER TABLE Include

ADD CONSTRAINT fkInc_1 FOREIGN KEY (NBill) REFERENCES BILLS (NBill) ON DELETE CASCADE ON UPDATE CASCADE,

ADD CONSTRAINT fkInc_2 FOREIGN KEY (CodeDs) REFERENCES DISHES (CodeDs) ON DELETE CASCADE ON UPDATE CASCADE;

ALTER TABLE Contain

ADD CONSTRAINT fkCont_1 FOREIGN KEY (CodeDs) REFERENCES DISHES (CodeDs) ON DELETE CASCADE ON UPDATE CASCADE,

ADD CONSTRAINT fkCont_2 FOREIGN KEY (CodePr) REFERENCES PRODUCTS (CodePr) ON DELETE CASCADE ON UPDATE CASCADE;

ALTER TABLE PRODUCTS

ADD CONSTRAINT fkPro_1 FOREIGN KEY (CodeSp) REFERENCES SUPPLIERS (CodeSp) ON DELETE CASCADE ON UPDATE CASCADE;

EXERCISE 2: EXERCISE 2

About the database Mouro Restaurant made the following changes:

Table EMPLOYEES

2.1. Add an index to facilitate frequent searches by last name without duplicates.

```
ALTER TABLE EMPLEADOS

ADD UNIQUE INDEX index_LName (LastName, );
```

2.2. The restaurant has opened on July 15, 2010. Check that the entry date of the employees is not earlier.

```
ALTER TABLE EMPLEADOS

ADD CHECK (EntryDate>="2010-07-15");
```

Table WAITERS

2.3. The turn can only take 3 values: morning, noon and night. Add this restriction considering that a waiter can have more than one turn (do not use CHECK).

```
ALTER TABLE CAMARAROS

MODIFY Turn SET("Morning", "Noon", "Night");
```

Table SUPPLIERS

2.4. Add the columns Name and Surname between the code and the address.

```
ALTER TABLE  SUPPLIERS

ADD COLUMN LastName VARCHAR(60) AFTER CodeSp,

ADD COLUMN Name VARCHAR(25) AFTER LastName;
```

Table TABLES

2.5. The default number of seats at the tables is 4.

```
ALTER TABLE TABLES

ALTER COLUMN Nseats SET DEFAULT 4;
```

Table PRODUCTS

2.6. Add an index by category. Displays all indexes of the table.

```
ALTER TABLE PRODUCTS

ADD INDEX indexcat (Category);
```

2.7. Add a constraint on the table, so that the Stock is 4-digit integer, unsigned and not admit null values.

```
ALTER TABLE PRODUCTS

MODIFY Stock SMALLINT(4) UNSIGNED NOT NULL;
```

2.8. Delete the newly created index.

```
DROP INDEX indexcat ON PRODUCTS;
```

Table DISHES

2.9. Deletes the table SUPPLIERS. What happen? Deletes foreign keys previously.

DROP TABLE SUPPLIERS; => Error Code: 1217. Cannot delete or update a parent row: a foreign key constraint fails.

```
ALTER TABLE PRODUCTS

DROP FOREIGN KEY fkPro_1,

DROP COLUMN CodeSp;

DROP TABLE SUPPLIERS;
```

Mouro Restaurant DATABASE

2.10. Deletes the database.

```
DROP DATABASE  MouroRestaurant;
```