**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 CAMAREROS

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;