Homework 3 Report

# Create Table Code:

//Creating Restaurant Table

CREATE TABLE Restaurant(

restaurantID INTEGER PRIMARY KEY,

restaurantName CHAR(15) NOT NULL,

type CHAR(15) NOT NULL,

city CHAR(15) NOT NULL);

//Creating Dish Table

CREATE TABLE Dish(

dishNo INTEGER PRIMARY KEY,

dishname CHAR(15) NOT NULL,

type ENUM('ap', 'en', 'ds'));

//Creating MenuItem Table

CREATE TABLE MenuItem(

itemNo INTEGER PRIMARY KEY,

restaurantNo INTEGER, dishNo INTEGER,

FOREIGN KEY (restaurantNo) REFERENCES Restaurant (restaurantID) ON DELETE RESTRICT,

FOREIGN KEY (dishNo) REFERENCES Dish (dishNo) ON DELETE SET NULL,

price DECIMAL(4,2) CHECK (price in (price<= 50.00 and price>=5.00)));

//Creating FoodOrder Table

CREATE TABLE FoodOrder(

orderNo INTEGER PRIMARY KEY,

itemNo INTEGER,

FOREIGN KEY (itemNo) REFERENCES MenuItem (itemNo) ON DELETE CASCADE,

dt DATE CHECK (date BETWEEN 2017-01-01 AND dateTo),

ts TIME NOT NULL);

# Log:

mysql> SHOW TABLES;

+--------------------+

| Tables\_in\_gwgraham |

+--------------------+

| Dish |

| FoodOrder |

| MenuItem |

| Restaurant |

+--------------------+

4 rows in set (0.00 sec)

mysql> DESC Dish;

+----------+----------------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+----------+----------------------+------+-----+---------+-------+

| dishNo | int(11) | NO | PRI | NULL | |

| dishname | char(15) | NO | | NULL | |

| type | enum('ap','en','ds') | YES | | NULL | |

+----------+----------------------+------+-----+---------+-------+

3 rows in set (0.00 sec)

mysql> DESC FoodOrder;

+---------+---------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+---------+---------+------+-----+---------+-------+

| orderNo | int(11) | NO | PRI | NULL | |

| itemNo | int(11) | YES | MUL | NULL | |

| dt | date | YES | | NULL | |

| ts | time | NO | | NULL | |

+---------+---------+------+-----+---------+-------+

4 rows in set (0.00 sec)

mysql> DESC MenuItem;

+--------------+--------------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+--------------+------+-----+---------+-------+

| itemNo | int(11) | NO | PRI | NULL | |

| restaurantNo | int(11) | YES | MUL | NULL | |

| dishNo | int(11) | YES | MUL | NULL | |

| price | decimal(4,2) | YES | | NULL | |

+--------------+--------------+------+-----+---------+-------+

4 rows in set (0.00 sec)

mysql> DESC Restaurant;

+----------------+----------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+----------------+----------+------+-----+---------+-------+

| restaurantID | int(11) | NO | PRI | NULL | |

| restaurantName | char(15) | NO | | NULL | |

| type | char(15) | NO | | NULL | |

| city | char(15) | NO | | NULL | |

+----------------+----------+------+-----+---------+-------+

4 rows in set (0.00 sec)

mysql> SHOW CREATE TABLE Dish;

+-------+------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

| Table | Create Table |

+-------+------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

| Dish | CREATE TABLE `Dish` (

`dishNo` int(11) NOT NULL,

`dishname` char(15) NOT NULL,

`type` enum('ap','en','ds') DEFAULT NULL,

PRIMARY KEY (`dishNo`)

) ENGINE=InnoDB DEFAULT CHARSET=latin1 |

+-------+------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

1 row in set (0.00 sec)

mysql> SHOW CREATE TABLE FoodOrder;

+-----------+--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

| Table | Create Table |

+-----------+--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

| FoodOrder | CREATE TABLE `FoodOrder` (

`orderNo` int(11) NOT NULL,

`itemNo` int(11) DEFAULT NULL,

`dt` date DEFAULT NULL,

`ts` time NOT NULL,

PRIMARY KEY (`orderNo`),

KEY `itemNo` (`itemNo`),

CONSTRAINT `FoodOrder\_ibfk\_1` FOREIGN KEY (`itemNo`) REFERENCES `MenuItem` (`itemNo`) ON DELETE CASCADE

) ENGINE=InnoDB DEFAULT CHARSET=latin1 |

+-----------+--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

1 row in set (0.00 sec)

mysql> SHOW CREATE TABLE MenuItem;

+----------+--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

| Table | Create Table |

+----------+--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

| MenuItem | CREATE TABLE `MenuItem` (

`itemNo` int(11) NOT NULL,

`restaurantNo` int(11) DEFAULT NULL,

`dishNo` int(11) DEFAULT NULL,

`price` decimal(4,2) DEFAULT NULL,

PRIMARY KEY (`itemNo`),

KEY `restaurantNo` (`restaurantNo`),

KEY `dishNo` (`dishNo`),

CONSTRAINT `MenuItem\_ibfk\_1` FOREIGN KEY (`restaurantNo`) REFERENCES `Restaurant` (`restaurantID`),

CONSTRAINT `MenuItem\_ibfk\_2` FOREIGN KEY (`dishNo`) REFERENCES `Dish` (`dishNo`) ON DELETE SET NULL

) ENGINE=InnoDB DEFAULT CHARSET=latin1 |

+----------+--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

1 row in set (0.00 sec)

mysql> SHOW CREATE TABLE Restaurant;

+------------+------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

| Table | Create Table |

+------------+------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

| Restaurant | CREATE TABLE `Restaurant` (

`restaurantID` int(11) NOT NULL,

`restaurantName` char(15) NOT NULL,

`type` char(15) NOT NULL,

`city` char(15) NOT NULL,

PRIMARY KEY (`restaurantID`)

) ENGINE=InnoDB DEFAULT CHARSET=latin1 |

+------------+------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------+

1 row in set (0.00 sec)

mysql> SELECT COLUMN\_NAME, CONSTRAINT\_NAME, REFERENCED\_COLUMN\_NAME, REFERENCED\_TABLE\_NAME FROM INFORMATION\_SCHEMA.KEY\_COLUMN\_USAGE WHERE REFERENCED\_COLUMN\_NAME IS NOT NULL AND CONSTRAINT\_SCHEMA = 'gwgraham';

+--------------+------------------+------------------------+-----------------------+

| COLUMN\_NAME | CONSTRAINT\_NAME | REFERENCED\_COLUMN\_NAME | REFERENCED\_TABLE\_NAME |

+--------------+------------------+------------------------+-----------------------+

| itemNo | FoodOrder\_ibfk\_1 | itemNo | MenuItem |

| restaurantNo | MenuItem\_ibfk\_1 | restaurantID | Restaurant |

| dishNo | MenuItem\_ibfk\_2 | dishNo | Dish |

+--------------+------------------+------------------------+-----------------------+

3 rows in set (0.01 sec)

mysql> SELECT\*FROM Restaurant;

+--------------+----------------+-------+--------------+

| restaurantID | restaurantName | type | city |

+--------------+----------------+-------+--------------+

| 0 | Tasty Thai | Asian | Dallas |

| 3 | Eureka Pizza | Pizza | Fayetteville |

| 5 | Tasty Thai | Asian | Las Vegas |

+--------------+----------------+-------+--------------+

3 rows in set (0.00 sec)

mysql> SELECT\*FROM Dish;

+--------+-----------------+------+

| dishNo | dishname | type |

+--------+-----------------+------+

| 7 | Cheese Pizza | en |

| 10 | Custard | ds |

| 12 | Garlic Bread | ap |

| 13 | Spring Rolls | ap |

| 15 | Pad Thai | en |

| 16 | Pot Stickers | ap |

| 19 | Pepperoni Pizza | en |

| 22 | Masaman Curry | en |

| 44 | Salad | ap |

| 77 | Veggie Supreme | en |

+--------+-----------------+------+

10 rows in set (0.00 sec)

mysql> SELECT\*FROM MenuItem;

+--------+--------------+--------+-------+

| itemNo | restaurantNo | dishNo | price |

+--------+--------------+--------+-------+

| 0 | 0 | 13 | 8.00 |

| 1 | 0 | 16 | 9.00 |

| 2 | 0 | 44 | 10.00 |

| 3 | 0 | 15 | 19.00 |

| 4 | 0 | 22 | 19.00 |

| 5 | 3 | 44 | 6.25 |

| 6 | 3 | 12 | 5.50 |

| 7 | 3 | 7 | 12.50 |

| 8 | 3 | 19 | 13.50 |

| 9 | 5 | 13 | 6.00 |

| 10 | 5 | 15 | 15.00 |

| 11 | 5 | 22 | 14.00 |

+--------+--------------+--------+-------+

12 rows in set (0.00 sec)

mysql> SELECT\*FROM FoodOrder;

+---------+--------+------------+----------+

| orderNo | itemNo | dt | ts |

+---------+--------+------------+----------+

| 0 | 2 | 2017-03-01 | 10:30:00 |

| 1 | 0 | 2017-03-02 | 15:33:00 |

| 2 | 3 | 2017-03-01 | 15:35:00 |

| 3 | 5 | 2017-03-03 | 21:00:00 |

| 4 | 7 | 2017-03-01 | 18:11:00 |

| 5 | 7 | 2017-03-04 | 18:51:00 |

| 6 | 9 | 2017-03-01 | 19:00:00 |

| 7 | 11 | 2017-03-05 | 17:15:00 |

+---------+--------+------------+----------+

8 rows in set (0.01 sec)

mysql> SELECT Restaurant.restaurantName, Restaurant.city

-> FROM Restaurant, MenuItem

-> WHERE MenuItem.dishNo = '44' AND MenuItem.restaurantNo = Restaurant.restaurantID;

+----------------+--------------+

| restaurantName | city |

+----------------+--------------+

| Tasty Thai | Dallas |

| Eureka Pizza | Fayetteville |

+----------------+--------------+

2 rows in set (0.00 sec)

mysql> SELECT DISTINCT Restaurant.restaurantName, Dish.dishName, MenuItem.price

-> FROM Dish, MenuItem, Restaurant

-> WHERE MenuItem.restaurantNo IN ('0', '5') AND Dish.dishNo = MenuItem.dishNo

-> AND MenuItem.restaurantNo = Restaurant.restaurantID

-> ORDER BY MenuItem.price ASC;

+----------------+---------------+-------+

| restaurantName | dishName | price |

+----------------+---------------+-------+

| Tasty Thai | Spring Rolls | 6.00 |

| Tasty Thai | Spring Rolls | 8.00 |

| Tasty Thai | Pot Stickers | 9.00 |

| Tasty Thai | Salad | 10.00 |

| Tasty Thai | Masaman Curry | 14.00 |

| Tasty Thai | Pad Thai | 15.00 |

| Tasty Thai | Masaman Curry | 19.00 |

| Tasty Thai | Pad Thai | 19.00 |

+----------------+---------------+-------+

8 rows in set (0.00 sec)

mysql> SELECT DISTINCT Restaurant.restaurantName, Restaurant.city,

-> COUNT(DISTINCT MenuItem.dishNo) AS MenuItems,

-> ROUND(AVG(MenuItem.price), 2) AS AveragePrice

-> FROM Restaurant, MenuItem, Dish

-> WHERE Restaurant.restaurantID = MenuItem.restaurantNo AND MenuItem.dishNo = Dish.dishNo

-> AND MenuItem.dishNo = Dish.dishNo

-> GROUP BY Restaurant.restaurantID;

+----------------+--------------+-----------+--------------+

| restaurantName | city | MenuItems | AveragePrice |

+----------------+--------------+-----------+--------------+

| Tasty Thai | Dallas | 5 | 13.00 |

| Eureka Pizza | Fayetteville | 4 | 9.44 |

| Tasty Thai | Las Vegas | 3 | 11.67 |

+----------------+--------------+-----------+--------------+

3 rows in set (0.00 sec)

mysql> SELECT Restaurant.restaurantName, COUNT(FoodOrder.itemNo) AS TotalOrders,

-> ROUND(AVG(MenuItem.price), 2) AS AverageBasePrice,

-> SUM(MenuItem.price) AS TotalBasePrice,

-> 1.1 \* SUM(MenuItem.price) AS TotalWithTax

-> FROM Restaurant, FoodOrder, MenuItem

-> WHERE restaurantID = '3' AND FoodOrder.itemNo = MenuItem.itemNo

-> AND MenuItem.restaurantNo = '3';

+----------------+-------------+------------------+----------------+--------------+

| restaurantName | TotalOrders | AverageBasePrice | TotalBasePrice | TotalWithTax |

+----------------+-------------+------------------+----------------+--------------+

| Eureka Pizza | 3 | 10.42 | 31.25 | 34.375 |

+----------------+-------------+------------------+----------------+--------------+

1 row in set (0.00 sec)

mysql> SELECT COUNT(FoodOrder.itemNo) AS TotalOrders,

-> ROUND(AVG(MenuItem.price), 2) AS AverageBasePrice,

-> SUM(MenuItem.price) AS TotalBasePrice,

-> 1.1 \* SUM(MenuItem.price) AS TotalWithTax

-> FROM FoodOrder, MenuItem

-> WHERE FoodOrder.itemNo = MenuItem.itemNo;

+-------------+------------------+----------------+--------------+

| TotalOrders | AverageBasePrice | TotalBasePrice | TotalWithTax |

+-------------+------------------+----------------+--------------+

| 8 | 11.03 | 88.25 | 97.075 |

+-------------+------------------+----------------+--------------+

1 row in set (0.00 sec)

mysql> notee