Data Centric Web Applications

Lab 2 MySQL Review II

Contents

[Part 1 2](#_Toc8663)

[Question 1.1 2](#_Toc8664)

[Question 1.2 2](#_Toc8665)

[Question 1.3 2](#_Toc8666)

[Question 1.4 2](#_Toc8667)

[Question 1.5 2](#_Toc8668)

[Question 1.6 2](#_Toc8669)

[Question 1.7 3](#_Toc8670)

[Question 1.8 3](#_Toc8671)

[Question 1.9 4](#_Toc8672)

[Question 1.10 4](#_Toc8673)

[Question 1.11 4](#_Toc8674)

[Question 1.12 4](#_Toc8675)

[Question 1.13 5](#_Toc8676)

[Part 2 6](#_Toc8677)

[Question 2.1 6](#_Toc8678)

[Question 2.2 6](#_Toc8679)

[Question 2.3 6](#_Toc8680)

[Question 2.4 6](#_Toc8681)

[Question 2.5 7](#_Toc8682)

[Question 2.6 7](#_Toc8683)

# Part 1

* Get salespersonsDB2P1.sql from Moodle.

* Import it into MySQL described in Lab 1.

## Question 1.1

Use the show create table <table name> command to find out the structure of the salesperson\_table, and list the Primary Key(s) and Foreign Key(s).

## Question 1.2

Use the show create table <table name> command to find out the structure of the salesperson\_city\_table, and list the Primary Key(s) and Foreign Key(s).

## Question 1.3

Delete salesman S102 from the salesperson\_table.

What happens and why?

delete from salesperson\_table where sid = "S102";

Query OK. Cannot delete because it is foreign key.

## Question 1.4

Delete salesman S106 from the salesperson\_table.

What happens and why?

delete from salesperson\_table where sid = "S106";

Query OK. S106 deleted.

## Question 1.5

Insert a new salesman in the *salesman\_table* as follows:

sid = ‘S107’

fname = ‘Tom’ surname = ‘Wilson’ dob = 1966-07-12

insert into salesperson\_table (sid, fname, surname, dob) values ('S107', 'Tom', 'Wilson', '1966-07-12');

Query OK. Salesman inserted into table.

## Question 1.6

Insert a new salesman in the *salesman\_table* as follows:

sid = ‘S108’

fname = ‘Pat surname = ‘O’Hara' dob = 1966-07-12

insert into salesperson\_table (sid, fname, surname, dob) values (S108’, Pat, 'OHara', '1966-07-12');

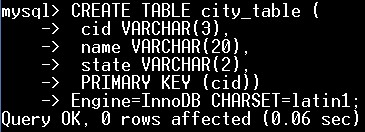
Query OK. Salesman inserted into table.

## Question 1.7

Delete the salesperson\_city\_table as follows:



and create a new table called *city\_table* as follows:



Populate it with the following data:

|  |  |  |
| --- | --- | --- |
| **cid** | **name** | **state** |
| ATL | Atlanta | GA |
| BOS | Boston | MA |
| DAL | Dallas | TX |
| HOU | Houston | TX |
| LA | Los Angeles | CA |
| NY | New York | NY |

## Question 1.8

Recreate the salesperson\_city\_table, this time with two columns: o *sid* VARCHAR(20) which is a Foreign Key referring to the *sid* column in the salesperson\_table. o *cid* VARCHAR(3) which is a Foreign Key referring to the *cid* column in the city\_table.

**HINT**: A Foreign Key is created using the following syntax:

**Foreign Key(***column***) References** *table\_name* **(***column\_in\_referenced\_table***)**.

* *commission* DOUBLE(4,2) o Primary Key is (*sid*, *cid*)
* **NOTE**: Make sure that Engine=InnoDB and charset=latin1 as shown in the previous question.

## Question 1.9

Populate the salesperson\_city\_table so that the following are associated:

|  |  |  |
| --- | --- | --- |
| **salesperson** | **city** | **commission** |
| Tom Smith | Boston | 4.10 |
| Tom Smith | New York | 5.20 |
| Betty Jones | Boston | 3.20 |
| Mick Clark | Dallas | 3.09 |
| Anne Collins | Dallas | NULL |
| Jim Flynn | Atlanta | 3.23 |
| Jim Flynn | Boston | NULL |
| Chloe Smyth | Boston | 5.13 |

## Question 1.10

Delete *Houston* from the city\_table.

What happens and why?

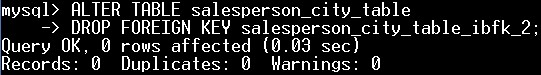
## Question 1.11

Delete *Boston* from the city\_table.

What happens and why?

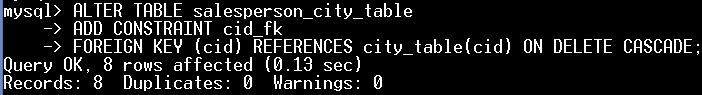
## Question 1.12

Remove the Foreign Key constraint to the *city\_table* from the *salesperson\_city\_table* as follows:



**NOTE**: The *salesperson\_city\_table\_ibfk\_2* refers to the name of the Foreign Key constraint in the salesperson\_city\_table and can be found by using the SHOW CREATE TABLE command.

Create a new Foreign Key constraint on the *salesperson*\_*city\_table* to *city\_table* as follows:



## Question 1.13

Delete *Boston* from the *city\_table*.

What happens and why?

# Part 2

* Get salespersonsDB2P2.sql from Moodle.

* Import it into MySQL described in Lab 1.

## Question 2.1

Show the *fname, surname*, *salary* and a column entitled *Band* for each salesperson. The *Band* column should contain “High” if the salesperson’s salary > 50,000 otherwise it should contain nothing.

## Question 2.2

Show the *fname, surname, dob* and a column entitled *Week Part* for each salesperson. The *Week Part* column should contain “Yes” if the salesperson was born on the weekend, otherwise “NO”.

## Question 2.3

Show the *sid, cid, commission* and a column entitled *Review* for each salesperson. The *Review* column should contain “Review” if the salesperson’s commission in Boston is greater than 4.0.

## Question 2.4

Show all details and a column entitled *Season* for each salesperson.

The *Season* column should contain: o “Spring” if the salesperson was born in February, March, or April o “Summer” if the salesperson was born in May, June, or July o “Autumn” if the salesperson was born in August, September, or October o “Winter” if the salesperson was born in November, December, or January

## Question 2.5

Show the *fname, surname, salary* and a column entitled *Salary Scope* for each salesperson.

The *Salary Scope* column should contain: o “40K” if salesperson’s salary is 40,000.00 to 49999.99 o “50K” if salesperson’s salary is 50,000.00 to 59999.99 o “60K” if salesperson’s salary is 60,000.00 to 69999.99 o “Out of range” otherwise

## Question 2.6

Show the *sid*, *cid*, and a column entitled *Earned Commission* for each salesperson and the city/cities they operate in.

The *Earned Commission* column should contain: o The commission the salesperson earns in each city he/she operates in, if the commission is not NULL. o The string “*None*” if the salesperson’s commission is NULL for a particular city.