

Assessment

- ❖ To create the database and then create all three tables (city, customer, country) inside it, here are the exact MySQL commands you can run.

Step 1: Create the Database

CREATE DATABASE world_data;

Step 2: Use the Database

USE world_data;

Step 3: Create COUNTRY Table

- SQL – Create Table

```
CREATE TABLE country (  
  id INT PRIMARY KEY,  
  country_name VARCHAR(100),  
  country_name_eng VARCHAR(100),  
  country_code VARCHAR(10)  
);
```

- SQL – Insert Data

```
INSERT INTO country (id, country_name, country_name_eng, country_code)  
VALUES  
(1, 'Deutschland', 'Germany', 'DEU'),  
(2, 'Srbija', 'Serbia', 'SRB'),  
(3, 'Hrvatska', 'Croatia', 'HRV'),  
(4, 'United States of America', 'United States of America', 'USA'),  
(5, 'Polska', 'Poland', 'POL'),  
(6, 'España', 'Spain', 'ESP'),  
(7, 'Rossiya', 'Russia', 'RUS');
```

The screenshot shows the phpMyAdmin interface. On the left, the database structure is visible, with 'world_data' selected. The main panel shows the 'country' table structure and data. The table has 7 rows of data, with columns: id, country_name, country_name_eng, and country_code. The data is as follows:

id	country_name	country_name_eng	country_code
1	Deutschland	Germany	DEU
2	Srbija	Serbia	SRB
3	Hrvatska	Croatia	HRV
4	United States of America	United States of America	USA
5	Polska	Poland	POL
6	España	Spain	ESP
7	Rossiya	Russia	RUS

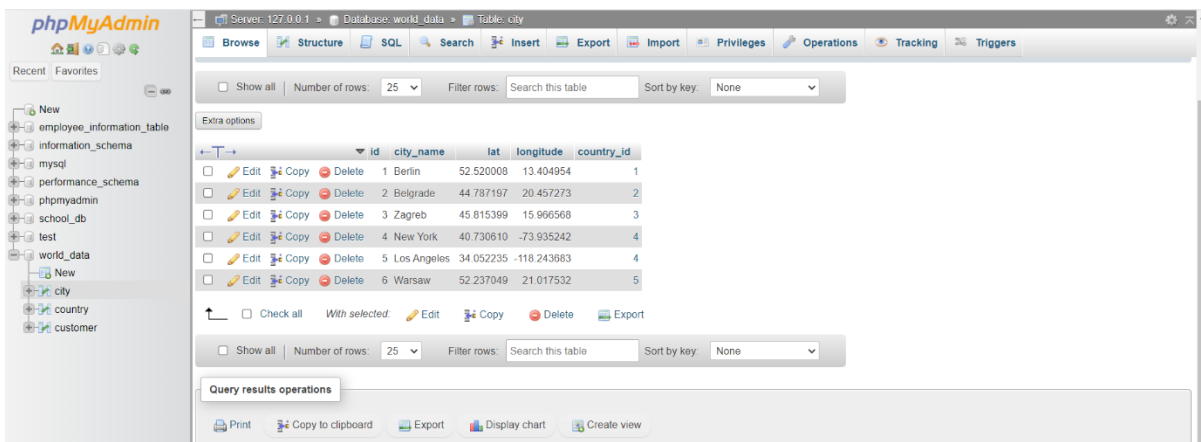
Step 4: Create CITY Table

- SQL – Create Table

```
CREATE TABLE city (  
    id INT PRIMARY KEY,  
    city_name VARCHAR(100),  
    lat DECIMAL(10,6),  
    longitude DECIMAL(10,6),  
    country_id INT,  
    FOREIGN KEY (country_id) REFERENCES country(id)  
);
```

- SQL -Insert Data

```
INSERT INTO city (id, city_name, lat, longitude, country_id)  
VALUES  
(1, 'Berlin', 52.520008, 13.404954, 1),  
(2, 'Belgrade', 44.787197, 20.457273, 2),  
(3, 'Zagreb', 45.815399, 15.966568, 3),  
(4, 'New York', 40.730610, -73.935242, 4),  
(5, 'Los Angeles', 34.052235, -118.243683, 4),  
(6, 'Warsaw', 52.237049, 21.017532, 5);
```



The screenshot shows the phpMyAdmin interface. On the left is the database navigation tree with 'world_data' selected. The main panel displays the 'city' table structure and data. The table has 6 rows of data. Below the table are options for 'Query results operations' including Print, Copy to clipboard, Export, Display chart, and Create view.

	id	city_name	lat	longitude	country_id
<input type="checkbox"/>	1	Berlin	52.520008	13.404954	1
<input type="checkbox"/>	2	Belgrade	44.787197	20.457273	2
<input type="checkbox"/>	3	Zagreb	45.815399	15.966568	3
<input type="checkbox"/>	4	New York	40.730610	-73.935242	4
<input type="checkbox"/>	5	Los Angeles	34.052235	-118.243683	4
<input type="checkbox"/>	6	Warsaw	52.237049	21.017532	5

Step 5: Create CUSTOMER Table

- SQL – Create Table

```
CREATE TABLE customer (  
    id INT PRIMARY KEY,  
    customer_name VARCHAR(100),  
    city_id INT,  
    customer_address VARCHAR(150),  
    next_call_date DATE,  
    ts_inserted DATETIME,  
    FOREIGN KEY (city_id) REFERENCES city(id)  
);
```

- SQL – Insert Data

`INSERT INTO` customer (id, customer_name, city_id, customer_address, next_call_date, ts_inserted)

`VALUES`

(1, 'Jewelry Store', 4, 'Long Street 120', '2020-01-21', '2020-01-09 14:01:20'),
 (2, 'Bakery', 1, 'Kurfürstendamm 25', '2020-02-21', '2020-01-09 17:52:15'),
 (3, 'Café', 1, 'Tauentzienstraße 44', '2020-01-21', '2020-01-10 08:02:49'),
 (4, 'Restaurant', 3, 'Ulica Ipa 15', '2020-01-21', '2020-01-10 09:20:21');

Showing rows 0 - 3 (4 total, Query took 0.0009 seconds.)

`SELECT * FROM "customer"`

Number of rows: 25 Filter rows: Search this table Sort by key: None

	id	customer_name	city_id	customer_address	next_call_date	ts_inserted
<input type="checkbox"/>	1	Jewelry Store	4	Long Street 120	2020-01-21	2020-01-09 14:01:20
<input type="checkbox"/>	2	Bakery	1	Kurfürstendamm 25	2020-02-21	2020-01-09 17:52:15
<input type="checkbox"/>	3	Café	1	Tauentzienstraße 44	2020-01-21	2020-01-10 08:02:49
<input type="checkbox"/>	4	Restaurant	3	Ulica Ipa 15	2020-01-21	2020-01-10 09:20:21

Number of rows: 25 Filter rows: Search this table Sort by key: None

❖ TASK 1 — LEFT JOIN (List ALL countries + related cities + related customers)

➤ Requirements:

- Show ALL countries (even without cities)
- For each country → show city → show customer
- Countries with no cities (Spain, Russia) must appear
- Cities with no customers must appear
- Customers linked to cities (Berlin, Zagreb, New York)

➤ Query: 1

`SELECT`

co.country_name_eng `AS` country,

ci.city_name `AS` city,

cu.customer_name `AS` customer

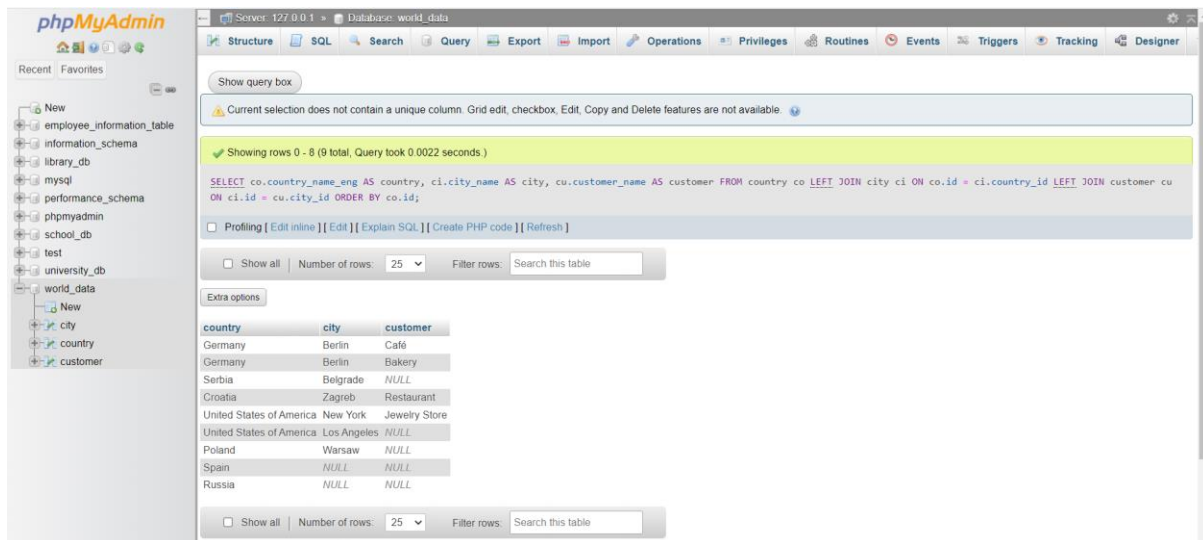
`FROM` country co

`LEFT JOIN` city ci

`ON` co.id = ci.country_id

`LEFT JOIN` customer cu

`ON` ci.id = cu.city_id `ORDER BY` co.id;



❖ Task 2: LEFT + INNER JOIN (Return only countries that have cities, and show their customers)

➤ Requirements:

- Return ONLY countries referenced by at least one city
 - Exclude: Spain, Russia
 - For each such country → show all city-customer pairs
- Countries with no customers must still appear (Serbia, Los Angeles, Warsaw)

➤ Query: 2

SELECT

co.country_name_eng AS country,

ci.city_name AS city,

cu.customer_name AS customer

FROM country co

INNER JOIN city ci

ON co.id = ci.country_id

LEFT JOIN customer cu

ON ci.id = cu.city_id

ORDER BY co.id, ci.id;

phpMyAdmin

Recent Favorites

New

employee_information_table

information_schema

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mysql

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phpmyadmin

school_db

test

university_db

world_data

New

city

country

customer

Server: 127.0.0.1 Database: world_data

Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers Tracking Designer

Show query box

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 6 (7 total, Query took 0.0014 seconds)

SELECT co.country_name_eng AS country, ci.city_name AS city, cu.customer_name AS customer FROM country co INNER JOIN city ci ON co.id = ci.country_id LEFT JOIN customer cu ON ci.id = cu.city_id ORDER BY co.id, ci.id;

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all Number of rows: 25 Filter rows: Search this table

Extra options

country	city	customer
Germany	Berlin	Bakery
Germany	Berlin	Cafe
Serbia	Belgrade	NULL
Croatia	Zagreb	Restaurant
United States of America	New York	Jewelry Store
United States of America	Los Angeles	NULL
Poland	Warsaw	NULL

Show all Number of rows: 25 Filter rows: Search this table

Query results operations

Print Copy to clipboard Export Display chart Create view