

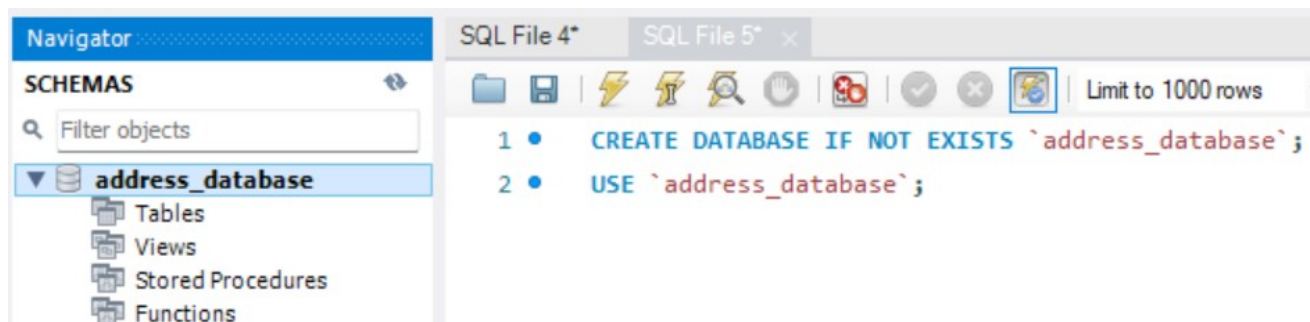
Homework: Databases

Problems for homework for the ["Software Technologies" course @ Software University](#).

Submit this document as your homework.

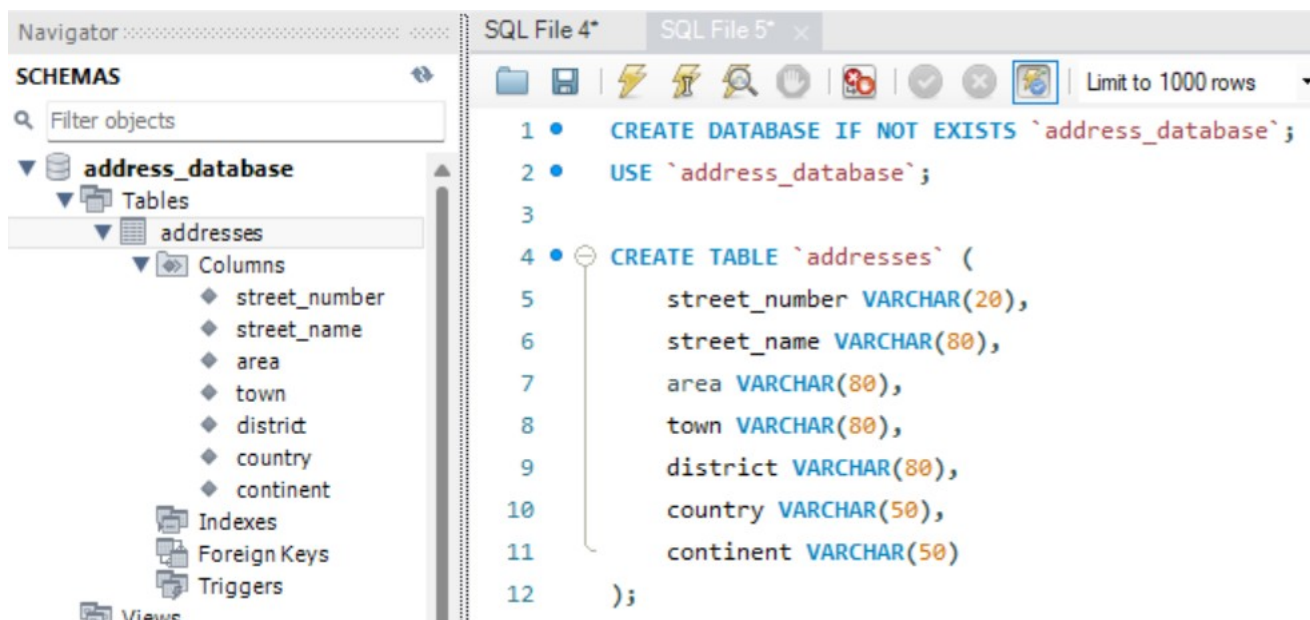
1. Address Database:

1. **CREATE DATABASE** named ``address_database`` and USE it:

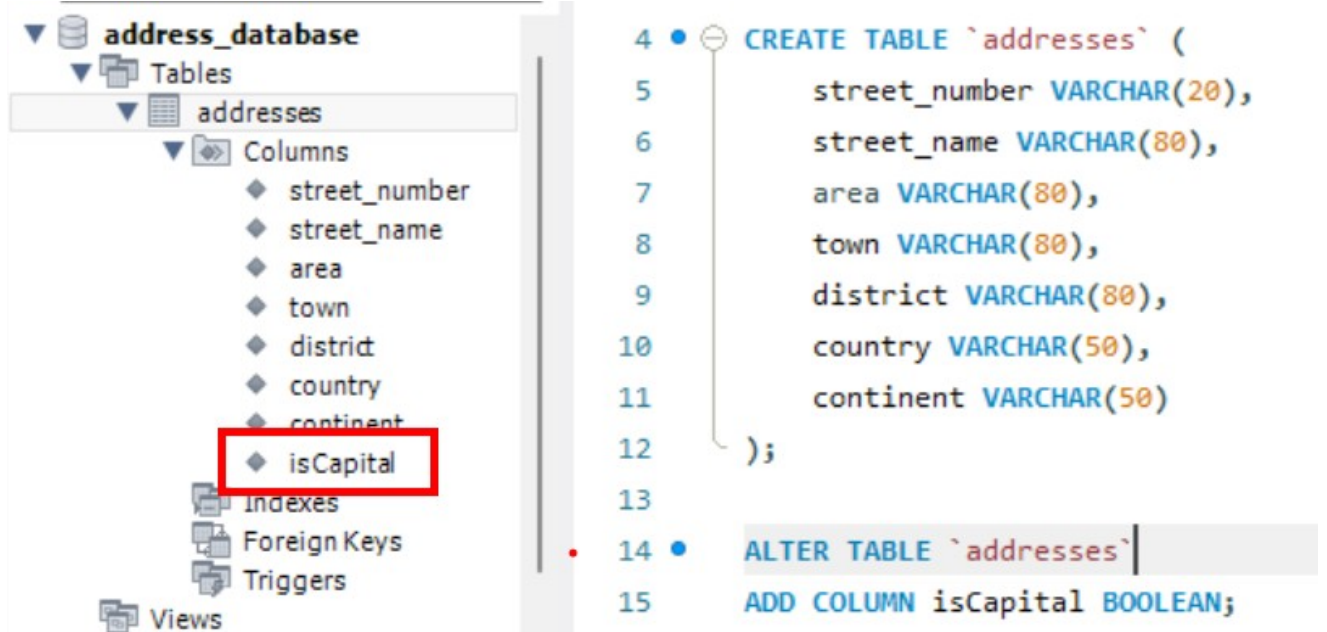


2. **CREATE TABLE** named ``addresses`` with the following columns:

- `street_number`
- `street_name`
- `area`
- `town`
- `district`
- `country`
- `continent`



3. We forgot to add Boolean column, named `isCapital`:



The screenshot shows a database management tool interface. On the left, a tree view displays the 'address_database' structure, including 'Tables', 'Columns', 'Indexes', 'Foreign Keys', 'Triggers', and 'Views'. The 'addresses' table is selected, and its columns are listed: 'street_number', 'street_name', 'area', 'town', 'district', 'country', 'continent', and 'isCapital'. The 'isCapital' column is highlighted with a red box. On the right, the SQL code is displayed, showing the 'CREATE TABLE' statement for 'addresses' and the 'ALTER TABLE' statement to add the 'isCapital' column.

```
4 CREATE TABLE `addresses` (  
5     street_number VARCHAR(20),  
6     street_name VARCHAR(80),  
7     area VARCHAR(80),  
8     town VARCHAR(80),  
9     district VARCHAR(80),  
10    country VARCHAR(50),  
11    continent VARCHAR(50)  
12 );  
13  
14 ALTER TABLE `addresses`  
15 ADD COLUMN isCapital BOOLEAN;
```

4. INSERT records INTO the `address` table and execute the SQL query:

```
17 INSERT INTO addresses (street_number, street_name, area, town, district, country, continent, isCapital)  
18 VALUES  
19 ('10', 'Main Street', 'Downtown', 'New York City', 'Manhattan', 'United States', 'North America', false),  
20 ('25A', 'Elm Avenue', 'West End', 'London', 'Westminster', 'United Kingdom', 'Europe', true),  
21 ('7', 'Rue de la Paix', 'Le Marais', 'Paris', 'Ile-de-France', 'France', 'Europe', true),  
22 ('1234', 'Oak Lane', 'Green Meadows', 'Los Angeles', 'California', 'United States', 'North America', false),  
23 ('42', 'High Street', 'City Center', 'Sydney', 'New South Wales', 'Australia', 'Australia & Oceania', true),  
24 ('56B', 'Maple Road', 'Northside', 'Toronto', 'Ontario', 'Canada', 'North America', false),  
25 ('9', 'Kaiserstrasse', 'Mitte', 'Berlin', 'Berlin', 'Germany', 'Europe', true),  
26 ('17', 'Plaza Mayor', 'Centro', 'Madrid', 'Madrid', 'Spain', 'Europe', true),  
27 ('3', 'Piazza San Marco', 'San Marco', 'Venice', 'Veneto', 'Italy', 'Europe', false),  
28 ('1001', 'Avenida Paulista', 'Jardins', 'Sao Paulo', 'Sao Paulo', 'Brazil', 'South America', false),  
29 ('8/15', 'Princes Street', 'New Town', 'Edinburgh', 'Edinburgh', 'United Kingdom', 'Europe', false),  
30 ('27', 'Koningsplein', 'Centrum', 'Amsterdam', 'North Holland', 'Netherlands', 'Europe', true),  
31 ('42A', 'Hauptstrasse', 'Mitte', 'Vienna', 'Vienna', 'Austria', 'Europe', true),  
32 ('100', 'Collins Street', 'CBD', 'Melbourne', 'Victoria', 'Australia', 'Oceania', false),  
33 ('123', 'Rua da Boavista', 'Baixa', 'Porto', 'Porto', 'Portugal', 'Europe', false),  
34 ('5', 'Knez Mihailova', 'Stari Grad', 'Belgrade', 'Belgrade', 'Serbia', 'Europe', true),  
35 ('9876', 'Ginza', 'Chuo', 'Tokyo', 'Tokyo', 'Japan', 'Asia', true),  
36 ('18', 'Connell Street', 'North City', 'Dublin', 'Dublin', 'Ireland', 'Europe', true),  
37 ('75C', 'Friedrichstrasse', 'Kreuzberg', 'Berlin', 'Berlin', 'Germany', 'Europe', true),  
38 ('22', 'Gran Vía', 'Malasana', 'Madrid', 'Madrid', 'Spain', 'Europe', true);
```

5. Your task is to execute the proper queries in order to get the following results:

- SELECT all addresses from the `address` table that are located in a capital city.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

address_database

addresses

Columns

Indexes

Foreign Keys

Triggers

Views

Stored Procedures

Functions

sys

SQL File 8' addresses SQL File 9' addresses addresses

1 • SELECT * FROM address_database.addresses where isCapital=1;

Result Grid

street_number	street_name	area	town	district	country	continent	isCapital
25A	Elm Avenue	West End	London	Westminster	United Kingdom	Europe	1
7	Rue de la Paix	Le Marais	Paris	Ile-de-France	France	Europe	1
42	High Street	City Center	Sydney	New South Wales	Australia	Australia & Oceania	1
9	Kaiserstrasse	Mitte	Berlin	Berlin	Germany	Europe	1
17	Plaza Mayor	Centro	Madrid	Madrid	Spain	Europe	1
27	Koningsplein	Centrum	Amsterdam	North Holland	Netherlands	Europe	1
42A	Hauptstrasse	Mitte	Vienna	Vienna	Austria	Europe	1
5	Knez Mihailova	Starí Grad	Belgrade	Belgrade	Serbia	Europe	1
9876	Ginza	Chuo	Tokyo	Tokyo	Japan	Asia	1
18	Connell Street	North City	Dublin	Dublin	Ireland	Europe	1
75C	Friedrichstrasse	Kreuzberg	Berlin	Berlin	Germany	Europe	1
22	Gran Vía	Malasaña	Madrid	Madrid	Spain	Europe	1

Table: addresses

Columns:

street_number varchar(20)

street_name varchar(80)

area varchar(80)

town varchar(80)

district varchar(80)

country varchar(80)

continent varchar(80)

Object Info Session

USE address_datab...

MySQL Workbench

10-Databases-Hom...

19°C Cloudy

10:25 PM

6/8/2023

-
- SELECT all addresses from the `address` table that are located in South America.

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

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Filter objects

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SQL File 8' addresses SQL File 9' addresses addresses

1 • SELECT * FROM address_database.addresses where continent like "South America";

Result Grid

street_number	street_name	area	town	district	country	continent	isCapital
1001	Avenida Paulista	Jardins	Sao Paulo	Sao Paulo	Brazil	South America	0

Table: addresses

Columns:

street_number varchar(20)

street_name varchar(80)

area varchar(80)

town varchar(80)

district varchar(80)

country varchar(80)

continent varchar(80)

Object Info Session

South America - Go...

MySQL Workbench

10-Databases-Hom...

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6/8/2023

-
-
- SELECT all addresses from the `address` table that are located in Europe, but only in NON Capital cities.

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

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address_database

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Administration Schemas

Information

Table: addresses

Columns:

street_number varchar(20)

street_name varchar(80)

area varchar(80)

town varchar(80)

district varchar(80)

country varchar(80)

continent varchar(80)

Output

1 SELECT * FROM address_database.addresses where continent like "Europe" and isCapital=0

Result Grid

street_number	street_name	area	town	district	country	continent	isCapital
3	Piazza San Marco	San Marco	Venice	Veneto	Italy	Europe	0
8/15	Princes Street	New Town	Edinburgh	Edinburgh	United Kingdom	Europe	0
123	Rua da Boavista	Baixa	Porto	Porto	Portugal	Europe	0

Export

Filter Rows

Export

Wrap Cell Contents

Read Only Context Help Snippets

Output

#	Time	Action	Message	Duration / Fetch
64	22:27:25	SELECT * FROM address_database.addresses LIMIT 0, 1000	20 row(s) returned	0.015 sec / 0.000 sec
65	22:29:03	SELECT * FROM address_database.addresses where continent like "South America" LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
66	22:29:42	SELECT * FROM address_database.addresses LIMIT 0, 1000	20 row(s) returned	0.000 sec / 0.000 sec
67	22:30:25	SELECT * FROM address_database.addresses where continent like "Europe" LIMIT 0, 1000	13 row(s) returned	0.000 sec / 0.000 sec
68	22:30:42	SELECT * FROM address_database.addresses where continent like "Europe" and isCapital=1 LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
69	22:30:50	SELECT * FROM address_database.addresses where continent like "Europe" and isCapital=0 LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

19°C Cloudy 10:30 PM 6/8/2023

! Create queries for each condition and place a screenshot after each query !