Querying Data
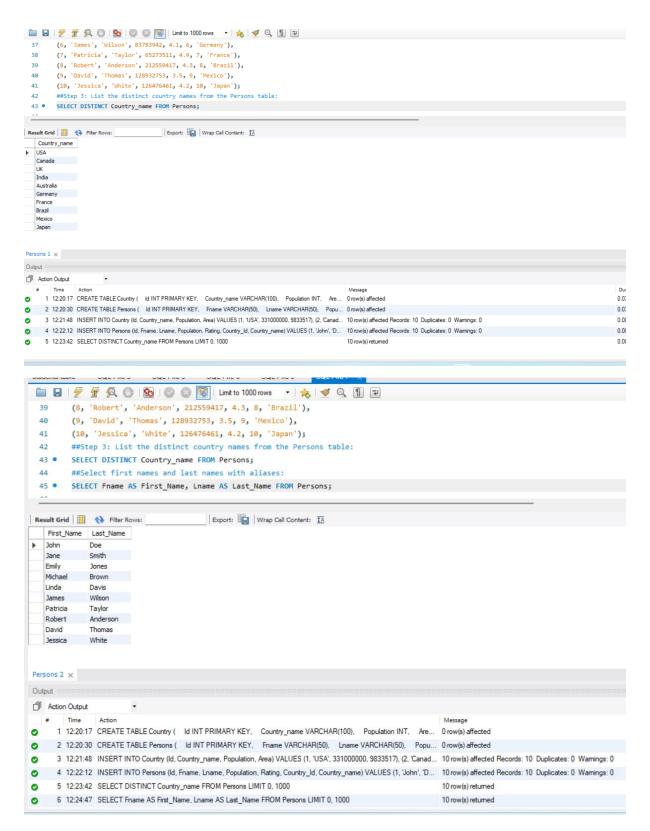


```
1    ##Step 1: Create Tables
2  ●⊖ CREATE TABLE Country (
3         Id INT PRIMARY KEY,
4         Country_name VARCHAR(100),
5         Population INT,
6         Area INT);
7
8  ●⊖ CREATE TABLE Persons (
9         Id INT PRIMARY KEY,
10        Fname VARCHAR(50),
11        Lname VARCHAR(50),
12        Population INT,
13        Rating DECIMAL(3, 2),
14        Country_Id INT,
15        Country_name VARCHAR(100),
16        FOREIGN KEY (Country_Id) REFERENCES Country(Id));
17
```
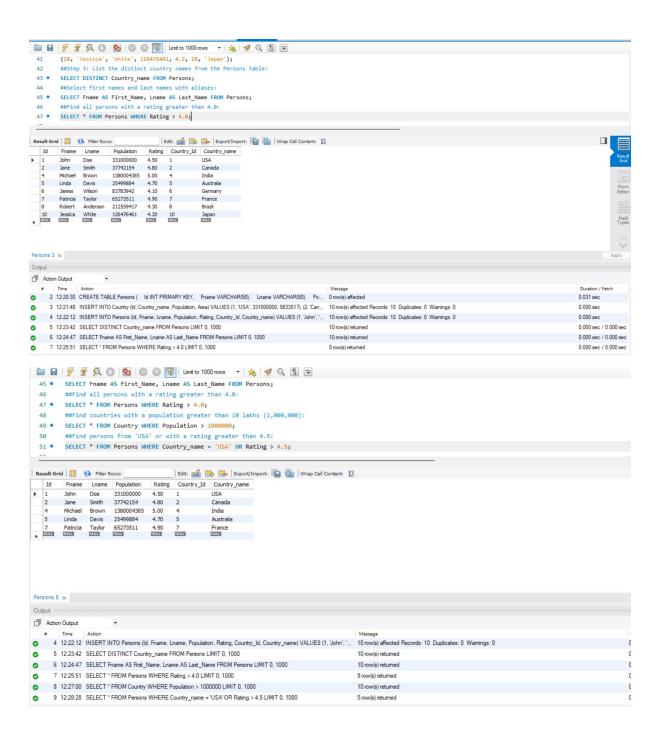
#	Time	Action	Message	Duration / Fetch
● 1	12:20:17	CREATE TABLE Country (Id INT PRIMARY KEY, Country_name VARCHAR(100), Population INT, Area ...	0 row(s) affected	0.032 sec
● 2	12:20:30	CREATE TABLE Persons (Id INT PRIMARY KEY, Fname VARCHAR(50), Lname VARCHAR(50), Popul...	0 row(s) affected	0.031 sec

1.CREATING TABLES


```
22        (3, 'UK', 67886011, 243610),
23        (4, 'India', 1380004385, 3287263),
24        (5, 'Australia', 25499884, 7692024),
25        (6, 'Germany', 83783942, 357022),
26        (7, 'France', 65273511, 551695),
27        (8, 'Brazil', 212559417, 8515767),
28        (9, 'Mexico', 128932753, 1964375),
29        (10, 'Japan', 126476461, 377975);
30
31 ●  INSERT INTO Persons (Id, Fname, Lname, Population, Rating, Country_Id, Country_name) VALUES
32        (1, 'John', 'Doe', 331000000, 4.5, 1, 'USA'),
33        (2, 'Jane', 'Smith', 37742154, 4.8, 2, 'Canada'),
34        (3, 'Emily', 'Jones', 67886011, 3.9, 3, 'UK'),
35        (4, 'Michael', 'Brown', 1380004385, 5.0, 4, 'India'),
36        (5, 'Linda', 'Davis', 25499884, 4.7, 5, 'Australia'),
37        (6, 'James', 'Wilson', 83783942, 4.1, 6, 'Germany'),
38        (7, 'Patricia', 'Taylor', 65273511, 4.9, 7, 'France'),
39        (8, 'Robert', 'Anderson', 212559417, 4.3, 8, 'Brazil'),
40        (9, 'David', 'Thomas', 128932753, 3.5, 9, 'Mexico'),
41        (10, 'Jessica', 'White', 126476461, 4.2, 10, 'Japan');
42
```

#	Time	Action	Message	Duration / F
● 1	12:20:17	CREATE TABLE Country (Id INT PRIMARY KEY, Country_name VARCHAR(100), Population INT, Area ...	0 row(s) affected	0.032 sec
● 2	12:20:30	CREATE TABLE Persons (Id INT PRIMARY KEY, Fname VARCHAR(50), Lname VARCHAR(50), Popul...	0 row(s) affected	0.031 sec
● 3	12:21:48	INSERT INTO Country (Id, Country_name, Population, Area) VALUES (1, 'USA', 331000000, 9833517), (2, 'Canada...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.000 sec
● 4	12:22:12	INSERT INTO Persons (Id, Fname, Lname, Population, Rating, Country_Id, Country_name) VALUES (1, 'John', 'Do...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.000 sec

2.EXECUTING QUERIES

```
41    (10, 'Jessica', 'White', 126476461, 4.2, 10, 'Japan');
42    ##Step 3: List the distinct country names from the Persons table:
43  • SELECT DISTINCT Country_name FROM Persons;
44    ##Select first names and last names with aliases:
45  • SELECT Fname AS First_Name, Lname AS Last_Name FROM Persons;
46    ##Find all persons with a rating greater than 4.0:
47  • SELECT * FROM Persons WHERE Rating > 4.0;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: ⱭA

Id	Fname	Lname	Population	Rating	Country_Id	Country_name
1	John	Doe	331000000	4.50	1	USA
2	Jane	Smith	37742154	4.80	2	Canada
4	Michael	Brown	1380004385	5.00	4	India
5	Linda	Davis	25499884	4.70	5	Australia
6	James	Wilson	83783942	4.10	6	Germany
7	Patricia	Taylor	65273511	4.90	7	France
8	Robert	Anderson	212559417	4.30	8	Brazil
10	Jessica	White	126476461	4.20	10	Japan
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Persons 3 ×

Output

Action Output ▾

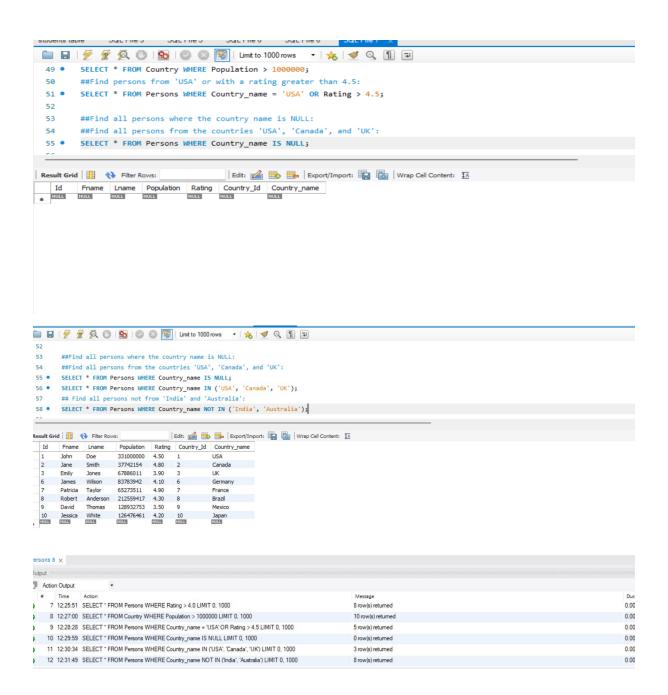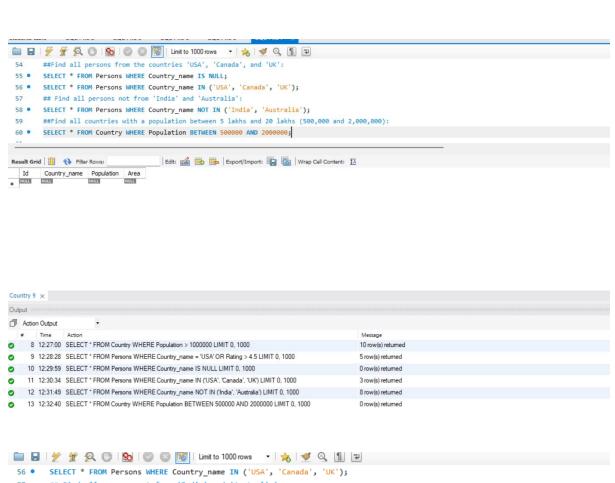| #	Time	Action	Message	Duration / Fetch
✓	2 12:20:30	CREATE TABLE Persons (Id INT PRIMARY KEY, Fname VARCHAR(50), Lname VARCHAR(50), Po...	0 row(s) affected	0.031 sec
✓	3 12:21:48	INSERT INTO Country (Id, Country_name, Population, Area) VALUES (1, 'USA', 331000000, 9833517), (2, 'Can...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.000 sec
✓	4 12:22:12	INSERT INTO Persons (Id, Fname, Lname, Population, Rating, Country_Id, Country_name) VALUES (1, 'John', '...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	0.000 sec
✓	5 12:23:42	SELECT DISTINCT Country_name FROM Persons LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
✓	6 12:24:47	SELECT Fname AS First_Name, Lname AS Last_Name FROM Persons LIMIT 0, 1000	10 row(s) returned	0.000 sec / 0.000 sec
✓	7 12:25:51	SELECT * FROM Persons WHERE Rating > 4.0 LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec

```
45  • SELECT Fname AS First_Name, Lname AS Last_Name FROM Persons;
46    ##Find all persons with a rating greater than 4.0:
47  • SELECT * FROM Persons WHERE Rating > 4.0;
48    ##Find countries with a population greater than 10 lakhs (1,000,000):
49  • SELECT * FROM Country WHERE Population > 1000000;
50    ##Find persons from 'USA' or with a rating greater than 4.5:
51  • SELECT * FROM Persons WHERE Country_name = 'USA' OR Rating > 4.5;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: ⱭA

Id	Fname	Lname	Population	Rating	Country_Id	Country_name
1	John	Doe	331000000	4.50	1	USA
2	Jane	Smith	37742154	4.80	2	Canada
4	Michael	Brown	1380004385	5.00	4	India
5	Linda	Davis	25499884	4.70	5	Australia
7	Patricia	Taylor	65273511	4.90	7	France
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Persons 5 ×

Output

Action Output ▾

#	Time	Action	Message	
✓	4 12:22:12	INSERT INTO Persons (Id, Fname, Lname, Population, Rating, Country_Id, Country_name) VALUES (1, 'John', '...	10 row(s) affected Records: 10 Duplicates: 0 Warnings: 0	
✓	5 12:23:42	SELECT DISTINCT Country_name FROM Persons LIMIT 0, 1000	10 row(s) returned	
✓	6 12:24:47	SELECT Fname AS First_Name, Lname AS Last_Name FROM Persons LIMIT 0, 1000	10 row(s) returned	
✓	7 12:25:51	SELECT * FROM Persons WHERE Rating > 4.0 LIMIT 0, 1000	8 row(s) returned	
✓	8 12:27:00	SELECT * FROM Country WHERE Population > 1000000 LIMIT 0, 1000	10 row(s) returned	
✓	9 12:28:28	SELECT * FROM Persons WHERE Country_name = 'USA' OR Rating > 4.5 LIMIT 0, 1000	5 row(s) returned	

```sql
49 •  SELECT * FROM Country WHERE Population > 1000000;
50    ##Find persons from 'USA' or with a rating greater than 4.5:
51 •  SELECT * FROM Persons WHERE Country_name = 'USA' OR Rating > 4.5;
52
53    ##Find all persons where the country name is NULL:
54    ##Find all persons from the countries 'USA', 'Canada', and 'UK':
55 •  SELECT * FROM Persons WHERE Country_name IS NULL;
```

	Id	Fname	Lname	Population	Rating	Country_Id	Country_name
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL


```sql
52
53    ##Find all persons where the country name is NULL:
54    ##Find all persons from the countries 'USA', 'Canada', and 'UK':
55 •  SELECT * FROM Persons WHERE Country_name IS NULL;
56 •  SELECT * FROM Persons WHERE Country_name IN ('USA', 'Canada', 'UK');
57    ## Find all persons not from 'India' and 'Australia':
58 •  SELECT * FROM Persons WHERE Country_name NOT IN ('India', 'Australia');
```

Id	Fname	Lname	Population	Rating	Country_Id	Country_name
1	John	Doe	331000000	4.50	1	USA
2	Jane	Smith	37742154	4.80	2	Canada
3	Emily	Jones	67886011	3.90	3	UK
6	James	Wilson	83783942	4.10	6	Germany
7	Patricia	Taylor	65273511	4.90	7	France
8	Robert	Anderson	212559417	4.30	8	Brazil
9	David	Thomas	128932753	3.50	9	Mexico
10	Jessica	White	126476461	4.20	10	Japan
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Persons 8 ×

Output

Action Output

#	Time	Action	Message	Dur
7	12:25:51	SELECT * FROM Persons WHERE Rating > 4.0 LIMIT 0, 1000	8 row(s) returned	0.00
8	12:27:00	SELECT * FROM Country WHERE Population > 1000000 LIMIT 0, 1000	10 row(s) returned	0.00
9	12:28:28	SELECT * FROM Persons WHERE Country_name = 'USA' OR Rating > 4.5 LIMIT 0, 1000	5 row(s) returned	0.00
10	12:29:59	SELECT * FROM Persons WHERE Country_name IS NULL 0, 1000	0 row(s) returned	0.00
11	12:30:34	SELECT * FROM Persons WHERE Country_name IN ('USA', 'Canada', 'UK') LIMIT 0, 1000	3 row(s) returned	0.00
12	12:31:49	SELECT * FROM Persons WHERE Country_name NOT IN ('India', 'Australia') LIMIT 0, 1000	8 row(s) returned	0.00

```
54      ##Find all persons from the countries 'USA', 'Canada', and 'UK':
55 ●    SELECT * FROM Persons WHERE Country_name IS NULL;
56 ●    SELECT * FROM Persons WHERE Country_name IN ('USA', 'Canada', 'UK');
57      ## Find all persons not from 'India' and 'Australia':
58 ●    SELECT * FROM Persons WHERE Country_name NOT IN ('India', 'Australia');
59      ##Find all countries with a population between 5 lakhs and 20 lakhs (500,000 and 2,000,000):
60 ●    SELECT * FROM Country WHERE Population BETWEEN 500000 AND 2000000;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Id	Country_name	Population	Area
NULL	NULL	NULL	NULL

Country 9 ×

Output

Action Output

#	Time	Action	Message
✓	8	12:27:00	SELECT * FROM Country WHERE Population > 1000000 LIMIT 0, 1000	10 row(s) returned
✓	9	12:28:28	SELECT * FROM Persons WHERE Country_name = 'USA' OR Rating > 4.5 LIMIT 0, 1000	5 row(s) returned
✓	10	12:29:59	SELECT * FROM Persons WHERE Country_name IS NULL LIMIT 0, 1000	0 row(s) returned
✓	11	12:30:34	SELECT * FROM Persons WHERE Country_name IN ('USA', 'Canada', 'UK') LIMIT 0, 1000	3 row(s) returned
✓	12	12:31:49	SELECT * FROM Persons WHERE Country_name NOT IN ('India', 'Australia') LIMIT 0, 1000	8 row(s) returned
✓	13	12:32:40	SELECT * FROM Country WHERE Population BETWEEN 500000 AND 2000000 LIMIT 0, 1000	0 row(s) returned

```
56 ●    SELECT * FROM Persons WHERE Country_name IN ('USA', 'Canada', 'UK');
57      ## Find all persons not from 'India' and 'Australia':
58 ●    SELECT * FROM Persons WHERE Country_name NOT IN ('India', 'Australia');
59      ##Find all countries with a population between 5 lakhs and 20 lakhs (500,000 and 2,000,000):
60 ●    SELECT * FROM Country WHERE Population BETWEEN 500000 AND 2000000;
61      ##Find all countries whose names do not start with 'C':
62 ●    SELECT * FROM Country WHERE Country_name NOT LIKE 'C%';
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Id	Country_name	Population	Area
1	USA	331000000	9833517
3	UK	67886011	243610
4	India	1380004385	3287263
5	Australia	25499884	7692024
6	Germany	83783942	357022
7	France	65273511	551695
8	Brazil	212559417	8515767
9	Mexico	128932753	1964375
10	Japan	126476461	377975
NULL	NULL	NULL	NULL

Country 10 ×

Output

Action Output

#	Time	Action	Message
✓	9	12:28:28	SELECT * FROM Persons WHERE Country_name = 'USA' OR Rating > 4.5 LIMIT 0, 1000	5 row(s) returned
✓	10	12:29:59	SELECT * FROM Persons WHERE Country_name IS NULL LIMIT 0, 1000	0 row(s) returned
✓	11	12:30:34	SELECT * FROM Persons WHERE Country_name IN ('USA', 'Canada', 'UK') LIMIT 0, 1000	3 row(s) returned
✓	12	12:31:49	SELECT * FROM Persons WHERE Country_name NOT IN ('India', 'Australia') LIMIT 0, 1000	8 row(s) returned
✓	13	12:32:40	SELECT * FROM Country WHERE Population BETWEEN 500000 AND 2000000 LIMIT 0, 1000	0 row(s) returned
✓	14	12:33:36	SELECT * FROM Country WHERE Country_name NOT LIKE 'C%' LIMIT 0, 1000	9 row(s) returned

SUMMARY :

Country Table

- **Fields:**

    - **Id: Unique identifier for each country.**

    - **Country_name: Name of the country.**

    - **Population: Total population of the country.**

    - **Area: Total area of the country in square kilometers.**

- **Data:**

    - **Contains 10 countries, including the USA, Canada, UK, India, Australia, Germany, France, Brazil, Mexico, and Japan, with populations ranging from about 25 million (Australia) to over 1.3 billion (India).**

Persons Table

- **Fields:**

    - **Id: Unique identifier for each person.**

    - **Fname: First name of the person.**

    - **Lname: Last name of the person.**

    - **Population: Population of the country the person belongs to (redundant in this context).**

    - **Rating: A rating score for each person (scale up to 5.0).**

    - **Country_Id: Foreign key referencing the Country table.**

    - **Country_name: Name of the country (redundant with the Country_Id).**

- **Data:**

    - **Contains 10 persons with varying ratings from 3.5 to 5.0.**

    - **People are from countries like the USA, Canada, UK, India, Australia, Germany, France, Brazil, Mexico, and Japan.**

Summary of Queries

1. **Distinct Country Names: Retrieves unique country names from the Persons table.**

2. **First and Last Names: Selects first and last names with aliases for clarity.**

3. **High Ratings: Finds persons with ratings above 4.0.**

4. **High Population Countries: Lists countries with populations greater than 1 million.**

5. **Specific Persons: Identifies persons from the USA or those rated over 4.5.**

6. **Null Country Names: Searches for persons where the country name is null.**

7. **Filtered Countries: Retrieves persons from the USA, Canada, and the UK.**

8. **Exclusions: Finds persons not from India or Australia.**

9. **Population Range: Lists countries with populations between 500,000 and 2 million.**

10. **Name Exclusion: Finds countries whose names do not start with 'C'.**

This summary encapsulates the data structure and the types of analyses you can perform with it. Let me know if you need further details!