Example of Data Retrieval Using a Music Database
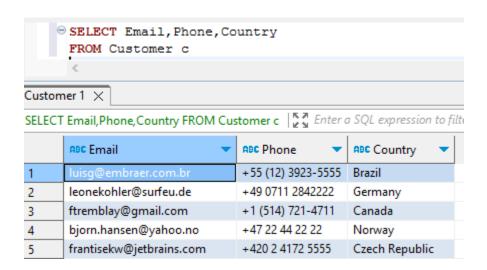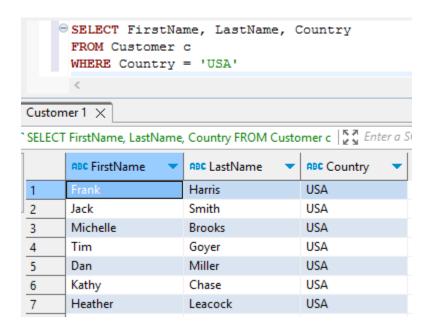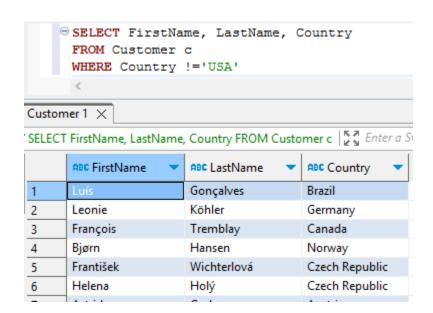
1. Search for Email, Phone, and Country using SELECT and FROM queries

```
SELECT Email,Phone,Country
FROM Customer c
```

Customer 1 ✕

SELECT Email,Phone,Country FROM Customer c | Enter a SQL expression to filte

	ABC Email	ABC Phone	ABC Country
1	luisg@embraer.com.br	+55 (12) 3923-5555	Brazil
2	leonekohler@surfeu.de	+49 0711 2842222	Germany
3	ftremblay@gmail.com	+1 (514) 721-4711	Canada
4	bjorn.hansen@yahoo.no	+47 22 44 22 22	Norway
5	frantisekw@jetbrains.com	+420 2 4172 5555	Czech Republic

2. Using filter/WHERE, look for the first and last name of the country USA

```
SELECT FirstName, LastName, Country
FROM Customer c
WHERE Country = 'USA'
```

Customer 1 ✕

SELECT FirstName, LastName, Country FROM Customer c | Enter a S

	ABC FirstName	ABC LastName	ABC Country
1	Frank	Harris	USA
2	Jack	Smith	USA
3	Michelle	Brooks	USA
4	Tim	Goyer	USA
5	Dan	Miller	USA
6	Kathy	Chase	USA
7	Heather	Leacock	USA

3. Using filter/WHERE, look for first and last names from countries other than the USA

```
SELECT FirstName, LastName, Country
FROM Customer c
WHERE Country !='USA'
```

Customer 1 ✕

'SELECT FirstName, LastName, Country FROM Customer c | ⤢ Enter a S

	ABC FirstName	ABC LastName	ABC Country
1	Luís	Gonçalves	Brazil
2	Leonie	Köhler	Germany
3	François	Tremblay	Canada
4	Bjørn	Hansen	Norway
5	František	Wichterlová	Czech Republic
6	Helena	Holý	Czech Republic

4. Sort the data based on the employee's first name

```
SELECT FirstName, BirthDate
FROM Employee e
ORDER BY FirstName ASC
```

Employee 1 ✕

'SELECT FirstName, BirthDate FROM Employee e ORD

	ABC FirstName	ABC BirthDate
1	Andrew	1962-02-18 00:00:00
2	Jane	1973-08-29 00:00:00
3	Laura	1968-01-09 00:00:00
4	Margaret	1947-09-19 00:00:00
5	Michael	1973-07-01 00:00:00
6	Nancy	1958-12-08 00:00:00

5. Take the first 3 rows from the Employee table

```
SELECT *
FROM Employee e
LIMIT 3
```

Employee 1 ✕

SELECT * FROM Employee e LIMIT 3 | Enter a SQL expression to filter resu

	123 Employeeld	ABC LastName	ABC FirstName	
1	1	Adams	Andrew	
2	2	Edwards	Nancy	
3	3	Peacock	Jane	

6. Create an alias from your first name and last name

```
SELECT FirstName AS NamaDepan, LastName AS NamaBelakang
FROM Customer c
```

Customer 1 ✕

SELECT FirstName AS NamaDepan, LastName AS NamaBe | Enter a SQL expression to filter

	ABC NamaDepan	ABC NamaBelakang	
1	Luís	Gonçalves	
2	Leonie	Köhler	
3	François	Tremblay	
4	Bjørn	Hansen	
5	František	Wichterlová	
6	Helena	Holý	
7	Astrid	Gruber	
8	Daan	Peeters	
9	Kara	Nielsen	
10	Eduardo	Martins	

7. Create a query to retrieve all employee information with the title IT Staff

```
SELECT *
FROM Employee e
WHERE Title = 'IT Staff'
```

Employee 1 ✕

SELECT * FROM Employee e WHERE Title = 'IT Staff'   ⤢ Enter a SQL expression to filter resu

	123 EmployeeId	ABC LastName	ABC FirstName	ABC Title
1	7	King	Robert	IT Staff
2	8	Callahan	Laura	IT Staff

8. Using the min and max functions, what is the lowest price on the Track?

```
SELECT MIN(UnitPrice)
FROM Track t
```

Results 1 ✕

SELECT MIN(UnitPrice) FROM Track t

	123 MIN(UnitPrice)
1	0.99

9. What is the average price of tracks sold per composer?

```
SELECT Composer, AVG(UnitPrice)
FROM Track t
GROUP BY Composer
```

Track 1 ×

SELECT Composer, AVG(UnitPrice) FROM Track t GROUP E | Enter a SQL expression to filter resul

	ABC Composer	123 AVG(UnitPrice)
1	[NULL]	1.207791411
2	A. F. Iommi, W. Ward, T. Butler, J. Osbourne	0.99
3	A. Jamal	0.99
4	A.Bouchard/J.Bouchard/S.Pearlman	0.99
5	A.Isbell/A.Jones/O.Redding	0.99
6	AC/DC	0.99

10. Group the data, if Brazilian citizens are called domestic, and those who are not are called Foreign

```
SELECT CustomerId, Country, CASE Country
WHEN 'USA' THEN 'Domestic'
ELSE 'Foreign'
END AS CustomerGroup
FROM Customer c
```

Customer 1 ×

T SELECT CustomerId, Country, CASE Country WHEN 'USA' ` | Enter a SQL expre

	123 CustomerId	ABC Country	ABC CustomerGroup
1	1	Brazil	Foreign
2	2	Germany	Foreign
3	3	Canada	Foreign
4	4	Norway	Foreign
5	5	Czech Republic	Foreign
6	6	Czech Republic	Foreign
7	7	Austria	Foreign
8	8	Belgium	Foreign
9	9	Denmark	Foreign

11. Create a query that shows the number of invoiceIDs based on billing country

```
SELECT BillingCountry, COUNT (InvoiceId)
FROM Invoice i
GROUP BY BillingCountry
<
```

Invoice 1 ✕

Γ SELECT BillingCountry, COUNT(InvoiceId) FROM Invoice i | 🔀 Ente

	ABC BillingCountry ▼	123 COUNT(InvoiceId) ▼
1	Argentina	7
2	Australia	7
3	Austria	7
4	Belgium	7
5	Brazil	35
6	Canada	56
7	Chile	7
8	Czech Republic	14
9	Denmark	7

12. Combine the 2 album tables and the artist table containing the name 'Aerosmith'

```
SELECT *
FROM Album alb INNER JOIN Artist art
    ON ALB.ArtistId = ART.ArtistId
    WHERE Name = 'Aerosmith'
<
```

Album(+) 1 ✕

Γ SELECT * FROM Album alb INNER JOIN Artist art ON ALB.A | 🔀 Enter a SQL expression to filter results (us

	123 AlbumId ▼	ABC Title ▼	123 ArtistId ▼	123 ArtistId ▼	ABC Name ▼
1	5	Big Ones	3 ⬀		3 Aerosmith

13. Combine 3 tables of track, album, and artist

```
SELECT *
    FROM Track trc
    LEFT JOIN Album alb ON trc.AlbumId = alb.AlbumId
    LEFT JOIN Artist art ON art.ArtistId = alb.ArtistId
```

Track(+) 1 ✕

⌐ SELECT * FROM Track trc LEFT JOIN Album alb ON trc.Albı ⤢ *Enter a SQL expression to filter results (use Ctrl+Space)*

	123 TrackId	ABC Name	123 AlbumId	123 MediaTypeId	123
1	1	For Those About To Rock (We Salute You)	1 ☑	1 ☑	
2	2	Balls to the Wall	2 ☑	2 ☑	
3	3	Fast As a Shark	3 ☑	2 ☑	
4	4	Restless and Wild	3 ☑	2 ☑	
5	5	Princess of the Dawn	3 ☑	2 ☑	
6	6	Put The Finger On You	1 ☑	1 ☑	
7	7	Let's Get It Up	1 ☑	1 ☑	
8	8	Inject The Venom	1 ☑	1 ☑	
9	9	Snowballed	1 ☑	1 ☑	

14. Look for an agent who has served the top 5 customers with the highest total span

```
WITH top_spender AS
  (SELECT i.CustomerId, SUM(Total) AS Total_Spending
    FROM Invoice i
    GROUP BY i.CustomerId
    ORDER BY Total_Spending DESC
    LIMIT 5)
SELECT SupportRepId, top_spender.CustomerId
FROM Customer c RIGHT JOIN top_spender
ON c.CustomerId = top_spender.CustomerID
```

Customer(+) 1 ✕

⌐ WITH top_spender AS (SELECT i.CustomerId, SUM(Total) A ⤢ *Enter a SQL expression*

	123 SupportRepId	123 CustomerId
1	3 ☑	45 ☑
2	3 ☑	46 ☑
3	4 ☑	26 ☑
4	5 ☑	6 ☑
5	5 ☑	57 ☑

15. Display customers' first names which are not employees' first names. Hint ; Use EXCEPT

```
SELECT FirstName
FROM Customer c
EXCEPT
SELECT FirstName
FROM Employee e
```

Customer 1 ✕

'SELECT FirstName FROM Customer c E

	ABC FirstName
1	Aaron
2	Alexandre
3	Astrid
4	Bjørn
5	Camille
6	Daan