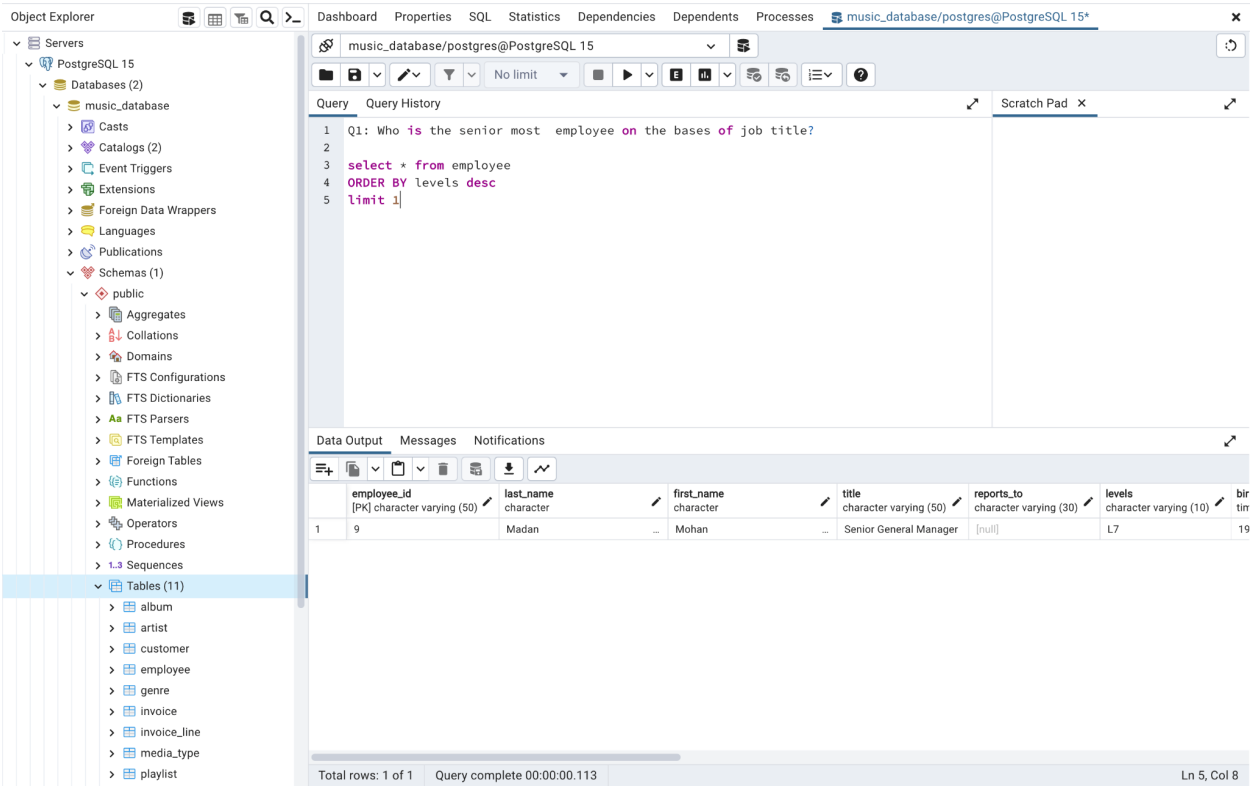
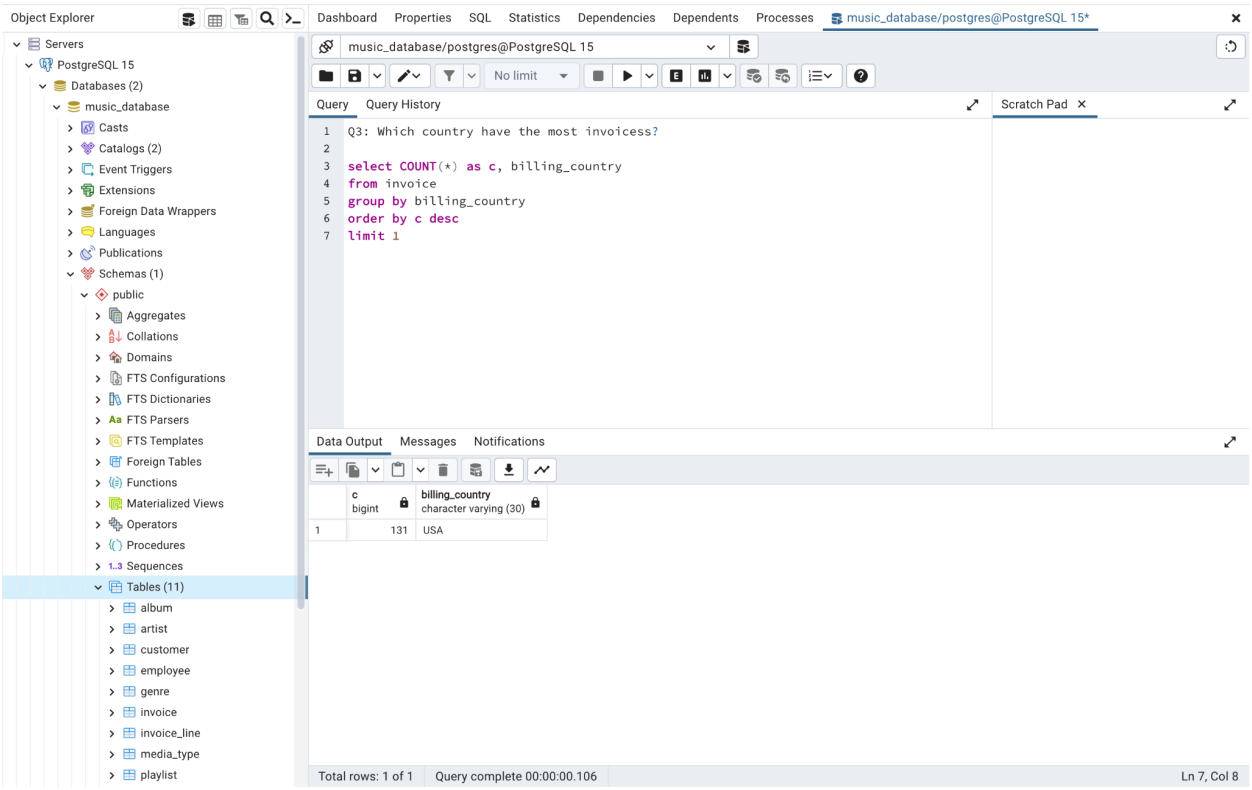
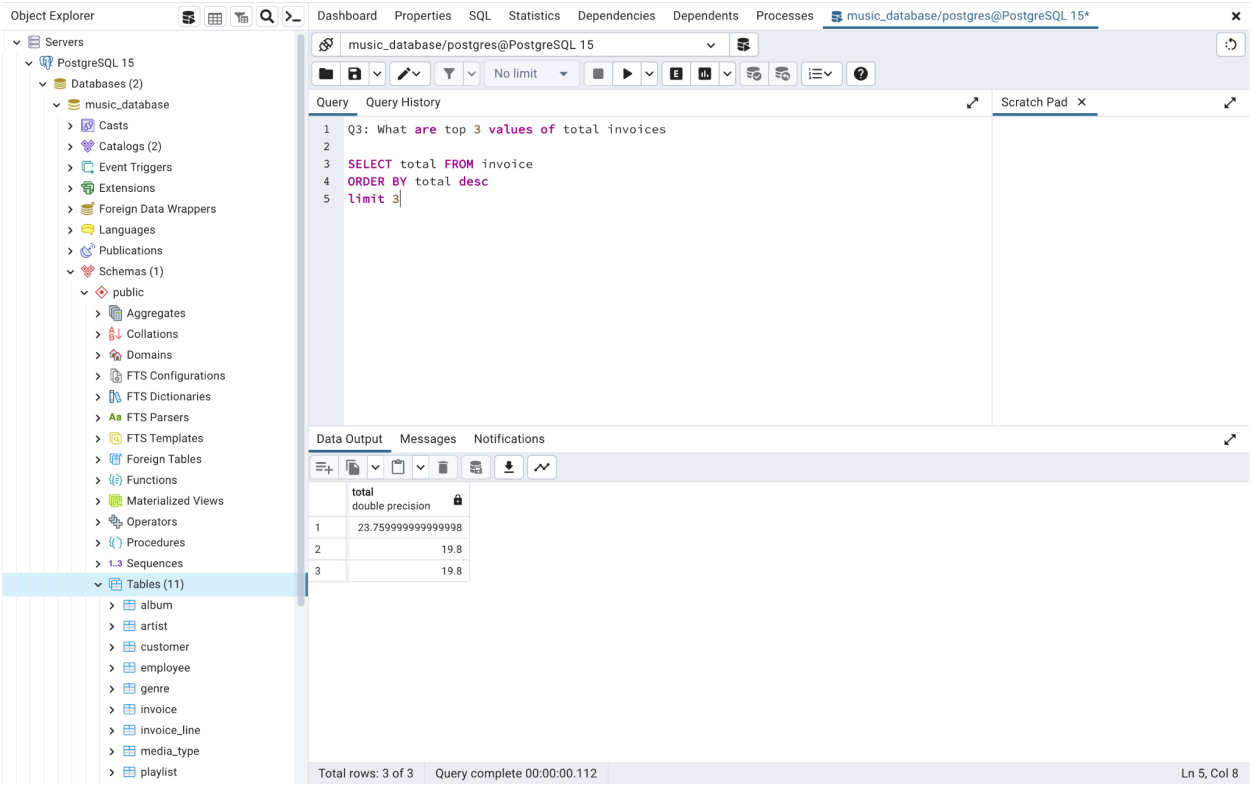
Music Store Data Analysis Project Using SQL






Object Explorer
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Catalogs (2)
Event Triggers
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genre
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invoice_line
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playlist
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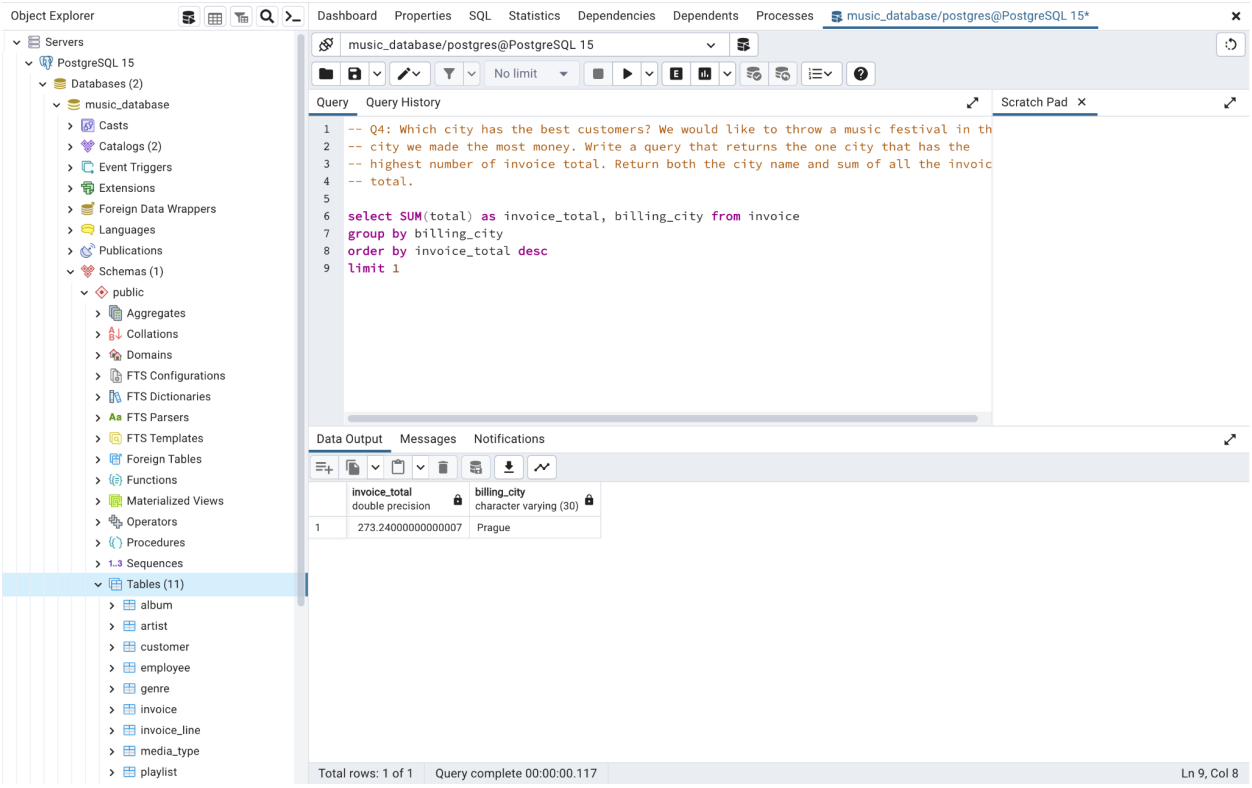
music_database/postgres@PostgreSQL 15*
music_database/postgres@PostgreSQL 15
No limit
Query
Query History
Scratch Pad
1 Q3: What are top 3 values of total invoices
2
3 SELECT total FROM invoice
4 ORDER BY total desc
5 limit 3
Data Output
Messages
Notifications
total
double precision
1 23.759999999999998
2 19.8
3 19.8
Total rows: 3 of 3
Query complete 00:00:00.112
Ln 5, Col 8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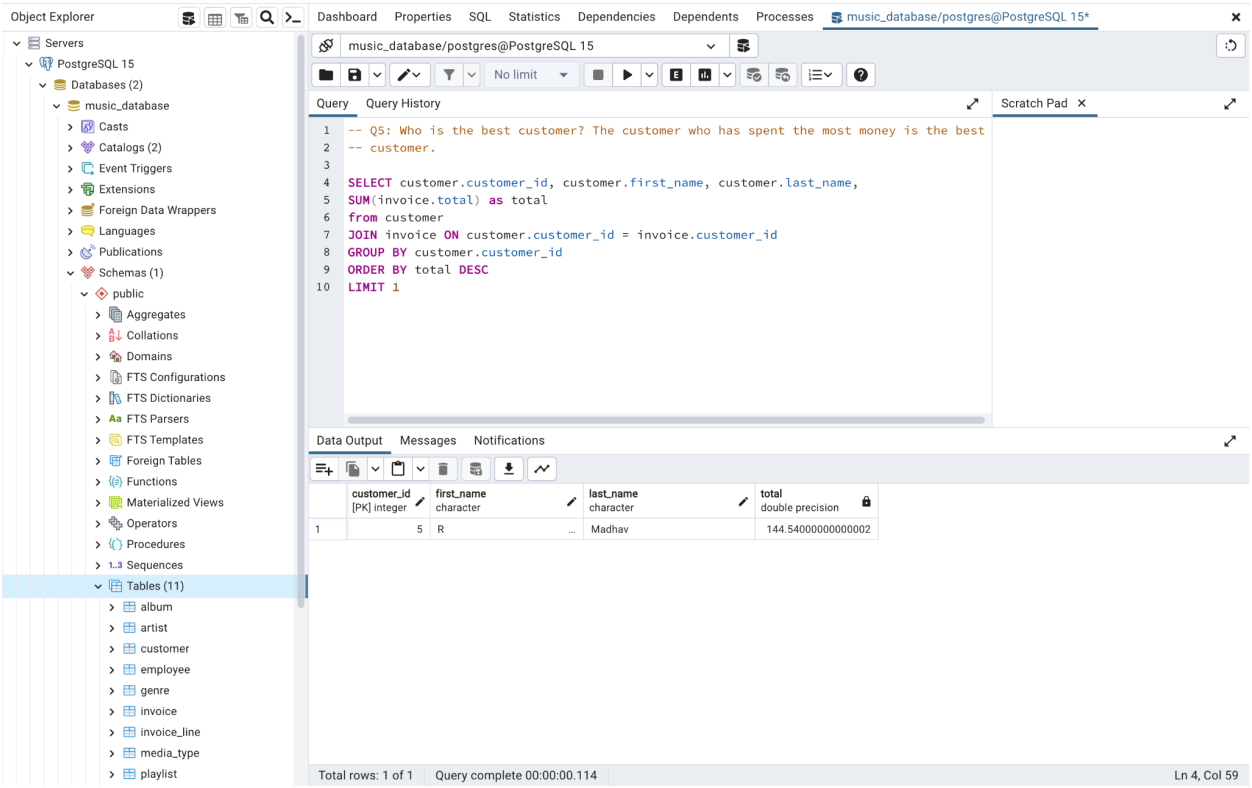
Processes
music_database/postgres@PostgreSQL 15*
music_database/postgres@PostgreSQL 15
No limit
Query
Query History
Scratch Pad
1 -- Q4: Which city has the best customers? We would like to throw a music festival in th
2 -- city we made the most money. Write a query that returns the one city that has the
3 -- highest number of invoice total. Return both the city name and sum of all the invoic
4 -- total.
5
6 select SUM(total) as invoice_total, billing_city from invoice
7 group by billing_city
8 order by invoice_total desc
9 limit 1
Data Output
Messages
Notifications
invoice_total
double precision
billing_city
character varying (30)
1
273.24000000000007
Prague
Total rows: 1 of 1
Query complete 00:00:00.117
Ln 9, Col 8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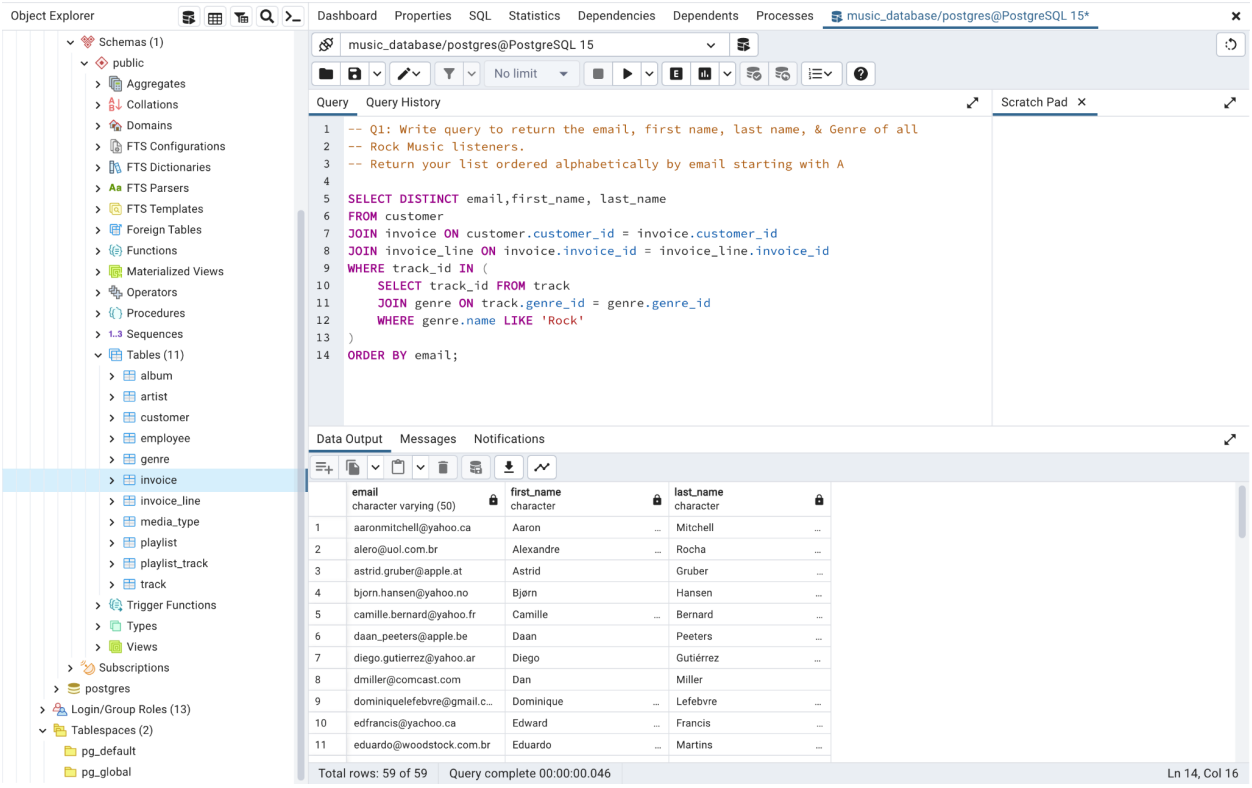
Processes
music_database/postgres@PostgreSQL 15*
music_database/postgres@PostgreSQL 15
No limit
Query
Query History
Scratch Pad
1 -- Q5: Who is the best customer? The customer who has spent the most money is the best
2 -- customer.
3
4 SELECT customer.customer_id, customer.first_name, customer.last_name,
5 SUM(invoice.total) as total
6 from customer
7 JOIN invoice ON customer.customer_id = invoice.customer_id
8 GROUP BY customer.customer_id
9 ORDER BY total DESC
10 LIMIT 1
Data Output
Messages
Notifications
customer_id
[PK] integer
first_name
character
last_name
character
total
double precision
1
5
R
Madhav
144.54000000000002
Total rows: 1 of 1
Query complete 00:00:00.114
Ln 4, Col 59


Object Explorer
Dashboard
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SQL
Statistics
Dependencies
Dependents
Processes
music_database/postgres@PostgreSQL 15*
music_database/postgres@PostgreSQL 15
No limit
Query
Query History
Scratch Pad
-- Q1: Write query to return the email, first name, last name, & Genre of all
-- Rock Music listeners.
-- Return your list ordered alphabetically by email starting with A
SELECT DISTINCT email,first_name, last_name
FROM customer
JOIN invoice ON customer.customer_id = invoice.customer_id
JOIN invoice_line ON invoice.invoice_id = invoice_line.invoice_id
WHERE track_id IN (
SELECT track_id FROM track
JOIN genre ON track.genre_id = genre.genre_id
WHERE genre.name LIKE 'Rock'
)
ORDER BY email;
Data Output
Messages
Notifications
email character varying (50)
first_name character
last_name character
1 aaronmitchell@yahoo.ca Aaron Mitchell
2 alero@uol.com.br Alexandre Rocha
3 astrid.gruber@apple.at Astrid Gruber
4 bjorn.hansen@yahoo.no Bjørn Hansen
5 camille.bernard@yahoo.fr Camille Bernard
6 daan_peeters@apple.be Daan Peeters
7 diego.gutierrez@yahoo.ar Diego Gutiérrez
8 dmiller@comcast.com Dan Miller
9 dominiquelefebvre@gmail.c... Dominique Lefebvre
10 edfrancis@yachoo.ca Edward Francis
11 eduardo@woodstock.com.br Eduardo Martins
Total rows: 59 of 59
Query complete 00:00:00.046
Ln 14, Col 16
Schemas (1)
public
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album
artist
customer
employee
genre
invoice
invoice_line
media_type
playlist
playlist_track
track
Trigger Functions
Types
Views
Subscriptions
postgres
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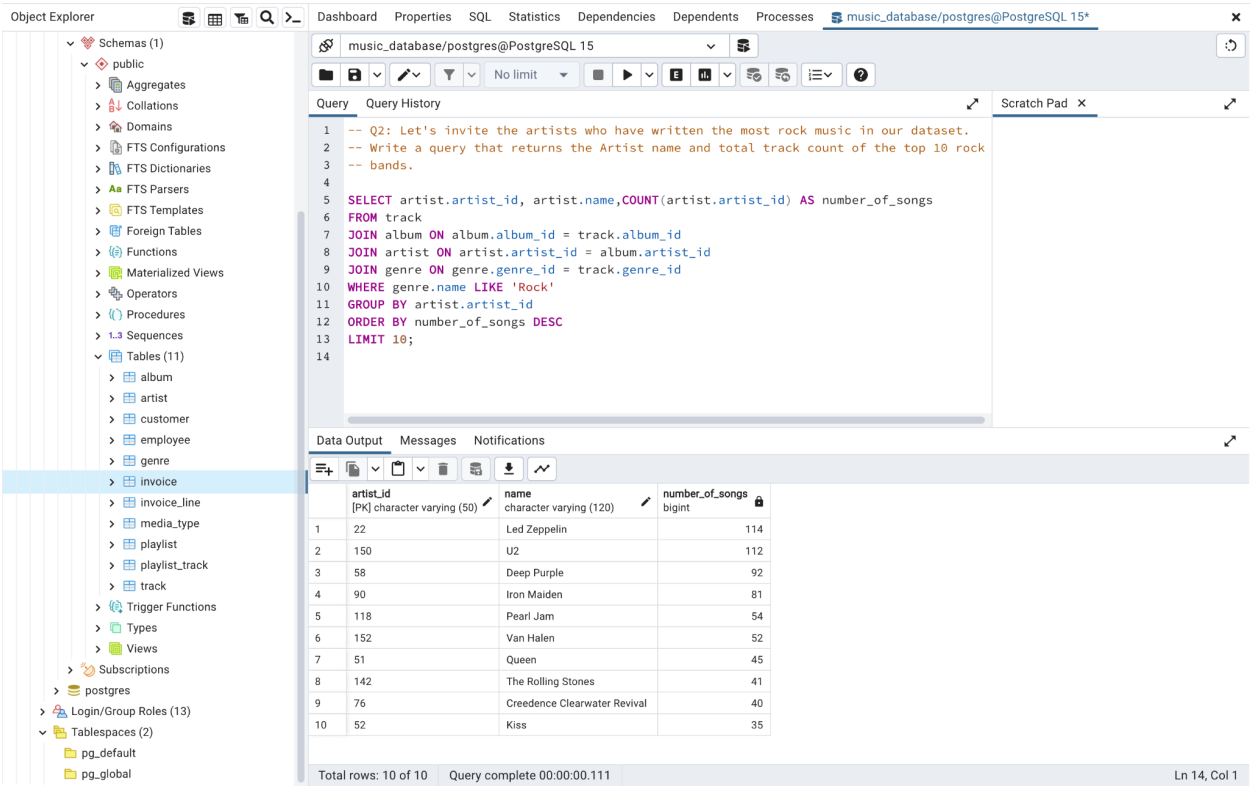
Tablespaces (2)
pg_default
pg_global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music_database/postgres@PostgreSQL 15*
music_database/postgres@PostgreSQL 15
No limit
Query
Query History
Scratch Pad
-- Q2: Let's invite the artists who have written the most rock music in our dataset.
-- Write a query that returns the Artist name and total track count of the top 10 rock
-- bands.
SELECT artist.artist_id, artist.name,COUNT(artist.artist_id) AS number_of_songs
FROM track
JOIN album ON album.album_id = track.album_id
JOIN artist ON artist.artist_id = album.artist_id
JOIN genre ON genre.genre_id = track.genre_id
WHERE genre.name LIKE 'Rock'
GROUP BY artist.artist_id
ORDER BY number_of_songs DESC
LIMIT 10;
Data Output
Messages
Notifications
artist_id [PK] character varying (50)
name character varying (120)
number_of_songs bigint
1 22 Led Zeppelin 114
2 150 U2 112
3 58 Deep Purple 92
4 90 Iron Maiden 81
5 118 Pearl Jam 54
6 152 Van Halen 52
7 51 Queen 45
8 142 The Rolling Stones 41
9 76 Creedence Clearwater Revival 40
10 52 Kiss 35
Total rows: 10 of 10
Query complete 00:00:00.111
Ln 14, Col 1
Schemas (1)
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album
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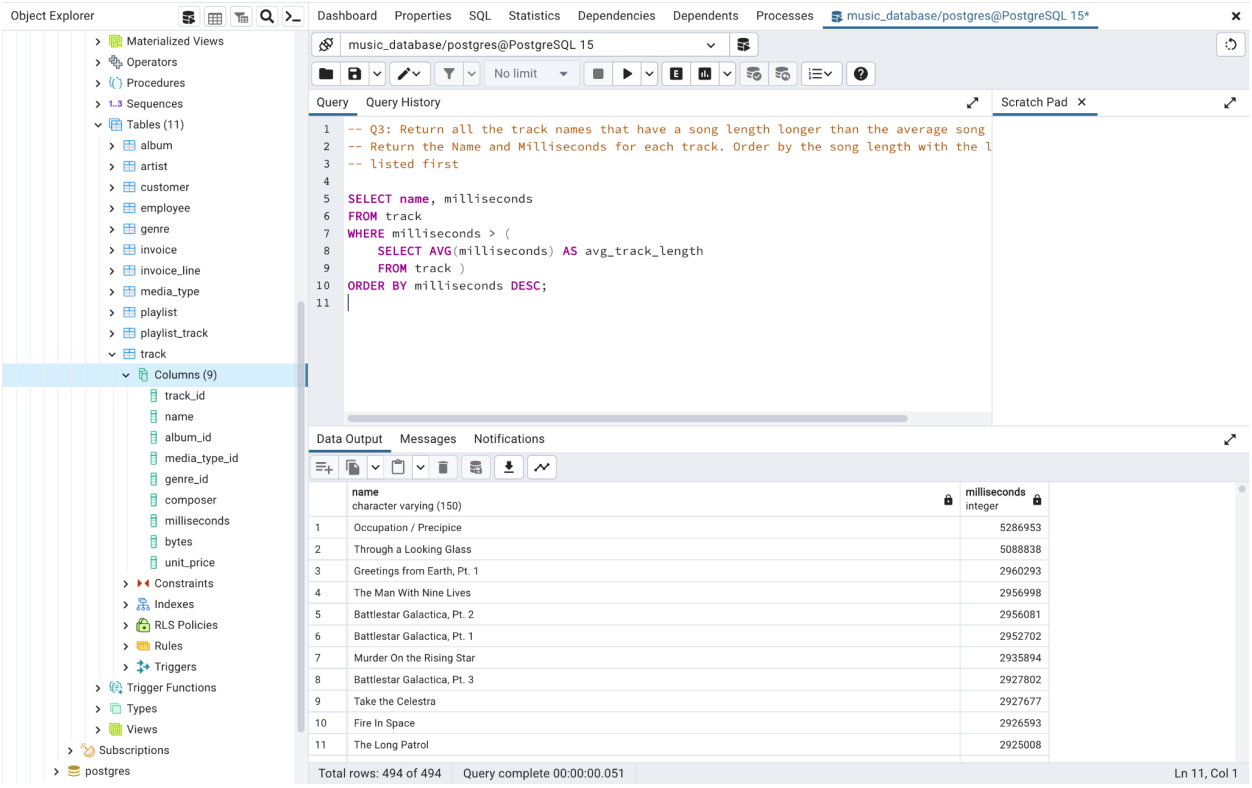
pg_default
pg_global


Object Explorer
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Procedures
Sequences
Tables (11)
album
artist
customer
employee
genre
invoice
invoice_line
media_type
playlist
playlist_track
track
Columns (9)
track_id
name
album_id
media_type_id
genre_id
composer
milliseconds
bytes
unit_price
Constraints
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Rules
Triggers
Trigger Functions
Types
Views
Subscriptions
postgres
Dashboard
Properties
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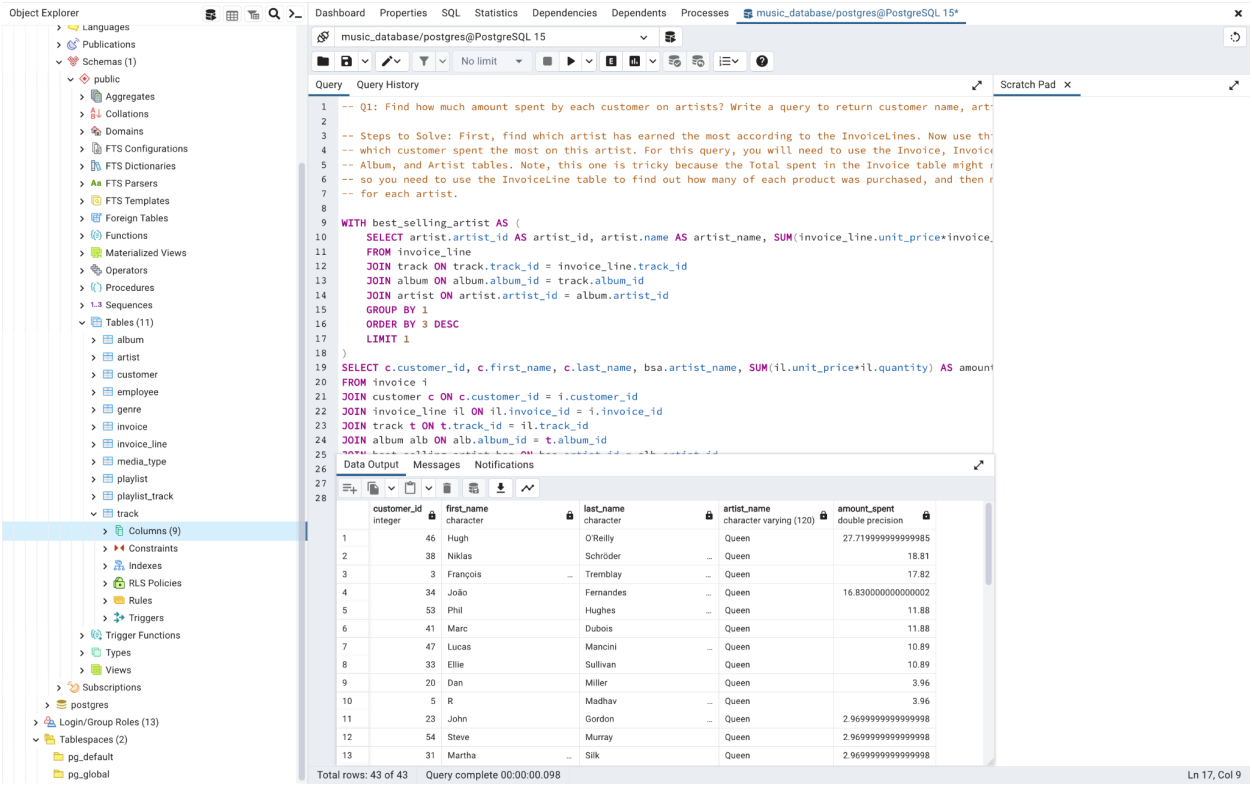
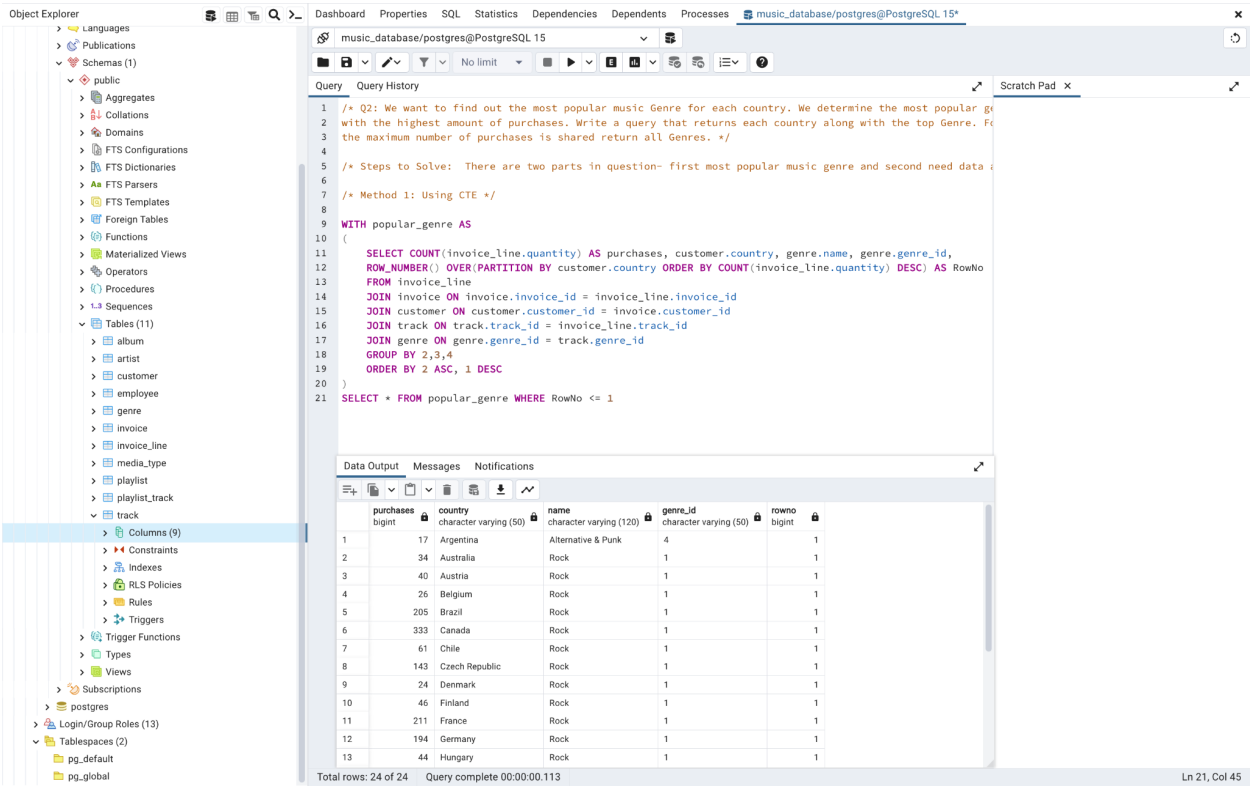
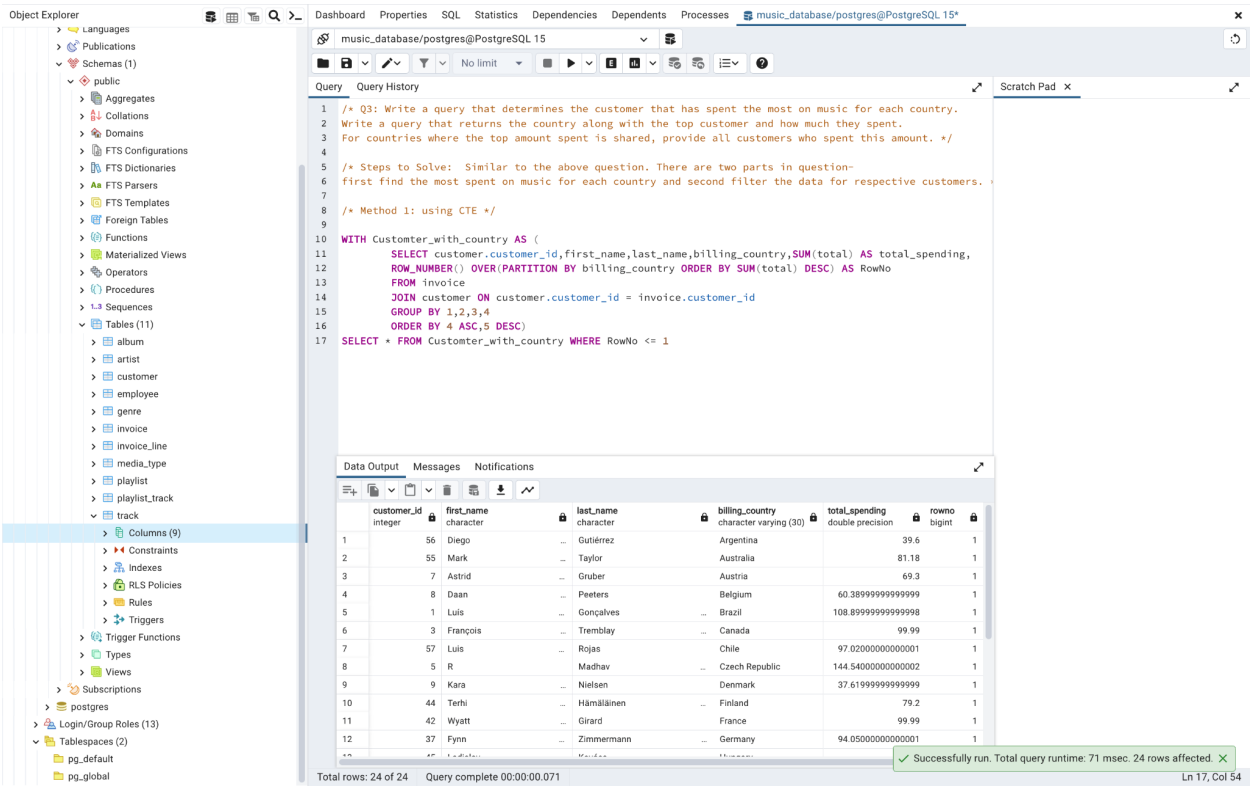
music_database/postgres@PostgreSQL 15*
music_database/postgres@PostgreSQL 15
No limit
Query
Query History
Scratch Pad
1 -- Q3: Return all the track names that have a song length longer than the average song
2 -- Return the Name and Milliseconds for each track. Order by the song length with the l
3 -- listed first
4
5 SELECT name, milliseconds
6 FROM track
7 WHERE milliseconds > (
8 SELECT AVG(milliseconds) AS avg_track_length
9 FROM track)
10 ORDER BY milliseconds DESC;
11
Data Output
Messages
Notifications
name
character varying (150)
milliseconds
integer
1 Occupation / Precipice 5286953
2 Through a Looking Glass 5088838
3 Greetings from Earth, Pt. 1 2960293
4 The Man With Nine Lives 2956998
5 Battlestar Galactica, Pt. 2 2956081
6 Battlestar Galactica, Pt. 1 2952702
7 Murder On the Rising Star 2935894
8 Battlestar Galactica, Pt. 3 2927802
9 Take the Celestra 2927677
10 Fire In Space 2926593
11 The Long Patrol 2925008
Total rows: 494 of 494
Query complete 00:00:00.051
Ln 11, Col 1


Object Explorer
Dashboard Properties SQL Statistics Dependencies Dependents Processes music_database/postgres@PostgreSQL 15*
music_database/postgres@PostgreSQL 15
No limit
Query Query History
Scratch Pad
-- Q1: Find how much amount spent by each customer on artists? Write a query to return customer name, art
-- Steps to Solve: First, find which artist has earned the most according to the InvoiceLines. Now use th
-- which customer spent the most on this artist. For this query, you will need to use the Invoice, Invoic
-- Album, and Artist tables. Note, this one is tricky because the Total spent in the Invoice table might
-- so you need to use the InvoiceLine table to find out how many of each product was purchased, and then
-- for each artist.
WITH best_selling_artist AS (
SELECT artist.artist_id AS artist_id, artist.name AS artist_name, SUM(invoice_line.unit_price*invoice_
FROM invoice_line
JOIN track ON track.track_id = invoice_line.track_id
JOIN album ON album.album_id = track.album_id
JOIN artist ON artist.artist_id = album.artist_id
GROUP BY 1
ORDER BY 3 DESC
LIMIT 1
)
SELECT c.customer_id, c.first_name, c.last_name, bsa.artist_name, SUM(il.unit_price*il.quantity) AS amount
FROM invoice i
JOIN customer c ON c.customer_id = i.customer_id
JOIN invoice_line il ON il.invoice_id = i.invoice_id
JOIN track t ON t.track_id = il.track_id
JOIN album alb ON alb.album_id = t.album_id
Data Output Messages Notifications
customer_id integer
first_name character
last_name character
artist_name character varying (120)
amount_spent double precision
1 46 Hugh O'Reilly Queen 27.719999999999985
2 38 Niklas Schröder Queen 18.81
3 3 François Tremblay Queen 17.82
4 34 João Fernandes Queen 16.830000000000002
5 53 Phil Hughes Queen 11.88
6 41 Marc Dubois Queen 11.88
7 47 Lucas Mancini Queen 10.89
8 33 Ellie Sullivan Queen 10.89
9 20 Dan Miller Queen 3.96
10 5 R Madhav Queen 3.96
11 23 John Gordon Queen 2.9699999999999998
12 54 Steve Murray Queen 2.9699999999999998
13 31 Martha Silk Queen 2.9699999999999998
Total rows: 43 of 43
Query complete 00:00:00.098
Ln 17, Col 9


Object Explorer
Dashboard Properties SQL Statistics Dependencies Dependents Processes music_database/postgres@PostgreSQL 15*
music_database/postgres@PostgreSQL 15
No limit
Query Query History
Scratch Pad
/* Q2: We want to find out the most popular music Genre for each country. We determine the most popular g
with the highest amount of purchases. Write a query that returns each country along with the top Genre. F
the maximum number of purchases is shared return all Genres. */
/* Steps to Solve: There are two parts in question- first most popular music genre and second need data
/* Method 1: Using CTE */
WITH popular_genre AS
(
SELECT COUNT(invoice_line.quantity) AS purchases, customer.country, genre.name, genre.genre_id,
ROW_NUMBER() OVER(PARTITION BY customer.country ORDER BY COUNT(invoice_line.quantity) DESC) AS RowNo
FROM invoice_line
JOIN invoice ON invoice.invoice_id = invoice_line.invoice_id
JOIN customer ON customer.customer_id = invoice.customer_id
JOIN track ON track.track_id = invoice_line.track_id
JOIN genre ON genre.genre_id = track.genre_id
GROUP BY 2,3,4
ORDER BY 2 ASC, 1 DESC
)
SELECT * FROM popular_genre WHERE RowNo <= 1
Data Output Messages Notifications
purchases bigint
country character varying (50)
name character varying (120)
genre_id character varying (50)
rowno bigint
1 17 Argentina Alternative & Punk 4 1
2 34 Australia Rock 1 1
3 40 Austria Rock 1 1
4 26 Belgium Rock 1 1
5 205 Brazil Rock 1 1
6 333 Canada Rock 1 1
7 61 Chile Rock 1 1
8 143 Czech Republic Rock 1 1
9 24 Denmark Rock 1 1
10 46 Finland Rock 1 1
11 211 France Rock 1 1
12 194 Germany Rock 1 1
13 44 Hungary Rock 1 1
Total rows: 24 of 24
Query complete 00:00:00.113
Ln 21, Col 45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music_database/postgres@PostgreSQL 15
No limit
Query
Query History
Scratch Pad
1 /* Q3: Write a query that determines the customer that has spent the most on music for each country.
2 Write a query that returns the country along with the top customer and how much they spent.
3 For countries where the top amount spent is shared, provide all customers who spent this amount. */
4
5 /* Steps to Solve: Similar to the above question. There are two parts in question-
6 first find the most spent on music for each country and second filter the data for respective customers.
7
8 /* Method 1: using CTE */
9
10 WITH Customter_with_country AS (
11 SELECT customer.customer_id,first_name,last_name,billing_country,SUM(total) AS total_spending,
12 ROW_NUMBER() OVER(PARTITION BY billing_country ORDER BY SUM(total) DESC) AS RowNo
13 FROM invoice
14 JOIN customer ON customer.customer_id = invoice.customer_id
15 GROUP BY 1,2,3,4
16 ORDER BY 4 ASC,5 DESC)
17 SELECT * FROM Customter_with_country WHERE RowNo <= 1
Data Output
Messages
Notifications
customer_id integer
first_name character
last_name character
billing_country character varying (30)
total_spending double precision
rowno bigint
1 56 Diego Gutiérrez Argentina 39.6 1
2 55 Mark Taylor Australia 81.18 1
3 7 Astrid Gruber Austria 69.3 1
4 8 Daan Peeters Belgium 60.38999999999999 1
5 1 Luís Gonçalves Brazil 108.89999999999998 1
6 3 François Tremblay Canada 99.99 1
7 57 Luis Rojas Chile 97.02000000000001 1
8 5 R Madhav Czech Republic 144.54000000000002 1
9 9 Kara Nielsen Denmark 37.61999999999999 1
10 44 Terhi Hämäläinen Finland 79.2 1
11 42 Wyatt Girard France 99.99 1
12 37 Fynn Zimmermann Germany 94.05000000000001 1
Successfully run. Total query runtime: 71 msec. 24 rows affected.
Total rows: 24 of 24
Query complete 00:00:00.071
Ln 17, Col 54