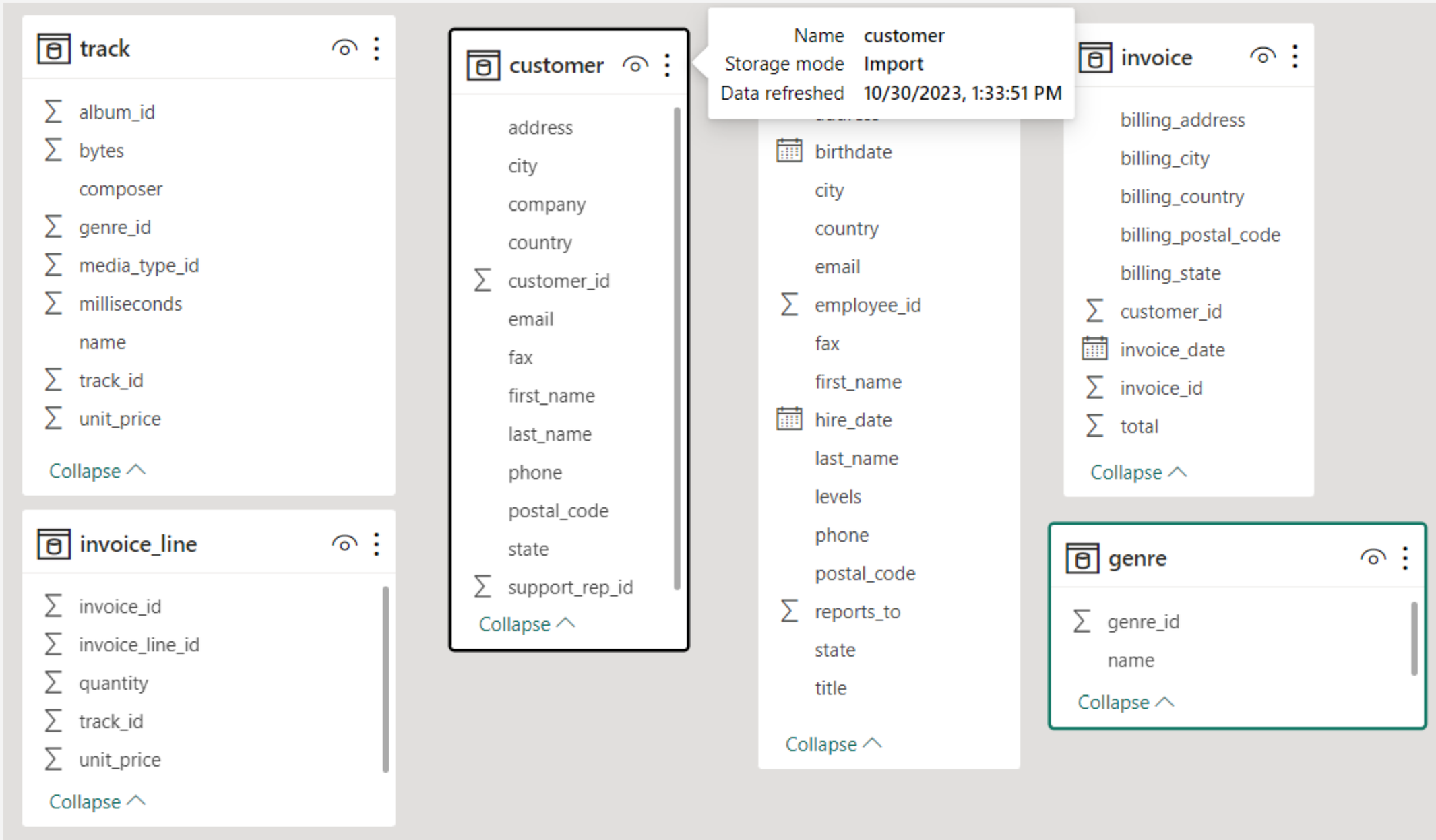
DIGITAL MUSIC STORE

SQL Case Study

My Role

As a data analyst, your role is to analyze a music dataset, extracting valuable insights to understand and support business growth. This involves querying the dataset to identify trends, customer preferences, and areas for improvement, ultimately assisting in data-driven decision-making and strategic planning for the music-related business.

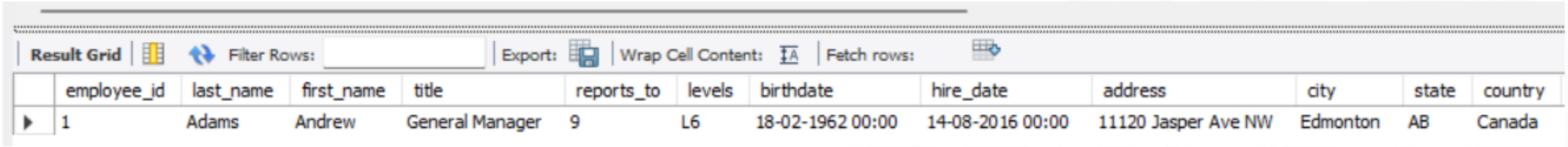
TABLES


track
album_id
bytes
composer
genre_id
media_type_id
milliseconds
name
track_id
unit_price
Collapse
invoice_line
invoice_id
invoice_line_id
quantity
track_id
unit_price
Collapse
customer
address
city
company
country
customer_id
email
fax
first_name
last_name
phone
postal_code
state
support_rep_id
Collapse
Name customer
Storage mode Import
Data refreshed 10/30/2023, 1:33:51 PM
birthdate
city
country
email
employee_id
fax
first_name
hire_date
last_name
levels
phone
postal_code
reports_to
state
title
Collapse
invoice
billing_address
billing_city
billing_country
billing_postal_code
billing_state
customer_id
invoice_date
invoice_id
total
Collapse
genre
genre_id
name
Collapse

Q1: Who is the senior most employee based on job title?

```
select * from music.employee
order by levels desc
limit 1 ;
```

OUTPUT



Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

employee_id	last_name	first_name	title	reports_to	levels	birthdate	hire_date	address	city	state	country
1	Adams	Andrew	General Manager	9	L6	18-02-1962 00:00	14-08-2016 00:00	11120 Jasper Ave NW	Edmonton	AB	Canada

Q2: Which countries have the most Invoices?

```
select count(*) as C , billing_country
from music.invoice
group by billing_country
order by C desc  ;
```

OUTPUT

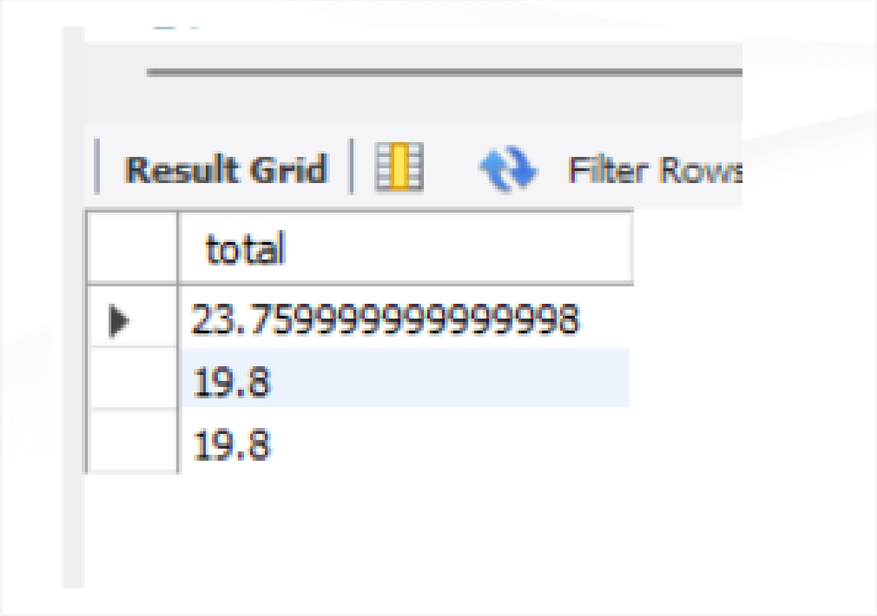
Result Grid | Filter Ro

C	billing_country
131	USA
76	Canada
61	Brazil
50	France
41	Germany
30	Czech Republic
29	Portugal
28	United Kingdom
21	India
13	Ireland
13	Chile
11	Finland
11	Spain
10	Poland
10	Denmark

Q3: What are top 3 values of total invoice?

```
select total from music.invoice
order by total desc
limit 3 ;
```

OUTPUT



Q4: Return all the track names that have a song length longer than the average song length. Return the Name and Milliseconds for each track. Order by the song length with the longest songs list first.

```
select total from music.invoice
order by total desc
limit 3 ;
```

OUTPUT

Result Grid | Filter Rows: | Expo

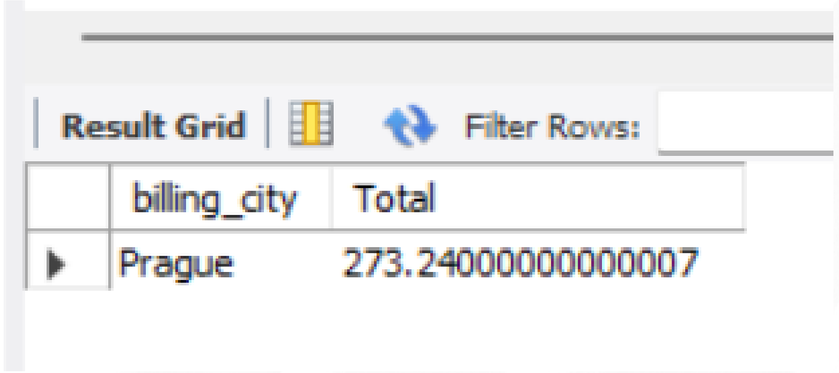
name	milliseconds
How Many More Times	711836
Advance Romance	677694
Sleeping Village	644571
You Shook Me(2)	619467
Talkin' 'Bout Women Obviously	589531
Stratus	582086
No More Tears	555075
The Alchemist	509413
Wheels Of Confusion / The Straightener	494524
Book Of Thel	494393
You Oughta Know (Alternate)	491885
Terra	482429
Snoopy's search-Red baron	456071
Sozinho (Hitmakers Classic Mix)	436636
Master Of Puppets	436453

track 10

Q5: Which city has the best customers? We would like to throw a promotional Music Festival in the city we made the most money. Write a query that returns one city that has the highest sum of invoice totals.Return both the city name & sum of all invoice totals ?

```
select billing_city , sum(total) as Total from music.invoice
group by billing_city
order by Total desc
limit 1 ;
```

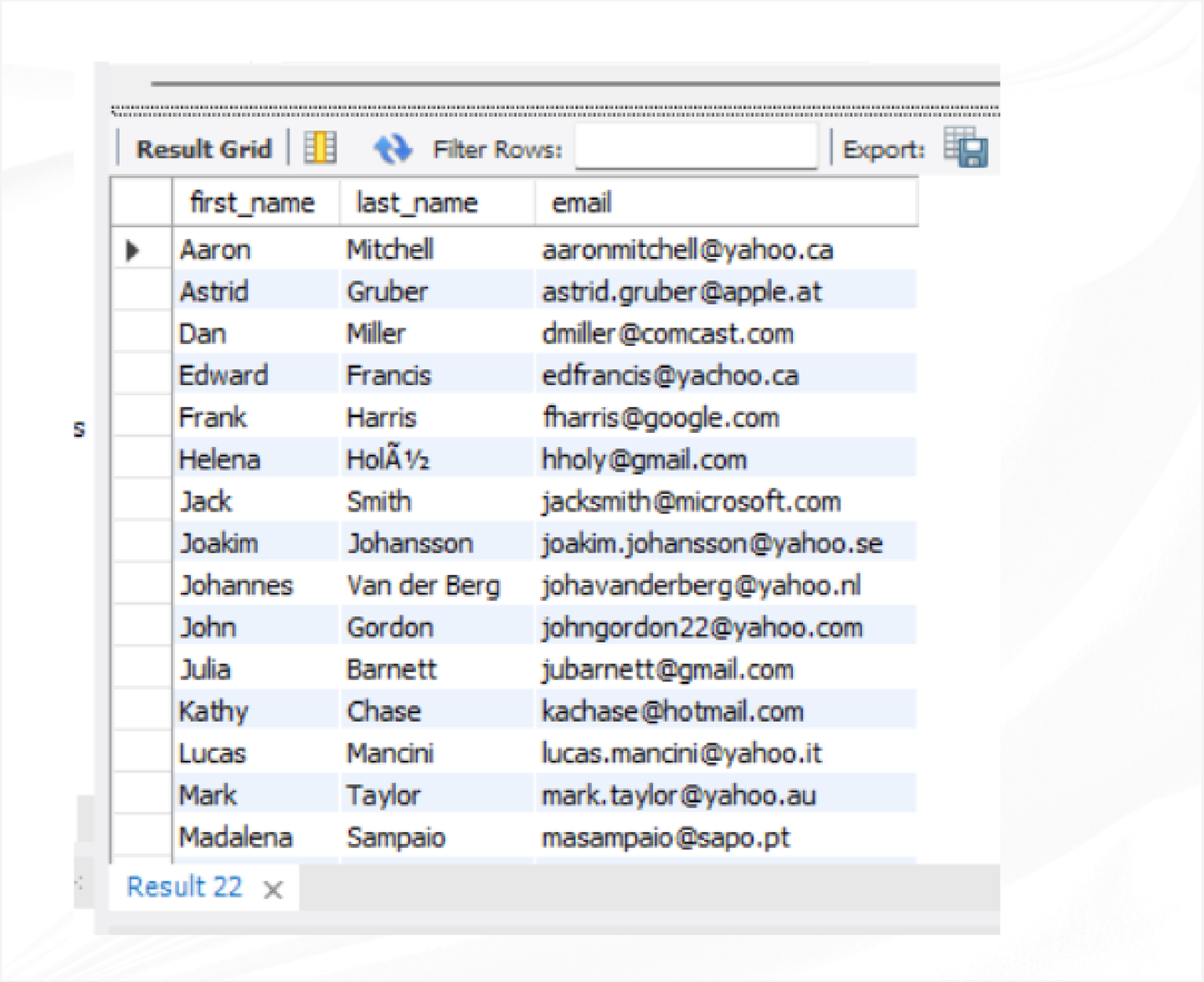
OUTPUT .....→



Q6: 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 first_name , last_name , email from music.customer
join music.invoice on customer.customer_id = invoice.invoice_id
join music.invoice_line on invoice.invoice_id = invoice_line.invoice_id
where track_id in (
select track_id from music.track
join music.genre on track.genre_id = genre.genre_id
where genre.name = "Rock" )
order by email ;
```

OUTPUT



Result Grid | Filter Rows: | Export:

first_name	last_name	email
Aaron	Mitchell	aaronmitchell@yahoo.ca
Astrid	Gruber	astrid.gruber@apple.at
Dan	Miller	dmiller@comcast.com
Edward	Francis	edfrancis@yachoo.ca
Frank	Harris	fharris@google.com
Helena	HolÃ½	hholy@gmail.com
Jack	Smith	jacksmith@microsoft.com
Joakim	Johansson	joakim.johansson@yahoo.se
Johannes	Van der Berg	johavanderberg@yahoo.nl
John	Gordon	johngordon22@yahoo.com
Julia	Barnett	jubarnett@gmail.com
Kathy	Chase	kachase@hotmail.com
Lucas	Mancini	lucas.mancini@yahoo.it
Mark	Taylor	mark.taylor@yahoo.au
Madalena	Sampaio	masampaio@sapo.pt

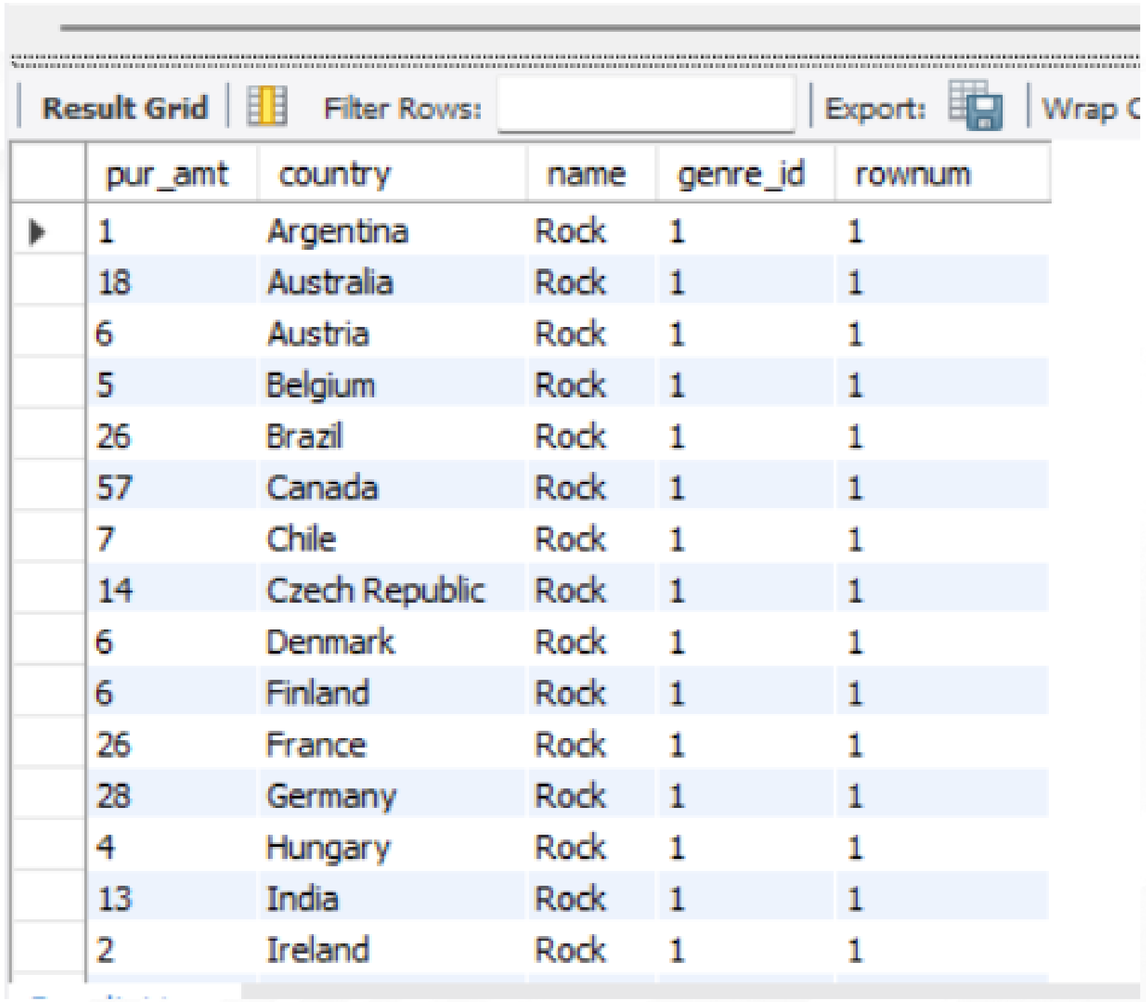
Result 22

Q7 : We want to find out the most popular music Genre for each country. We determine the most popular genre as the genre with the highest amount of purchases. Write a query that returns each country along with the top Genre. For countries where the maximum number of purchases is shared return all Genres.

```
with popular_genre as
(
  select count(invoice_line.quantity) as pur_amt , customer.country , genre.name , genre.genre_id ,
  row_number() over(partition by customer.country order by count(invoice_line.quantity) desc ) as rownum
  from music.invoice_line
  join music.invoice on invoice.invoice_id = invoice_line.invoice_id
  join music.customer on customer.customer_id = invoice.customer_id
  join music.track on track.track_id = invoice_line.track_id
  join music.genre on genre.genre_id = track.genre_id
  group by 2,3,4
  order by 2 asc , 1 desc
  )

select * from popular_genre where rownum <= 1 ;
```

OUTPUT



Result Grid | Filter Rows: | Export: | Wrap C

pur_amt	country	name	genre_id	rownum
1	Argentina	Rock	1	1
18	Australia	Rock	1	1
6	Austria	Rock	1	1
5	Belgium	Rock	1	1
26	Brazil	Rock	1	1
57	Canada	Rock	1	1
7	Chile	Rock	1	1
14	Czech Republic	Rock	1	1
6	Denmark	Rock	1	1
6	Finland	Rock	1	1
26	France	Rock	1	1
28	Germany	Rock	1	1
4	Hungary	Rock	1	1
13	India	Rock	1	1
2	Ireland	Rock	1	1

Q8: Write a query that determines the customer that has spent the most on music for each country. Write a query that returns the country along with the top customer and how much they spent. For countries where the top amount spent is shared, provide all customers who spent this amount.

```
with customer_with_country as (
 select customer.customer_id , first_name , last_name , billing_country , sum(total) as total_spending ,
 ROW_NUMBER () OVER ( partition by billing_country order by sum(total) desc ) as rownum
 from music.invoice
 join music.customer on customer.customer_id = invoice.customer_id
 group by 1,2,3,4
 order by 4 asc , 5 desc )
 select * from customer_with_country where rownum <= 1 ;
```

OUTPUT

customer_id	first_name	last_name	billing_country	total_spending	rownum
56	Diego	GutiÃ©rrez	Argentina	39.6	1
55	Mark	Taylor	Australia	81.18	1
7	Astrid	Gruber	Austria	69.3	1
8	Daan	Peeters	Belgium	60.38999999999999	1
1	LuÃ-s	GonÃ§alves	Brazil	108.89999999999998	1
3	FranÃ§ois	Tremblay	Canada	99.99	1
57	Luis	Rojas	Chile	97.02000000000001	1
5	FrantiÅiek	WichterlovÃi	Czech Republic	144.54000000000002	1
9	Kara	Nielsen	Denmark	37.61999999999999	1
44	Terhi	HÃ¤mÃ¤lÃ¤inen	Finland	79.2	1
42	Wyatt	Girard	France	99.99	1
37	Fynn	Zimmermann	Germany	94.05000000000001	1
45	Ladislav	KovÃics	Hungary	78.21	1
58	Manoj	Pareek	India	111.86999999999999	1
46	Hugh	O'Reilly	Ireland	114.83999999999997	1