

NOTE - Replace 'propane-ground-386006.Music_store' with your dataset name in all the queries

```
/* Q1: Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent */
WITH highest_sell AS (
  SELECT
    artist.artist_id AS ID,
    artist.name AS artist_name,
    ROUND(SUM(invoice_line.unit_price*invoice_line.quantity),2) AS total_sales
  FROM
    propane-ground-386006.Music_store.artist AS artist
  JOIN
    propane-ground-386006.Music_store.album AS album ON album.artist_id=artist.artist_id
  JOIN
    propane-ground-386006.Music_store.track AS track ON track.album_id=album.album_id
  JOIN
    propane-ground-386006.Music_store.invoice_line AS invoice_line ON invoice_line.track_id=track.track_id
  GROUP BY
    ID,artist_name
  ORDER BY
    total_sales DESC
  LIMIT 1
)
SELECT
  CONCAT(customer.first_name," ",customer.last_name) AS Customer_Name,
  hs.artist_name,
  ROUND(SUM(invoice_line.unit_price*invoice_line.quantity),2) AS amount_spent
FROM
  propane-ground-386006.Music_store.customer AS customer
  JOIN
    propane-ground-386006.Music_store.invoice AS invoice ON invoice.customer_id=customer.customer_id
  JOIN
    propane-ground-386006.Music_store.invoice_line AS invoice_line ON invoice_line.invoice_id=invoice.invoice_id
  JOIN
    propane-ground-386006.Music_store.track AS track ON track.track_id = invoice_line.track_id
  JOIN
    propane-ground-386006.Music_store.album AS album ON album.album_id=track.album_id
  JOIN
    highest_sell hs ON hs.ID=album.artist_id
GROUP BY
  Customer_Name,hs.artist_name
ORDER BY
  amount_spent DESC
```

Result of the query -

Query results				SAVE RESULTS	E
JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH PREVIEW
Row	Customer_Name	artist_name	amount_spent		
1	Hugh O'Reilly	Queen	27.72		
2	Niklas Schröder	Queen	18.81		
3	François Tremblay	Queen	17.82		
4	João Fernandes	Queen	16.83		
5	Phil Hughes	Queen	11.88		
6	Marc Dubois	Queen	11.88		
7	Ellie Sullivan	Queen	10.89		
8	Lucas Mancini	Queen	10.89		
9	František Wichterlová	Queen	3.96		
10	Dan Miller	Queen	3.96		
11	John Gordon	Queen	2.97		
12	Martha Silk	Queen	2.97		
13	Steve Murray	Queen	2.97		
14	Luís Gonçalves	Queen	1.98		

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/* Q2: 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. */

--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  
    propane-ground-386006.Music_store.invoice_line AS invoice_line  
  JOIN  
    propane-ground-386006.Music_store.invoice AS invoice ON invoice.invoice_id = invoice_line.invoice_id  
  JOIN  
    propane-ground-386006.Music_store.customer AS customer ON customer.customer_id=invoice.customer_id  
  JOIN  
    propane-ground-386006.Music_store.track AS track ON track.track_id=invoice_line.track_id  
  JOIN  
    propane-ground-386006.Music_store.genre AS 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
```

Result of the query -

Query results SAVE RESULTS

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS		EXECUTION GRAPH	PREVIEW
Row		purchases	country		name	genre_id	RowNo
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
14		102	India		Rock	1	1
15		72	Ireland		Rock	1	1

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/* Q3: 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 Customter_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 RowNo  
    FROM propane-ground-386006.Music_store.invoice AS invoice  
    JOIN propane-ground-386006.Music_store.customer AS customer ON customer.customer_id = invoice.customer_id  
    GROUP BY 1,2,3,4  
    ORDER BY 4 ASC,5 DESC)  
SELECT * FROM Customter_with_country WHERE RowNo <= 1
```

Result of the query -

Query results

SAVE RESULTS

JOB INFORMATION		RESULTS	JSON	EXECUTION DETAILS	EXECUTION GRAPH	PREVIEW
Row	customer_id	first_name	last_name	billing_country	total_spending	RowNo
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	60.3899999...	1
5	1	Luis	Gonçalves	Brazil	108.899999...	1
6	3	François	Tremblay	Canada	99.99	1
7	57	Luis	Rojas	Chile	97.0200000...	1
8	5	František	Wichterlová	Czech Republic	144.540000...	1
9	9	Kara	Nielsen	Denmark	37.6199999...	1
10	44	Terhi	Hämäläinen	Finland	79.2	1
11	42	Wyatt	Girard	France	99.99	1
12	37	Fynn	Zimmermann	Germany	94.0500000...	1
13	45	Ladislav	Kovács	Hungary	78.21	1
14	58	Manoj	Pareek	India	111.869999...	1
15	46	Mark	O'Dell	Ireland	114.820000...	1

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