## Question 1: Who is the best customer?

The customer who has spent the most money will be declared the best customer. Build a query that returns the person who has spent the most money. I found the solution by linking the following three: Invoice, InvoiceLine, and Customer tables to retrieve this information, but you can probably do it with fewer!

SELECT

c.CustomerId,

c.FirstName,

c.LastName,

SUM(total) Total\_invoices

FROM Customer c

JOIN Invoice i

ON i.CustomerId = c.CustomerId

GROUP BY 1,

2,

3

ORDER BY 4 DESC;

## Question 2: Who is writing the rock music?

Now that we know that our customers love rock music, we can decide which musicians to invite to play at the concert.

SELECT

a.ArtistId,

a.Name,

COUNT(\*) songs

FROM Artist a

JOIN Album al

ON a.ArtistId = al.ArtistId

JOIN Track t

ON al.AlbumId = t.AlbumId

JOIN Genre g

ON t.GenreId = g.GenreId

WHERE g.Name = 'Rock'

GROUP BY 1,

2

ORDER BY 3 DESC

LIMIT 10;

## Question 3.1 First, find which artist has earned the most according to the InvoiceLines?

SELECT

ar.Name,

SUM(il.UnitPrice) AS amount\_spent

FROM InvoiceLine il

JOIN Track t

ON il.TrackId = t.TrackId

JOIN Album al

ON t.AlbumId = AL.AlbumId

JOIN Artist ar

ON al.ArtistId = ar.ArtistId

GROUP BY 1

ORDER BY 2 DESC

LIMIT 10;

## Question 3.2 Now use this artist to find which customer spent the most on this artist.

SELECT

c.CustomerId,

c.FirstName,

c.LastName,

ar.Name,

SUM(il.Quantity \* il.UnitPrice) AmountSpent

FROM Invoice i

JOIN InvoiceLine il

ON i.InvoiceId = il.InvoiceId

JOIN Track t

ON il.TrackId = t.TrackId

JOIN Customer c

ON i.CustomerId = c.CustomerId

JOIN Album al

ON t.AlbumId = al.AlbumId

JOIN Artist ar

ON al.ArtistId = ar.ArtistId

WHERE ar.Name = 'Iron Maiden'

GROUP BY 1,

2,

3,

4

ORDER BY 5 DESC;

## Question 4

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 total\_spent\_table

AS (SELECT

c.FirstName,

c.LastName,

c.Country,

c.CustomerId,

SUM(i.total) AS sum\_invoices

FROM Customer c

JOIN Invoice i

ON c.CustomerId = i.CustomerId

GROUP BY i.CustomerId)

SELECT

total\_spent\_table.\*

FROM Total\_spent\_table

LEFT JOIN (SELECT

CustomerId,

FirstName,

LastName,

Country,

MAX(sum\_invoices) AS MaxInvoices

FROM total\_spent\_table

GROUP BY Country) Max\_spent\_table

ON Total\_spent\_table.Country = Max\_spent\_table.Country

WHERE total\_spent\_table.sum\_invoices = Max\_spent\_table.MaxInvoices

ORDER BY Country;