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

```
select * from employee
order by levels desc
limit 1
```

Q2 : Which countries have the most invoices?

```
select COUNT(*) as c,billing_country
from invoice
group by billing_country
order by c desc
```

Q3 : what are the top 3 values of total invoice

```
select total from invoice
order by total desc
limit 3
```

Q4 :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 SUM(total) as invoice_total,billing_city
from invoice
group by billing_city
order by invoice_total desc
```

Q5 : Who is the best customer?

The customer who has spent the most money will be declared the best customer.

Write a query that returns the person who has spent the most money

```
select
customer.customer_id,customer.first_name,customer.last_name,SUM(invoice.t
otal) as total
from customer
join invoice on customer.customer_id = invoice.customer_id
group by customer.customer_id
order by total desc
```

limit 1

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 email,first_name,last_name
from customer
join invoice on customer.customer_id = invoice.customer_id
join invoiceline 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
```

Q7: 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
```

Q8 : 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 listed first

```
select name, milliseconds
from track
where milliseconds > (
	select avg(milliseconds) as avg_track_length from track
) order by milliseconds desc
```

Q9: Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent

```
SELECT
    Customer.First_Name || ' ' || Customer.Last_Name AS CustomerName,
    Artist.Name AS ArtistName,
    SUM(Invoice_Line.Unit_Price * Invoice_Line.Quantity) AS TotalSpent
FROM
    Customer
JOIN
    Invoice ON Customer.Customer_Id = Invoice.Customer_Id
JOIN
    Invoice_Line ON Invoice.Invoice_Id = Invoice_Line.Invoice_Id
JOIN
    Track ON Invoice_Line.Track_Id = Track.Track_Id
JOIN
    Album ON Track.Album_Id = Album.Album_Id
JOIN
    Artist ON Album.Artist_Id = Artist.Artist_Id
GROUP BY
    Customer.Customer_Id, Artist.Artist_Id
ORDER BY
    CustomerName, ArtistName;
```

Q10: 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 Genre_Purchases AS (
    SELECT
        Customer.Country,
        Genre.Name AS Genre,
        COUNT(*) AS Purchases
    FROM
        Customer
    JOIN
        Invoice ON Customer.Customer_Id = Invoice.Customer_Id
    JOIN
        Invoice_Line ON Invoice.Invoice_Id = Invoice_Line.Invoice_Id
    JOIN
        Track ON Invoice_Line.Track_Id = Track.Track_Id
    JOIN
        Genre ON Track.Genre_Id = Genre.Genre_Id
    GROUP BY
        Customer.Country, Genre.Name
),
Max_Purchases AS (
```

```
    SELECT
        Country,
        MAX(Purchases) AS Max_Purchases
    FROM
        Genre_Purchases
    GROUP BY
        Country
)
SELECT
    gp.Country,
    gp.Genre,
    gp.Purchases
FROM
    Genre_Purchases gp
JOIN
    Max_Purchases mp ON gp.Country = mp.Country AND gp.Purchases =
mp.Max_Purchases
ORDER BY
    gp.Country, gp.Genre;
```

Q11: 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_Spendings AS (
    SELECT
        Customer.Country,
        Customer.Customer_Id,
        Customer.First_Name || ' ' || Customer.Last_Name AS CustomerName,
        SUM(Invoice_Line.Unit_Price * Invoice_Line.Quantity) AS TotalSpent
    FROM
        Customer
    JOIN
        Invoice ON Customer.Customer_Id = Invoice.Customer_Id
    JOIN
        Invoice_Line ON Invoice.Invoice_Id = Invoice_Line.Invoice_Id
    GROUP BY
        Customer.Country, Customer.Customer_Id, Customer.First_Name,
Customer.Last_Name
),
Max_Spendings AS (
    SELECT
        Country,
```

```
        MAX(TotalSpent) AS MaxSpent
    FROM
        Customer_Spendings
    GROUP BY
        Country
)
SELECT
    cs.Country,
    cs.CustomerName,
    cs.TotalSpent
FROM
    Customer_Spendings cs
JOIN
    Max_Spendings ms ON cs.Country = ms.Country AND cs.TotalSpent =
ms.MaxSpent
ORDER BY
    cs.Country, cs.CustomerName;
```