
PROJECT
MUSIC

TABLES

```sql
select * from album2;
select * from artist;
select * from customer;
select * from employee;
select * from genre;
select * from invoice;
select * from invoice_line;
select * from media_type;
select * from playlist;
select * from playlist_track;
select * from track;
```

WHO IS THE SENIOR MOST EMPLOYEE BASED ON JOB TITLE?

```sql
SELECT
    first_name, last_name, title
FROM
    employee
ORDER BY levels DESC
LIMIT 1;
```

first_name	last_name	title
Andrew	Adams	General Manager

WHICH COUNTRIES HAVE THE MOST INVOICES?

```sql
SELECT
    billing_country, COUNT(*) AS 'total invoice'
FROM
    invoice
GROUP BY billing_country
ORDER BY COUNT(*) DESC;
```

Result Grid | Filter Rows:

billing_country	total invoice
USA	131
Canada	76
Brazil	61
France	50
Germany	41
Czech Republic	30

WHAT ARE TOP 3 VALUES OF TOTAL INVOICE?

```sql
SELECT
    total
FROM
    invoice
ORDER BY total DESC
LIMIT 3;
```

total
23.759999999999998
19.8
19.8

WHICH CITY HAS THE BEST CUSTOMERS

```sql
SELECT
    billing_city, SUM(total) AS 'Invoice_total'
FROM
    invoice
GROUP BY billing_city
ORDER BY SUM(total) DESC
LIMIT 1;
```

	billing_city	Invoice_total
▶	Prague	273.2400000000007

WHO IS THE BEST CUSTOMER?

```sql
SELECT
    customer.customer_id,
    customer.first_name,
    customer.last_name,
    SUM(invoice.total) AS 'high spend customer'
FROM
    customer
        JOIN
    invoice ON customer.customer_id = invoice.customer_id
GROUP BY customer.customer_id , customer.first_name , customer.last_name
ORDER BY SUM(invoice.total) DESC
LIMIT 1;
```

customer_id	first_name	last_name	high spend customer
5	FrantiÅiek	WichterlovÃ¡	144.54000000000002

WRITE QUERY TO RETURN THE EMAIL, FIRST NAME, LAST NAME, & GENRE OF ALL ROCK MUSIC LISTENERS.

```sql
SELECT DISTINCT
    (customer.email),
    customer.first_name,
    customer.last_name,
    genre.name
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 genre.genre_id = track.genre_id
WHERE
    genre.name = 'Rock'
        AND customer.email LIKE 'A%'
ORDER BY customer.email;
```

email	first_name	last_name	name
aaronmitchell@yahoo.ca	Aaron	Mitchell	Rock
alero@uol.com.br	Alexandre	Rocha	Rock
astrid.gruber@apple.at	Astrid	Gruber	Rock

LET'S INVITE THE ARTISTS WHO HAVE WRITTEN THE MOST ROCK MUSIC IN OUR DATASET.

```sql
select artist.artist_id, artist.name, count(track.track_id) as "total_track"
from artist
join album2 on artist.artist_id = album2.artist_id
join track on track.album_id = album2.album_id
join genre on genre.genre_id = track.genre_id
where genre.name = "Rock"
group by artist.name,  artist.artist_id
order by count(track.track_id) desc
limit 10;
```

artist_id	name	total_track
1	AC/DC	18
3	Aerosmith	15
8	Audioslave	14
22	Led Zeppelin	14
4	Alanis Morissette	13

RETURN ALL THE TRACK NAMES THAT HAVE A SONG LENGTH LONGER THAN THE AVERAGE SONG LENGTH.

```
select track.track_id, track.name, milliseconds from track
where milliseconds > (select avg(milliseconds) from track
                      order by milliseconds desc
                     );
```

track_id	name	milliseconds
1	For Those About To Rock (We Salute You)	343719
2	Balls to the Wall	342562
4	Restless and Wild	252051
5	Princess of the Dawn	375418
10	Evil Walks	263497

FIND HOW MUCH AMOUNT SPENT BY EACH CUSTOMER ON ARTISTS?
WRITE A QUERY TO RETURN CUSTOMER NAME, ARTIST NAME AND TOTAL SPENT

```sql
select customer.customer_id, customer.first_name, customer.last_name, artist.name,
sum(invoice_line.unit_price * invoice_line.quantity) as "total_spend"
from customer
join invoice on customer.customer_id = invoice.customer_id
join invoice_line on invoice_line.invoice_id = invoice.invoice_id
join track on track.track_id = invoice_line.track_id
join album2 on album2.album_id = track.album_id
join artist on artist.artist_id = album2.artist_id
group by 1,2,3,4
order by 5 desc
limit 1;
```

	customer_id	first_name	last_name	name	total_spend
▶	54	Steve	Murray	AC/DC	17.82

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.

```sql
select genre.name, invoice.billing_country, count(invoice_line.quantity) as "purchase",
row_number() over(partition by invoice.billing_country order by count(invoice_line.quantity) desc) as "rank_by_row_number"
from invoice
join invoice_line on invoice.invoice_id = invoice_line.invoice_id
join track on track.track_id = invoice_line.track_id
join genre on genre.genre_id = track.genre_id
group by 1,2
order by count(invoice_line.quantity) desc;
```

name	billing_country	purchase	rank_by_row_number
Rock	USA	70	1
Rock	Canada	57	1
Rock	United Kingdom	47	1
Metal	USA	34	2
Rock	Germany	28	1

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.

```sql
select customer.customer_id, customer.first_name, customer.last_name, sum(invoice.total) as "total_spend",
invoice.billing_country,
row_number() over(partition by invoice.billing_country order by sum(invoice.total) desc) as "Rank"
from customer
join invoice on invoice.customer_id = customer.customer_id
group by 1,2,3,5
order by 4 desc;
```

customer_id	first_name	last_name	total_spend	billing_country	Rank
5	FrantiÅiek	WichterlovÃ¡	144.54000000000002	Czech Republic	1
6	Helena	HolÃ½	128.7	Czech Republic	2
46	Hugh	O'Reilly	114.83999999999997	Ireland	1
58	Manoj	Pareek	111.86999999999999	India	1
1	LuÃ-s	GonÃ§alves	108.89999999999998	Brazil	1


THANK YOU