Music Store Analysis

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

SELECT *
FROM employee
ORDER BY levels DESC
LIMIT 1;

employee_id	last_name	first_name	title	reports_to	levels	birthdate
1	Adams	Andrew	General Manager	9	L6	18-02-1962 00:00

hire_date	address	city	state	country	postal_code	phone
14-08-2016 00:00	11120 Jasper Ave NW	Edmonton	AB	Canada	T5K 2N1	+1 (780) 428-9482

fax	email
+1 (780) 428-3457	andrew@chinookcorp.com

Q2. Which countries have the most Invoices?

SELECT billing_country, COUNT(invoice_id) AS invoice_count
FROM invoice
GROUP BY billing_country
ORDER BY invoice_count DESC;

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

Australia	10
Hungary	10
Sweden	10
Netherlands	10
Norway	9
Italy	9
Austria	9
Belgium	7
Argentina	5

Q3. What are top 3 values of total invoice?

SELECT *
FROM invoice
ORDER BY total DESC
LIMIT 3;

invoice_id	customer_id	invoice_date	billing_address	billing_city	billing_country
183	42	09-02-2018	9, Place Louis Barthou	Bordeaux	France
92	32	02-07-2017	696 Osborne Street	Winnipeg	Canada
31	3	21-02-2017	1498 rue BÃƒÂ©langer	MontrÃƒÂ©al	Canada

total	billing_state	billing_postal_code
24	None	33000
20	MB	R3L 2B9
20	QC	H2G 1A7

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 billing_country, SUM(total) AS total
FROM invoice
GROUP BY billing_country
ORDER BY total DESC
LIMIT 1;

billing_country	total
USA	1051

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
    c.first_name,
    c.last_name,
    SUM(i.total) AS total
FROM
    customer c
JOIN
    invoice i ON c.customer_id = i.customer_id
GROUP BY
    c.first_name, c.last_name
ORDER BY
    total DESC
LIMIT 1;
```

first_name	last_name	total
FrantiÃ…Â¡ek	WichterlovÃƒÂ¡	146

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 c.last_name, c.first_name, c.email
FROM customer c
JOIN invoice i ON c.customer_id = i.customer_id
JOIN invoice_line il ON i.invoice_id = il.invoice_id
WHERE il.track_id IN (
    SELECT track_id
    FROM track
    JOIN genre ON genre.genre_id = track.genre_id
    WHERE genre.name LIKE 'Rock'
)
ORDER BY c.email;
```

last_name	first_name	email
Mitchell	Aaron	aaronmitchell@yahoo.ca
Rocha	Alexandre	alero@uol.com.br
Gruber	Astrid	astrid.gruber@apple.at
Hansen	BjÃƒÂ¸rn	bjorn.hansen@yahoo.no
Bernard	Camille	camille.bernard@yahoo.fr
Peeters	Daan	daan_peeters@apple.be

GutiÃƒÂ©rrez	Diego	diego.gutierrez@yahoo.ar
Miller	Dan	dmiller@comcast.com
Lefebvre	Dominique	dominiquelefebvre@gmail.com
Francis	Edward	edfrancis@yachoo.ca
Martins	Eduardo	eduardo@woodstock.com.br
Sullivan	Ellie	ellie.sullivan@shaw.ca
Jones	Emma	emma_jones@hotmail.com
MuÃƒÂ±oz	Enrique	enrique_munoz@yahoo.es
Ramos	Fernanda	fernadaramos4@uol.com.br
Harris	Frank	fharris@google.com
Ralston	Frank	fralston@gmail.com
WichterlovÃƒÂ¡	FrantiÃƒ…Â¡ek	frantisekw@jetbrains.com
Tremblay	FranÃƒÂ§ois	ftremblay@gmail.com
Zimmermann	Fynn	fzimmermann@yahoo.de
Schneider	Hannah	hannah.schneider@yahoo.de
HolÃƒÂ½	Helena	hholy@gmail.com
Leacock	Heather	hleacock@gmail.com
O'Reilly	Hugh	hughoreilly@apple.ie
Mercier	Isabelle	isabelle_mercier@apple.fr
Smith	Jack	jacksmith@microsoft.com
Peterson	Jennifer	jenniferp@rogers.ca
Fernandes	JoÃƒÂ£o	jfernandes@yahoo.pt
Johansson	Joakim	joakim.johansson@yahoo.se
Van der Berg	Johannes	johavanderberg@yahoo.nl
Gordon	John	johngordon22@yahoo.com
Barnett	Julia	jubarnett@gmail.com
Chase	Kathy	kachase@hotmail.com
Nielsen	Kara	kara.nielsen@jubii.dk
KovÃƒÂ¡cs	Ladislav	ladislav_kovacs@apple.hu
KÃƒÂ¶hler	Leonie	leonekohler@surfeu.de
Mancini	Lucas	lucas.mancini@yahoo.it
Rojas	Luis	luisrojas@yahoo.cl
Pareek	Manoj	manoj.pareek@rediff.com
Dubois	Marc	marc.dubois@hotmail.com
Taylor	Mark	mark.taylor@yahoo.au
Silk	Martha	marthasilk@gmail.com
Sampaio	Madalena	masampaio@sapo.pt
Philips	Mark	mphilips12@shaw.ca
SchrÃƒÂ¶der	Niklas	nschroder@surfeu.de
Gray	Patrick	patrick.gray@aol.com
Hughes	Phil	phil.hughes@gmail.com
Cunningham	Richard	ricunningham@hotmail.com
Mishra	Rishabh	rishabh_mishra@yahoo.in

Brown	Robert	robbrown@shaw.ca
Almeida	Roberto	roberto.almeida@riotur.gov.br
WÃƒÂ³jcik	StanisÃ…â€šaw	stanisÃ…â€šaw.wÃƒÂ³jcik@wp.pl
Murray	Steve	steve.murray@yahoo.uk
HÃƒÂ¤mÃƒÂ¤lÃƒÂ¤inen	Terhi	terhi.hamalainen@apple.fi
Goyer	Tim	tgoyer@apple.com
Stevens	Victor	vstevens@yahoo.com
Girard	Wyatt	wyatt.girard@yahoo.fr

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 a.name, COUNT(t.track_id) AS total_count
FROM artist a
JOIN album al ON a.ArtistID = al.Artist_ID
JOIN track t ON al.album_id = t.album_id
WHERE t.genre_id IN (
    SELECT genre_id
    FROM genre
    WHERE name LIKE 'Rock'
)
GROUP BY a.name
ORDER BY total_count DESC
LIMIT 10;

name	total_count
AC/DC	18
Audioslave	14
Aerosmith	13
Alanis Morissette	13
Alice In Chains	12
Led Zeppelin	11
Frank Zappa & Captain Beefheart	9
Accept	2

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)
    FROM track
)
ORDER BY milliseconds DESC;
```

name	milliseconds
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
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
Stone Crazy	433397
Snowblind	420022
Computadores Fazem Arte	404323
Jerusalem	402390
Dazed and Confused	401920
The Winner Loses	392254
Love, Hate, Love	387134
ConstruÃƒÂ§ÃƒÂ£o / Deus Lhe Pague	383059
Black Sabbath	382066
Livin' On The Edge	381231
I Can't Quit You Baby(2)	380551
Princess of the Dawn	375418
Harvester Of Sorrow	374543
Momma's Gotta Die Tonight	371539
Vai Passar	369763
Wherever I May Roam	369345
Overdose	369319

N.I.B.	368770
O Boto (BÃƒÂ´to)	366837
Let There Be Rock	366654
The Begining... At Last	365662
Carolina Hard-Core Ecstasy	359680
World Of Trouble	359157
Trupets Of Jericho	359131
Amazing	356519
Welcome Home (Sanitarium)	350197
There Goes The Neighborhood	350171
Sea Of Sorrow	349831
Confusion	344163
For Those About To Rock (We Salute You)	343719
Shadow on the Sun	343457
Balls to the Wall	342562
Machine Men	341655
I am the Highway	334942
Muffin Man	332878
Go Down	331180
Janie's Got A Gun	330736
Bring'em Back Alive	329534
Sozinho (CaÃƒÂªdrum 'n' Bass)	328071
Problem Child	325041
Whole Lotta Rosie	323761
Intro/ Low Down	323683
The Unforgiven	322925
Love In An Elevator	321828
Super Terrorizer	319373
The pleasant pheasant	318066
Body Count	317936
Geni E O Zepelim	317570
The Last Remaining Light	317492
Crazy	316656
You Shook Me	315951
Travelling Riverside Blues	312032
Noite Do Prazer	311353
What It Takes	310622
The Curse	309786
Cryin'	309263
Creeping Death	308035
Angel	307617
Banditismo Por Uma Questa	307095

Extra	304352
Light My Way	303595
Stronger Than Death	300747
Voodoo	300721
Forgiven	300355
Getaway Car	299598
Linha Do Equador	299337
#1 Zero	299102
Onde VocÃƒÂª Mora?	298396
Mel	294765
Moon germs	294060
Like a Stone	294034
Wake Up	293485
Out Of Exile	291291
Na Frente Da TV	289750
Sad But True	288208
Rios Pontes & Overdrives	286720
Man In The Box	286641
The Tower	285257
A Sombra Da Maldade	285231
Garota De Ipanema	285048
Sunshine	284969
All I Really Want	284891
Blood In The Wall	284368
Maracatu AtÃƒÂ´mico	284264
Lost My Better Half	284081
Bye, Bye Brasil	283402
King In Crimson	283167
Gavioes 2001	282723
A Estrada	282174
Born To Booze	282122
Vida Boa	281730
Freedom Of Speech	281234
Mary Jane	280607
Be Yourself	279484
Gasoline	279457
Dandelion	278125
Show Me How to Live	277890
It Ain't Like That	277577
Heaven's Dead	276688
Like A Bird	276532
Vai-Vai 2001	276349
Flor Do Futuro	275748

Do what cha wanna	274155
X-9 2001	273920
Yesterday To Tomorrow	273763
Phoney Smile Fake Hellos	273606
Maracatu AtÃfÂ´mico [Atomic Version]	273084
A Cor Do Sol	273031
200 Years Old	272561
Samidarish [instrumental]	272431
The Beginning...At Last	271960
Canta, Canta Mais	271856
Samba Makossa	271856
Spellbound	270863
Killing Floor	269557
Bad Boy Boogie	267728
Head Over Feet	267493
SÃfÂ¡bado A Noite	267363
Felicidade Urgente	266605
A.N.D.R.O.T.A.Z.	266266
Gates Of Urizen	265351
Dude (Looks Like A Lady)	264855
The Wizard	264829
FÃfÂ©rias	264202
I Can't Quit You Baby	263836
Evil Walks	263497
Breaking The Rules	263288
Set It Off	263262
I Know Somethin (Bout You)	261955
Quadrant	261851
What is and Should Never Be	260675
Meu Caro Amigo	260257
ConciliaÃfÂ§ÃfÂ£o	257619
Onde VocÃfÂª Mora?	256026
Doesn't Remind Me	255869
Your Time Has Come	255529
Johnny B. Goode	254615
Hell Ain't A Bad Place To Be	254380
Amor Demais	254040
Cada Um Cada Um (A Namoradeira)	253492
Dindi (Dindi)	253178
Ligia	251977
A Luz De Tieta	251742
Da Lama Ao Caos	251559
Eat The Rich	251036

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

```sql
SELECT
    c.customer_id,
    c.first_name AS customer_name,
    ar.name AS artist_name,
    SUM(i.total) AS total_spent
FROM
    Customer c
JOIN
    Invoice i ON c.customer_id = i.customer_id
JOIN
    Invoice_Line il ON i.invoice_id = il.invoice_id
JOIN
    Track t ON t.track_id = il.track_id
JOIN
    Album a ON t.album_id = a.album_id
JOIN
    Artist ar ON ar.ArtistID = a.Artist_ID
GROUP BY
    1, 2, 3
ORDER BY
    total_spent DESC;
```

customer_id	customer_name	name	total_spent
2	Leonie	Audioslave	196
13	Fernanda	AntÃƒÂ´nio Carlos Jobim	196
15	Jennifer	Aerosmith	195
55	Mark	Aerosmith	195
30	Edward	Alanis Morissette	169
52	Emma	Alanis Morissette	169
54	Steve	AC/DC	164
34	JoÃƒÂ£o	Alanis Morissette	146
25	Victor	Alice In Chains	144
49	StanisÃ…â€šaw	Buddy Guy	121
53	Phil	AC/DC	110
21	Kathy	AC/DC	94
49	StanisÃ…â€šaw	AC/DC	90
24	Frank	AC/DC	64
3	FranÃƒÂ§ois	Apocalyptica	64
21	Kathy	Black Sabbath	49
24	Frank	Black Sabbath	49

20	Dan	Alice In Chains	33
6	Helena	AC/DC	33
38	Niklas	AC/DC	30
43	Isabelle	Aerosmith	27
51	Joakim	Alanis Morissette	26
57	Luis	Aerosmith	26
31	Martha	AC/DC	25
58	Manoj	Alice In Chains	25
42	Wyatt	Alice In Chains	25
3	FranÃƒÂ§ois	Black Sabbath	24
35	Madalena	AC/DC	24
42	Wyatt	AC/DC	23
44	Terhi	AC/DC	23
16	Frank	AC/DC	22
6	Helena	Aerosmith	22
17	Jack	Audioslave	22
38	Niklas	Buddy Guy	21
17	Jack	Alice In Chains	21
27	Patrick	AC/DC	21
30	Edward	AC/DC	21
50	Enrique	Black Sabbath	19
36	Hannah	Audioslave	19
13	Fernanda	Alanis Morissette	19
20	Dan	AC/DC	19
43	Isabelle	Alanis Morissette	19
3	FranÃƒÂ§ois	Aerosmith	19
59	Rishabh	Alanis Morissette	18
49	StanisÃ…â€šaw	Alice In Chains	18
43	Isabelle	Alice In Chains	17
50	Enrique	Apocalyptica	17
17	Jack	Apocalyptica	17
7	Astrid	Black Label Society	17
8	Daan	Aerosmith	16
48	Johannes	Alice In Chains	16
34	JoÃƒÂ£o	AC/DC	15
20	Dan	Apocalyptica	15
57	Luis	Apocalyptica	15
36	Hannah	Alice In Chains	15
26	Richard	Alanis Morissette	15
42	Wyatt	Audioslave	14
45	Ladislav	Audioslave	14
59	Rishabh	Aerosmith	14
40	Dominique	Black Sabbath	14

48	Johannes	Buddy Guy	14
7	Astrid	Alice In Chains	13
7	Astrid	Aerosmith	13
28	Julia	Alanis Morissette	13
36	Hannah	Alanis Morissette	13
12	Roberto	Aerosmith	12
19	Tim	Black Sabbath	12
49	StanisÃ…â€šaw	Alanis Morissette	11
9	Kara	AC/DC	11
46	Hugh	Aerosmith	11
39	Camille	Apocalyptica	11
39	Camille	AC/DC	11
57	Luis	Alice In Chains	11
36	Hannah	Billy Cobham	11
45	Ladislav	Alice In Chains	11
45	Ladislav	Aerosmith	11
32	Aaron	Aerosmith	11
32	Aaron	AC/DC	11
22	Heather	Led Zeppelin	11
6	Helena	AntÃƒÂ´nio Carlos Jobim	11
35	Madalena	Accept	11
17	Jack	AC/DC	11
27	Patrick	Alice In Chains	11
20	Dan	Aerosmith	11
2	Leonie	AC/DC	11
6	Helena	Alice In Chains	11
17	Jack	Accept	11
58	Manoj	Audioslave	11
58	Manoj	AC/DC	11
58	Manoj	Black Sabbath	11
8	Daan	Alanis Morissette	11
8	Daan	Alice In Chains	11
8	Daan	Black Label Society	11
23	John	Black Sabbath	11
6	Helena	Alanis Morissette	11
6	Helena	Bruce Dickinson	11
41	Marc	Audioslave	11
5	FrantiÃ…Â¡ek	AC/DC	11
57	Luis	Caetano Veloso	11
2	Leonie	Alice In Chains	11
49	StanisÃ…â€šaw	Audioslave	11
55	Mark	Apocalyptica	11
55	Mark	AC/DC	11

12	Roberto	Alice In Chains	11
12	Roberto	Apocalyptica	11
12	Roberto	Black Label Society	11
12	Roberto	Black Sabbath	11
30	Edward	Buddy Guy	10
59	Rishabh	Apocalyptica	10
43	Isabelle	Audioslave	10
43	Isabelle	Led Zeppelin	10
37	Fynn	Audioslave	10
57	Luis	AC/DC	10
10	Eduardo	Black Label Society	10
33	Ellie	Led Zeppelin	10
33	Ellie	Black Sabbath	10
13	Fernanda	Black Label Society	10
3	FranÃƒÂ§ois	Alanis Morissette	10
3	FranÃƒÂ§ois	Chico Buarque	10
3	FranÃƒÂ§ois	Buddy Guy	10
35	Madalena	Aerosmith	10
35	Madalena	Alice In Chains	10
25	Victor	Alanis Morissette	10
34	JoÃƒÂ£o	Audioslave	10
57	Luis	Bruce Dickinson	10
57	Luis	Led Zeppelin	10
58	Manoj	Black Label Society	10
28	Julia	Alice In Chains	10
42	Wyatt	Apocalyptica	10
50	Enrique	Alice In Chains	10
21	Kathy	Aerosmith	10
21	Kathy	Alanis Morissette	10
50	Enrique	Aerosmith	10
46	Hugh	AC/DC	10
46	Hugh	Black Sabbath	10
3	FranÃƒÂ§ois	Led Zeppelin	10
26	Richard	Aerosmith	10
54	Steve	Cidade Negra	10
18	Michelle	Bruce Dickinson	10
13	Fernanda	AC/DC	10
5	FrantiÃƒ…Â¡ek	Black Sabbath	10
5	FrantiÃƒ…Â¡ek	Caetano Veloso	10
5	FrantiÃƒ…Â¡ek	Black Label Society	10
30	Edward	Aerosmith	10
53	Phil	Chico Buarque	10
53	Phil	Alanis Morissette	10

24	Frank	Apocalyptica	10
18	Michelle	Caetano Veloso	9
18	Michelle	Buddy Guy	9
19	Tim	AC/DC	9
5	FrantiÃ…Â¡ek	Aerosmith	9
50	Enrique	Cidade Negra	9
59	Rishabh	Led Zeppelin	9
42	Wyatt	Aerosmith	9
59	Rishabh	Audioslave	9
41	Marc	Aerosmith	9
28	Julia	Billy Cobham	9
51	Joakim	Buddy Guy	9
58	Manoj	Apocalyptica	9
4	BjÃƒÂ¸rn	Alice In Chains	9
48	Johannes	Audioslave	9
22	Heather	Aerosmith	9
52	Emma	Black Label Society	9
26	Richard	Buddy Guy	9
54	Steve	Alice In Chains	9
54	Steve	Aerosmith	9
7	Astrid	AC/DC	9
18	Michelle	Apocalyptica	9
38	Niklas	Black Sabbath	9
38	Niklas	Caetano Veloso	9
3	FranÃƒÂ§ois	Alice In Chains	9
27	Patrick	Alanis Morissette	9
27	Patrick	Apocalyptica	9
40	Dominique	Alanis Morissette	9
39	Camille	Alanis Morissette	8
39	Camille	Aerosmith	8
39	Camille	Bruce Dickinson	8
44	Terhi	Alice In Chains	8
19	Tim	Billy Cobham	8
19	Tim	Aerosmith	8
15	Jennifer	Alanis Morissette	8
54	Steve	Accept	8
2	Leonie	Buddy Guy	8
2	Leonie	Chico Buarque	8
24	Frank	Alice In Chains	8
41	Marc	AntÃƒÂ´nio Carlos Jobim	8
41	Marc	Alice In Chains	8
15	Jennifer	Alice In Chains	8
10	Eduardo	Apocalyptica	8

6	Helena	Chico Science & NaÃfÂ§ÃfÂ£o Zumbi	8
34	JoÃfÂ£o	Accept	8
43	Isabelle	Buddy Guy	8
43	Isabelle	Chico Buarque	8
30	Edward	Apocalyptica	8
12	Roberto	Chico Science & NaÃfÂ§ÃfÂ£o Zumbi	8
48	Johannes	AC/DC	8
11	Alexandre	Chico Buarque	8
11	Alexandre	Aerosmith	8
10	Eduardo	Aerosmith	8
33	Ellie	Caetano Veloso	8
23	John	Alanis Morissette	8
23	John	Apocalyptica	8
23	John	Buddy Guy	8
59	Rishabh	Black Sabbath	8
59	Rishabh	Caetano Veloso	8
59	Rishabh	AC/DC	8
59	Rishabh	Alice In Chains	8
10	Eduardo	Audioslave	7
51	Joakim	Black Sabbath	7
49	StanisÃ…â€šaw	Black Sabbath	7
38	Niklas	Alanis Morissette	7
38	Niklas	Aerosmith	7
52	Emma	Audioslave	7
56	Diego	AC/DC	7
43	Isabelle	AC/DC	7
55	Mark	Alice In Chains	7
19	Tim	Audioslave	7
42	Wyatt	AntÃfÂ´nio Carlos Jobim	7
42	Wyatt	Black Sabbath	7
53	Phil	Apocalyptica	7
5	FrantiÃ…Â¡ek	Led Zeppelin	7
48	Johannes	Aerosmith	7
32	Aaron	Black Sabbath	7
35	Madalena	Audioslave	7
8	Daan	AC/DC	6
15	Jennifer	Apocalyptica	6
29	Robert	AC/DC	6
20	Dan	Black Sabbath	6
47	Lucas	Alice In Chains	6
4	BjÃfÂ¸rn	Black Sabbath	6

4	Bjørn	Body Count	6
14	Mark	AC/DC	6
14	Mark	Alice In Chains	6
14	Mark	Apocalyptica	6
8	Daan	Apocalyptica	6
25	Victor	Black Label Society	6
25	Victor	Aerosmith	6
26	Richard	AC/DC	6
26	Richard	Caetano Veloso	6
6	Helena	Led Zeppelin	6
10	Eduardo	AC/DC	6
45	Ladislav	AC/DC	6
34	João	Apocalyptica	5
9	Kara	Audioslave	5
30	Edward	Audioslave	5
30	Edward	Alice In Chains	5
9	Kara	Aerosmith	5
9	Kara	Alanis Morissette	5
19	Tim	Alice In Chains	5
11	Alexandre	Caetano Veloso	5
36	Hannah	Black Sabbath	5
53	Phil	Black Sabbath	5
53	Phil	Billy Cobham	5
37	Fynn	Alanis Morissette	5
15	Jennifer	AC/DC	5
15	Jennifer	Black Label Society	5
32	Aaron	Alanis Morissette	4
51	Joakim	Aerosmith	4
40	Dominique	Chico Buarque	4
40	Dominique	Apocalyptica	4
40	Dominique	Black Label Society	4
28	Julia	Body Count	4
39	Camille	Black Label Society	4
48	Johannes	Alanis Morissette	4
30	Edward	Antônio Carlos Jobim	4
43	Isabelle	Caetano Veloso	3
47	Lucas	Aerosmith	3
33	Ellie	Aerosmith	3
58	Manoj	Alanis Morissette	3
51	Joakim	Audioslave	3
31	Martha	Aerosmith	2
55	Mark	Audioslave	2
32	Aaron	Audioslave	2

50	Enrique	Chico Buarque	2
12	Roberto	Audioslave	2
52	Emma	Alice In Chains	2
2	Leonie	Apocalyptica	1
47	Lucas	AC/DC	1

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.

```
SELECT
    country_name,
    genre_name,
    total_quantity
FROM (
    SELECT
        c.country AS country_name,
        g.name AS genre_name,
        SUM(il.Quantity) AS total_quantity,
        RANK() OVER (PARTITION BY c.country ORDER BY SUM(il.Quantity) DESC) AS rnk
    FROM
        customer c
    JOIN
        invoice i ON c.customer_id = i.customer_id
    JOIN
        invoice_line il ON il.invoice_id = i.invoice_id
    JOIN
        track t ON il.track_id = t.track_id
    JOIN
        genre g ON t.genre_id = g.genre_id
    GROUP BY
        1, 2
) AS abc
WHERE rnk = 1;
```

country_name	genre_name	total_quantity
Argentina	Rock	1
Australia	Metal	1
Austria	Metal	3
Belgium	Metal	2
Brazil	Alternative & Punk	1
Canada	Alternative &	1

	Punk	
Canada	Jazz	1
Chile	Latin	1
Czech Republic	Jazz	1
Denmark	Rock	6
Finland	Rock	5
France	Blues	1
France	Alternative & Punk	1
Germany	Jazz	1
Hungary	Alternative & Punk	1
India	Alternative & Punk	1
India	Latin	1
Ireland	Metal	1
Italy	Rock	3
Netherlands	Blues	2
Norway	Metal	1
Norway	Alternative & Punk	1
Norway	Rock	1
Poland	Metal	1
Portugal	Metal	1
Portugal	Alternative & Punk	1
Spain	Reggae	1
Spain	Latin	1
Sweden	Blues	1
Sweden	Metal	1
United Kingdom	Jazz	1
United Kingdom	Alternative & Punk	1
United Kingdom	Latin	1
United Kingdom	Reggae	1
USA	Alternative & Punk	2
USA	Latin	2
USA	Jazz	2

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.

```sql
SELECT
    customer_id,
    first_name,
    last_name,
    billing_country,
    total_spent
FROM (
    SELECT
        c.customer_id,
        c.first_name,
        c.last_name,
        i.billing_country,
        SUM(i.total) AS total_spent,
        ROW_NUMBER() OVER (PARTITION BY i.billing_country ORDER BY SUM(i.total) DESC) AS row_num
    FROM
        invoice i
    JOIN
        customer c ON c.customer_id = i.customer_id
    GROUP BY
        1, 2, 3, 4
) AS abc
WHERE
    row_num = 1;
```

customer_id	first_name	last_name	billing_country	total_spent
56	Diego	GutiÃfÂ©rrez	Argentina	40
55	Mark	Taylor	Australia	82
7	Astrid	Gruber	Austria	70
8	Daan	Peeters	Belgium	61
13	Fernanda	Ramos	Brazil	108
3	FranÃfÂ§ois	Tremblay	Canada	101
57	Luis	Rojas	Chile	98
5	FrantiÃ…Â¡ek	WichterlovÃfÂ¡	Czech Republic	146
9	Kara	Nielsen	Denmark	38
44	Terhi	HÃfÂ¤mÃfÂ¤lÃfÂ¤inen	Finland	80
42	Wyatt	Girard	France	101
37	Fynn	Zimmermann	Germany	95
45	Ladislav	KovÃfÂ¡cs	Hungary	79

58	Manoj	Pareek	India	113
46	Hugh	O'Reilly	Ireland	116
47	Lucas	Mancini	Italy	51
48	Johannes	Van der Berg	Netherlands	66
4	BjÃƒÂ¸rn	Hansen	Norway	73
49	StanisÃƒ…â€šaw	WÃƒÂ³jcik	Poland	77
34	JoÃƒÂ£o	Fernandes	Portugal	104
50	Enrique	MuÃƒÂ±oz	Spain	99
51	Joakim	Johansson	Sweden	76
53	Phil	Hughes	United Kingdom	99
17	Jack	Smith	USA	99

Q12. Who are the most popular artists?

```
SELECT
    COUNT(invoice_line.quantity) AS purchases,
    artist.name AS artist_name
FROM
    invoice_line
JOIN
    track ON track.track_id = invoice_line.track_id
JOIN
    album ON album.album_id = track.album_id
JOIN
    artist ON artist.artistid = album.artist_id
GROUP BY
    2
ORDER BY
    1 DESC;
```

purchases	artist_name
124	AC/DC
75	Alanis Morissette
72	Aerosmith
59	Alice In Chains
43	Audioslave
39	Black Sabbath
37	Apocalyptica
23	Buddy Guy
18	AntÃƒÂ´nio Carlos Jobim
15	Black Label Society
10	Caetano Veloso
8	Led Zeppelin
7	Chico Buarque

4	Accept
4	Bruce Dickinson
4	Billy Cobham
2	Cidade Negra
2	Chico Science & NaÃƒÂ§ÃƒÂ£o Zumbi
2	Body Count

Q13. Which is the most popular song?

```sql
SELECT
    COUNT(invoice_line.quantity) AS purchases,
    track.name AS song_name
FROM
    invoice_line
JOIN
    track ON track.track_id = invoice_line.track_id
GROUP BY
    2
ORDER BY
    1 DESC;
```

purchases	song_name
13	Put The Finger On You
10	Night Of The Long Knives
9	Snowballed
9	Mary Jane
9	Behind The Wall Of Sleep
8	Dog Eat Dog
8	For Those About To Rock (We Salute You)
8	Deuces Are Wild
8	Evil Woman
8	Sunshine
7	Hell Ain't A Bad Place To Be
7	Breaking The Rules
7	Angel
7	The Other Side
7	You Oughta Know
7	The Unforgiven
7	Sleeping Village
7	I Know Somethin (Bout You)
7	Bad Boy Boogie
7	Overdose

6	Amazing
6	Right Through You
6	Love In An Elevator
6	Confusion
6	Inject The Venom
6	Evil Walks
6	Spellbound
6	All I Really Want
6	Perfect
6	Forgiven
6	You Learn
6	Wake Up
6	Hypnotize
6	Whole Lotta Rosie
6	Problem Child
6	Bleed The Freak
6	Dude (Looks Like A Lady)
6	Eat The Rich
6	What It Takes
5	Sad But True
5	Wherever I May Roam
5	Exploder
5	C.O.D.
5	Head Over Feet
5	Ironic
5	Not The Doctor
5	Let There Be Rock
5	Cryin'
5	We Die Young
5	Enter Sandman
5	N.I.B.
5	Creeping Death
5	Real Thing
4	I Can't Remember
4	Let's Get It Up
4	Cochise
4	Hand In My Pocket
4	You Oughta Know (Alternate)
4	Crazy
4	Warning
4	Go Down
4	Janie's Got A Gun
4	Sea Of Sorrow

4	Blind Man
4	It Ain't Like That
4	Harvester Of Sorrow
4	The Wizard
4	Man In The Box
3	Keep It To Myself (Aka Keep It To Yourself)
3	Put You Down
3	Doesn't Remind Me
3	MeditaÃƒÂ§ÃƒÂ£o
3	When My Left Eye Jumps
3	Welcome Home (Sanitarium)
3	Balls to the Wall
3	Por Causa De VocÃƒÂª
3	Livin' On The Edge
3	Talkin' 'Bout Women Obviously
3	Love, Hate, Love
3	Let Me Love You Baby
3	Master Of Puppets
2	Stone Crazy
2	I am the Highway
2	You Shook Me
2	Like A Bird
2	Getaway Car
2	Show Me How to Live
2	What You Are
2	Like a Stone
2	Shadow on the Sun
2	Bring'em Back Alive
2	Do what cha wanna
2	The Curse
2	All For You
2	Carolina
2	Canta, Canta Mais
2	The Real Problem
2	Pretty Baby
2	Leave My Girl Alone
2	My Time After Awhile
2	Blood In The Wall
2	A.N.D.R.O.T.A.Z.
2	Black Sabbath
2	Corcovado (Quiet Nights Of Quiet Stars)
1	Prenda Minha
1	The Worm

1	Chemical Wedding
1	Dandelion
1	Moon germs
1	You Shook Me(2)
1	Gasoline
1	Set It Off
1	Light My Way
1	The Last Remaining Light
1	Dazed and Confused
1	A Cor Do Sol
1	Travelling Riverside Blues
1	O Que SerÃƒÂ¡ (Ãƒâ‚¬ Flor Da Terra)
1	Sozinho (Hitmakers Classic Radio Edit)
1	Out Of Exile
1	King In Crimson
1	What is and Should Never Be
1	#1 Zero
1	DrÃƒÂ£o
1	Maracatu AtÃƒÂ´mico [Trip Hop]
1	The pleasant pheasant
1	First Time I Met The Blues
1	She Suits Me To A Tee
1	Too Many Ways (Alternate)
1	Princess of the Dawn
1	Samba De Orly
1	13 Years Of Grief
1	Essa MoÃƒÂ§a Ta Diferente
1	Super Terrorizer
1	Lost My Better Half
1	Vida Boa
1	Intro/ Low Down
1	Enquanto O Mundo Explode
1	I Can't Quit You Baby(2)
1	A Sombra Da Maldade
1	Killing Floor
1	Minha Historia
1	Somethin' Else
1	Bored To Tears
1	Gates Of Urizen
1	No More Tears
1	Odara
1	Desafinado
1	Garota De Ipanema

1	Samba De Uma Nota SÃƒÂ³ (One Note Samba)
1	Ligia
1	Fotografia
1	Dindi (Dindi)
1	Se Todos Fossem Iguais A VocÃƒÂª (Instrumental)
1	Falando De Amor
1	Angela
1	Outra Vez
1	O Boto (BÃƒÂ´to)
1	Sozinho (CaÃƒÂªdrum 'n' Bass)
1	Drown Me Slowly
1	Vai Passar
1	Born To Booze
1	Terra

Q14. What are the average prices of different types of music?

```
SELECT
    genre,
    ROUND(AVG(total_spent)) AS total_spent
FROM (
    SELECT
        genre.name AS genre,
        SUM(total) AS total_spent
    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
) AS abc
GROUP BY
    genre;
```

genre	total_spent
Reggae	19
Alternative & Punk	100
Latin	146
Blues	227
Jazz	259
Metal	729
Rock	3531

Q15. What are the most popular countries for music purchases?

```
SELECT
    COUNT(invoice_line.quantity) AS purchases,
    customer.country
FROM
    invoice_line
JOIN
    invoice ON invoice.invoice_id = invoice_line.invoice_id
JOIN
    customer ON customer.customer_id = invoice.customer_id
GROUP BY
    country
ORDER BY
    purchases DESC;
```

purchases	country
1051	USA
541	Canada
393	France
338	Germany
322	Brazil
276	Czech Republic
248	United Kingdom
187	Portugal
185	India
116	Ireland

99	Spain
98	Chile
82	Australia
80	Finland
79	Hungary
77	Poland
76	Sweden
73	Norway
70	Austria
66	Netherlands
61	Belgium
51	Italy
40	Argentina
38	Denmark