MUSIC STORE SQL QUERIES

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

SELECT TOP 1 *
FROM employee
ORDER BY levels DESC;

⊞ F	# Results															
	employee_id	last_name	first_name	title	reports_to	levels	birthdate	hire_date	address	city	state	country	postal_code	phone	fax	email
1	9	Madan	Mohan	Senior General Manager	NULL	L7	1961-01-26	2016-01-14	1008 Vrinda Ave MT	Edmonton	AB	Canada	T5K 2N1	+1 (780) 428-9482	+1 (780) 428-3457	madan.mohan@chinookcorp.com

Q2: Which countries have the most Invoices?

SELECT

COUNT(*) AS Invoice_Count,
billing_country AS Billing_Country

FROM
invoice

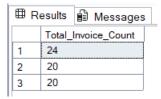
GROUP BY
billing_country

ORDER BY
Invoice_Count DESC;

⊞ R	Results 🔒 Mes	sages
	Invoice_Count	Billing_Country
1	131	USA
2	76	Canada
3	61	Brazil
4	50	France
5	41	Germany
6	30	Czech Republic
7	29	Portugal
8	28	United Kingdom
9	21	India
10	13	Ireland
11	13	Chile
12	11	Finland
13	11	Spain
14	10	Sweden
15	10	Poland
16	10	Netherlands
17	10	Hungary
18	10	Denmark
19	10	Australia
20	9	Austria
21	9	Italy
22	9	Norway
23	7	Belgium
24	5	Argentina

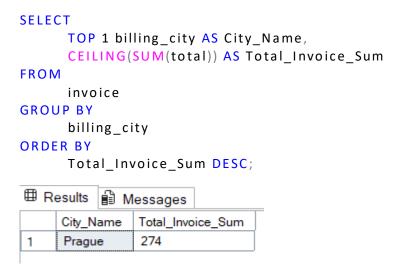
Q3: What are top 3 values of total invoice?

```
SELECT TOP 3 CEILING(total) AS Total_Invoice_Count FROM invoice
ORDER BY Total_Invoice_Count DESC;
```



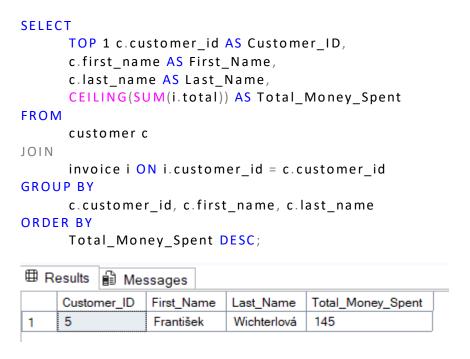
Q4: Which city has the best customers?

- 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.



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.



Q6: Write a 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.first_name AS First_Name,
      c.last_name AS Last_Name,
      c.email AS Email_ID,
      g.name AS Genre
FROM
      customer c
JOIN
      invoice i ON i.customer_id = c.customer_id
JOIN
      invoice_line il ON il.invoice_id = i.invoice_id
JOIN
      track t ON t.track_id = il.track_id
JOIN
      genre g ON g.genre_id = t.genre_id
WHERE
      g.name IN ('Rock')
ORDER BY
      Email ID ASC;
```


	First_Name	Last_Name	Email_ID	Genre
1	Aaron	on Mitchell aaronmitchell@yahoo.ca		Rock
2	Alexandre	xandre Rocha alero@uol.com.br		Rock
3	Astrid	Gruber	astrid.gruber@apple.at	Rock
4	Bjørn	Hansen	bjorn.hansen@yahoo.no	Rock
5	Camille	Bernard	camille.bernard@yahoo.fr	Rock
6	Daan	Peeters	daan_peeters@apple.be	Rock
7	Diego	Gutiérrez	diego.gutierrez@yahoo.ar	Rock
8	Dan	Miller	dmiller@comcast.com	Rock
9	Dominique	Lefebvre	dominiquelefebvre@gmail.com	Rock
10	Edward	Francis	edfrancis@yachoo.ca	Rock
11	Eduardo	Martins	eduardo@woodstock.com.br	Rock
12	Ellie	Sullivan	ellie.sullivan@shaw.ca	Rock
13	Emma	Jones	emma_jones@hotmail.com	Rock
14	Enrique	Enrique Muñoz enrique_munoz@yahoo.es		Rock
15	Fernanda	Fernanda Ramos fernadaramos4		Rock
16	Frank	Harris	fharris@google.com	
17	Frank	Ralston	fralston@gmail.com	Rock
18	František	Wichterlová	frantisekw@jetbrains.com	Rock
19	François	Tremblay	ftremblay@gmail.com	Rock
20	Fynn	Zimmerm	fzimmermann@yahoo.de	Rock
21	Hannah	Schneider	hannah.schneider@yahoo.de	Rock
22	Helena	Holý	hholy@gmail.com	
23	Heather	Leacock	hleacock@gmail.com	Rock
24	Hugh	O'Reilly	hughoreilly@apple.ie	Rock
25	Isabelle	Mercier	isabelle_mercier@apple.fr	Rock
26	Jack	Smith	jacksmith@microsoft.com	Rock
27	Jennifer	Jennifer Peterson jenniferp@rogers.ca		Rock
28	João	Fernandes jfernandes@yahoo.pt		Rock
29	Joakim	im Johansson joakim.johansson@yahoo.se		Rock
30	Johannes	hannes Van der B johavanderberg@yahoo.nl		Rock
31	John	Gordon	johngordon22@yahoo.com	Rock
32	Julia	Barnett	jubarnett@gmail.com	Rock
33	Kathy	Chase	kachase@hotmail.com	Rock
34	Kara	Nielsen	kara.nielsen@jubii.dk	Rock
35	Ladislav	Kovács	ladislav_kovacs@apple.hu	Rock
36	Leonie	Köhler	leonekohler@surfeu.de	Rock
37	Lucas	Mancini	lucas.mancini@yahoo.it	Rock

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37	Lucas	Mancini	lucas.mancini@yahoo.it	Rock
38	Luís	Gonçalves	luisg@embraer.com.br	Rock
39	Luis	Rojas	luisrojas@yahoo.cl	Rock
40	Manoj	Pareek	manoj.pareek@rediff.com	Rock
41	Marc	Dubois	marc.dubois@hotmail.com	Rock
42	Mark	Taylor	mark.taylor@yahoo.au	Rock
43	Martha	Silk	marthasilk@gmail.com	Rock
44	Madalena	Sampaio	masampaio@sapo.pt	Rock
45	Michelle	Brooks	michelleb@aol.com	Rock
46	Mark	Philips	mphilips12@shaw.ca	Rock
47	Niklas	Schröder	nschroder@surfeu.de	Rock
48	Patrick	Gray	patrick.gray@aol.com	Rock
49	Phil	Hughes	phil.hughes@gmail.com	Rock
50	Richard	Cunningh	ricunningham@hotmail.com	Rock
51	Rishabh	Mishra	rishabh_mishra@yahoo.in	Rock
52	Robert	Brown	robbrown@shaw.ca	Rock
53	Roberto	Almeida	roberto.almeida@riotur.gov.br	Rock
54	Stanislaw	Wójcik	stanislaw.wójcik@wp.pl	Rock
55	Steve	Murray	steve.murray@yahoo.uk	Rock
56	Terhi	Hämäläin	terhi.hamalainen@apple.fi	Rock
57	Tim	Goyer	tgoyer@apple.com	Rock
58	Victor	Stevens	vstevens@yahoo.com	Rock
59	Wyatt	Girard	wyatt.girard@yahoo.fr	Rock

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
      TOP 10 a.artist_id AS Artist_ID,
      a.name AS Artist Name,
      g.name AS Genre,
      COUNT(a.artist_id) AS Number_of_Songs
FROM
      artist a
JOIN
      album al ON al.artist_id = a.artist_id
JOIN
      track t ON t.album_id = al.album_id
JOIN
      genre g ON g.genre_id = t.genre_id
WHERE
      g.name IN ('Rock')
GROUP BY
      a.artist_id, a.name, g.name
ORDER BY
      Number_of_Songs DESC;
```

⊞ R	esults		Messages		
	Artist_ID		Artist_Name	Genre	Number_of_Songs
1	22		Led Zeppelin	Rock	114
2	150		U2	Rock	112
3	58		Deep Purple	Rock	92
4	90		Iron Maiden	Rock	81
5	118		Pearl Jam	Rock	54
6	152		Van Halen	Rock	52
7	51		Queen	Rock	45
8	142		The Rolling Stones	Rock	41
9	76		Creedence Clearwater Revival	Rock	40
10	10 52		Kiss	Rock	35

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.

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

```
WITH Best_Selling_Artist AS (
            SELECT
                   TOP 1 a.artist id AS Artist ID,
                   a.name AS Artist_Name,
                   SUM(il.unit price * il.quantity) AS Total Sales
            FROM
                   artist a
            JOIN
                   album al ON al.artist_id = a.artist_id
            JOIN
                   track t ON t.album_id = al.album_id
            JOIN
                   invoice_line il ON il.track_id = t.track_id
            GROUP BY
                   a.artist_id,
                   a.name
            ORDER BY
                   Total Sales DESC
SELECT
      c.customer_id AS Customer_ID,
      c.first_name AS First_Name,
      c.last_name AS Last_Name,
      bsa.Artist_Name AS Artist_Name,
      SUM(il.unit_price * il.quantity) AS Total_Spent
FROM
      customer c
JOIN
      invoice i ON i.customer_id = c.customer_id
JOIN
      invoice_line il ON il.invoice_id = i.invoice_id
JOIN
      track t ON t.track_id = il.track_id
JOIN
      album a ON a.album_id = t.album_id
JOIN
      Best_Selling_Artist bsa ON bsa.Artist_ID = a.artist_id
GROUP BY
      c.customer_id,
      c.first_name,
      c.last name,
      bsa.Artist_Name
ORDER BY
      Total_Spent DESC;
```

⊞ Results
 ■ Messages

	Customer_ID	First_Name	Last_Name	Artist_Name	Total_Spent
1	46	Hugh	O'Reilly	Queen	27.7200002670288
2	38	Niklas	Schröder	Queen	18.8100001811981
3	3	François	Tremblay	Queen	17.8200001716614
4	34	João	Fernandes	Queen	16.8300001621246
5	41	Marc	Dubois	Queen	11.8800001144409
6	53	Phil	Hughes	Queen	11.8800001144409
7	47	Lucas	Mancini	Queen	10.8900001049042
8	33	Ellie	Sullivan	Queen	10.8900001049042
9	5	František	Wichterlová	Queen	3.96000003814697
10	20	Dan	Miller	Queen	3.96000003814697
11	23	John	Gordon	Queen	2.97000002861023
12	31	Martha	Silk	Queen	2.97000002861023
13	54	Steve	Murray	Queen	2.97000002861023
14	57	Luis	Rojas	Queen	1.98000001907349
15	1	Luís	Gonçalves	Queen	1.98000001907349
16	35	Madalena	Sampaio	Queen	1.98000001907349
17	36	Hannah	Schneider	Queen	1.98000001907349
18	42	Wyatt	Girard	Queen	1.98000001907349
19	52	Emma	Jones	Queen	1.98000001907349
20	44	Terhi	Hämäläin	Queen	1.98000001907349
21	48	Johannes	Van der B	Queen	1.98000001907349
22	49	Stanislaw	Wójcik	Queen	1.98000001907349
23	24	Frank	Ralston	Queen	1.98000001907349
24	28	Julia	Barnett	Queen	1.98000001907349
25	30	Edward	Francis	Queen	1.98000001907349
26	8	Daan	Peeters	Queen	1.98000001907349
27	11	Alexandre	Rocha	Queen	1.98000001907349
28	15	Jennifer	Peterson	Queen	1.98000001907349
29	16	Frank	Harris	Queen	1.98000001907349
30	17	Jack	Smith	Queen	1.98000001907349
31	19	Tim	Goyer	Queen	0.990000009536
32	13	Fernanda	Ramos	Queen	0.990000009536
33	6	Helena	Holý	Queen	0.990000009536
34	22	Heather	Leacock	Queen	0.990000009536
35	26	Richard	Cunningh	Queen	0.990000009536
36	27	Patrick	Gray	Queen	0.990000009536
	1			1 _	
37	50	Enrique	Muñoz	Queen	0.990000009536
38	45	Ladislav	Kovács	Queen	0.990000009536
39	43	Isabelle	Mercier	Queen	0.990000009536
40	39	Camille	Bernard	Queen	0.990000009536
41	58	Manoj	Pareek	Queen	0.990000009536
42	59	Rishabh	Mishra	Queen	0.990000009536
43	55	Mark	Taylor	Queen	0.990000009536

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 Popular_Genre AS (
            SELECT
                  g.genre_id AS Genre_ID,
                  g.name AS Genre_Name,
                  c.country AS Country,
                  COUNT(il.quantity) AS Highest_Purchase,
                  ROW_NUMBER() OVER(PARTITION BY c.country ORDER BY
COUNT(il.quantity) DESC) AS Rank_No
            FROM
                  genre g
            JOIN
                  track t ON t.genre_id = g.genre_id
            JOIN
                  invoice_line il ON il.track_id = t.track_id
            JOIN
                  invoice i ON i.invoice_id = il.invoice_id
            JOIN
                  customer c ON c.customer_id = i.customer_id
            GROUP BY
                  g.genre_id,
                  g.name,
                  c.country
SELECT *
FROM Popular_Genre
WHERE Rank_No <= 1
ORDER BY Country ASC;
```

∄R	esults	1	Messages			
	Genre_	ID	Genre_Name	Country	Highest_Purchase	Rank_No
1	4		Alternative & Punk	Argentina	17	1
2	1		Rock	Australia	34	1
3	1		Rock	Austria	40	1
4	1		Rock	Belgium	26	1
5	1		Rock	Brazil	205	1
6	1		Rock	Canada	333	1
7	1		Rock	Chile	61	1
8	1		Rock	Czech Republic	143	1
9	1		Rock	Denmark	24	1
10	1		Rock	Finland	46	1
11	1		Rock	France	211	1
12	1		Rock	Germany	194	1
13	1		Rock	Hungary	44	1
14	1		Rock	India	102	1
15	1		Rock	Ireland	72	1
16	1		Rock	Italy	35	1
17	1		Rock	Netherlands	33	1
18	1		Rock	Norway	40	1
19	1		Rock	Poland	40	1
20	1		Rock	Portugal	108	1
21	1		Rock	Spain	46	1
22	1		Rock	Sweden	60	1
23	1		Rock	United Kingdo	166	1
24	1		Rock	USA	561	1

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_with_Country AS (
            SELECT
                  c.customer_id AS Customer_ID,
                  c.first_name AS First_Name,
                  c.last_name AS Last_Name,
                  i.billing_country AS Billing_Country,
                  CEILING(SUM(i.total)) AS Total_Spent,
                  ROW_NUMBER() OVER(PARTITION BY i.billing_country ORDER BY
SUM(i.total) DESC) AS Rank_No
            FROM
                  customer c
            JOIN
                  invoice i ON i.customer_id = c.customer_id
            GROUP BY
                  c.customer_id,
                  c.first_name,
                  c.last_name,
                  i.billing_country
SELECT *
FROM Customer_with_Country
WHERE Rank No <= 1
ORDER BY Billing_Country ASC;
```

⊞R	esults	Me:	ssages				
	Custor	mer_ID	First_Name	Last_Name	Billing_Country	Total_Spent	Rank_No
1	56		Diego	Gutiérrez	Argentina	40	1
2	55		Mark	Taylor	Australia	82	1
3	7		Astrid	Gruber	Austria	70	1
4	8		Daan	Peeters	Belgium	61	1
5	1		Luís	Gonçalves	Brazil	109	1
6	3		François	Tremblay	Canada	100	1
7	57		Luis	Rojas	Chile	98	1
8	5		František	Wichterlová	Czech Republic	145	1
9	9		Kara	Nielsen	Denmark	38	1
10	44		Terhi	Hämäläinen	Finland	80	1
11	42		Wyatt	Girard	France	100	1
12	37		Fynn	Zimmermann	Germany	95	1
13	45		Ladislav	Kovács	Hungary	79	1
14	58	Manoj		Pareek	India	112	1
15	46		Hugh	O'Reilly	Ireland	115	1
16	47		Lucas	Mancini	Italy	51	1
17	48		Johannes	Van der Berg	Netherlands	66	1
18	4		Bjørn	Hansen	Norway	73	1
19	49		Stanislaw	Wójcik	Poland	77	1
20	34		João	Fernandes	Portugal	103	1
21	50		Enrique	Muñoz	Spain	99	1
22	51		Joakim	Johansson	Sweden	76	1
23	53		Phil	Hughes	United Kingdo	99	1
24	17		Jack	Smith	USA	99	1