DBMS LAB

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Course: MCA 3rd Semester
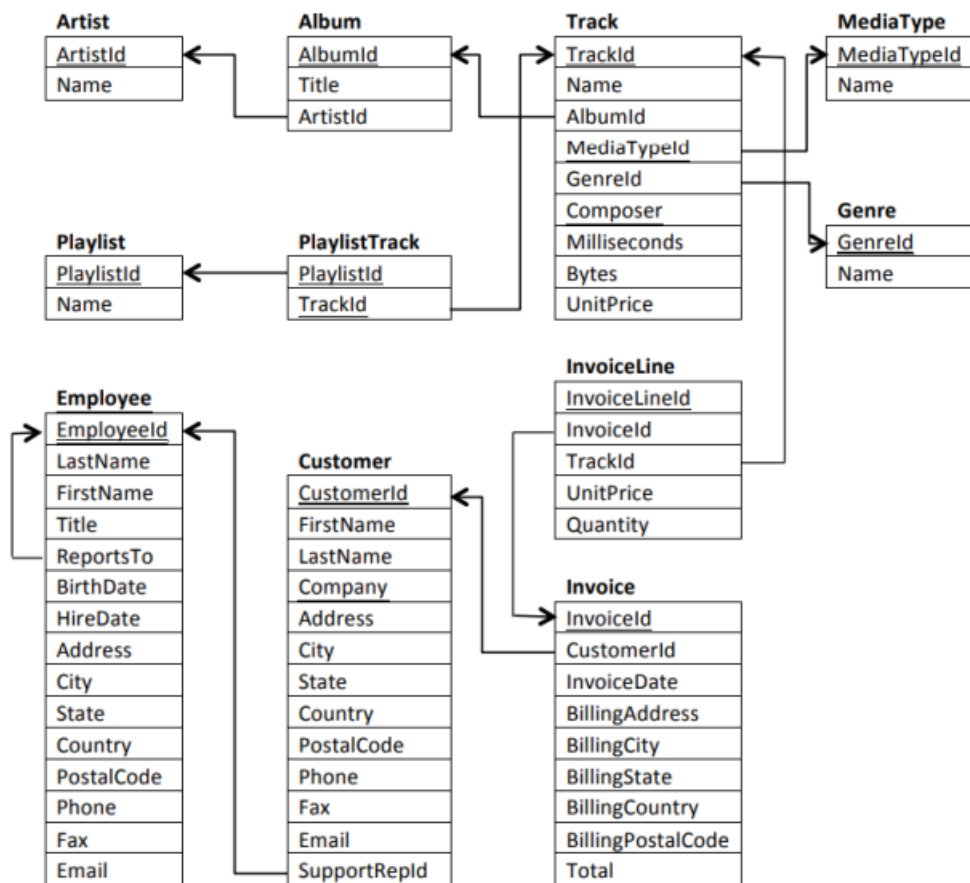
Date: 23-11-2022

Instructor- D.A. KHAN SIR,D.K SHAW SIR.

Assignment 6

Question :-

The Chinook Database is about an imaginary video and music store. Each track is stored using one of the digital formats and has a genre. The store has also some playlists, where a single track can be part of several playlists. Just like TPC-H, orders are recorded for customers, but are called invoices. LINEITEM is replaced by INVOICELINE. Every customer is assigned a support employee, and Employees report to other employees.

Artist
- ArtistId
- Name

Album
- AlbumId
- Title
- ArtistId

Track
- TrackId
- Name
- AlbumId
- MediaTypeId
- GenreId
- Composer
- Milliseconds
- Bytes
- UnitPrice

MediaType
- MediaTypeId
- Name

Genre
- GenreId
- Name

Playlist
- PlaylistId
- Name

PlaylistTrack
- PlaylistId
- TrackId

InvoiceLine
- InvoiceLineId
- InvoiceId
- TrackId
- UnitPrice
- Quantity

Employee
- EmployeeId
- LastName
- FirstName
- Title
- ReportsTo
- BirthDate
- HireDate
- Address
- City
- State
- Country
- PostalCode
- Phone
- Fax
- Email

Customer
- CustomerId
- FirstName
- LastName
- Company
- Address
- City
- State
- Country
- PostalCode
- Phone
- Fax
- Email
- SupportRepId

Invoice
- InvoiceId
- CustomerId
- InvoiceDate
- BillingAddress
- BillingCity
- BillingState
- BillingCountry
- BillingPostalCode
- Total

Write SQL queries to answer the following:

1. Which artists did not make any albums at all? Include their names in your answer.

```
SELECT artistId, name FROM artist
 WHERE artist_Id NOT IN
 (
SELECT album.artist_Id FROM Album
)
```

```sql
1   SELECT artist_Id, name FROM artist
2     WHERE artist_Id NOT IN
3   ⊟ (
4     └SELECT album.artist_Id FROM album
5     );
```

	artist_id	name
1	25	Milton Nascimento & Bebeto
2	26	Azymuth
3	28	João Gilberto
4	29	Bebel Gilberto
5	30	Jorge Vercilo
6	31	Baby Consuelo
7	32	Ney Matogrosso
8	33	Luiz Melodia
9	34	Nando Reis
10	35	Pedro Luís & A Parede
11	38	Banda Black Rio
12	39	Fernanda Porto
13	40	Os Cariocas
14	43	A Cor Do Som
15	44	Kid Abelha
16	45	Sandra De Sá
17	47	Hermeto Pascoal
18	48	Barão Vermelho
19	49	Edson, DJ Marky & DJ Patife Featuring ...
20	60	Santana Feat. Dave Matthews
21	61	Santana Feat. Everlast
22	62	Santana Feat. Rob Thomas
23	63	Santana Feat. Lauryn Hill & Cee-Lo
24	64	Santana Feat. The Project G&B
25	65	Santana Feat. Maná

26	66	Santana Feat. Eagle-Eye Cherry
27	67	Santana Feat. Eric Clapton
28	71	Vinícius De Moraes & Baden Powell
29	73	Vinícius E Qurteto Em Cy
30	74	Vinícius E Odette Lara
31	75	Vinicius, Toquinho & Quarteto Em Cy
32	107	Motörhead & Girlschool
33	119	Peter Tosh
34	123	R.E.M. Feat. KRS-One
35	129	Simply Red
36	154	Whitesnake
37	160	Christina Aguilera featuring BigElf
38	161	Aerosmith & Sierra Leone's Refugee Allstars
39	162	Los Lonely Boys
40	163	Corinne Bailey Rae
41	164	Dhani Harrison & Jakob Dylan
42	165	Jackson Browne
43	166	Avril Lavigne
44	167	Big & Rich
45	168	Youssou N'Dour
46	169	Black Eyed Peas
47	170	Jack Johnson
48	171	Ben Harper
49	172	Snow Patrol

50	173	Matisyahu
51	174	The Postal Service
52	175	Jaguares
53	176	The Flaming Lips
54	177	Jack's Mannequin & Mick Fleetwood
55	178	Regina Spektor
56	181	Xis
57	182	Nega Gizza
58	183	Gustavo & Andres Veiga & Salazar
59	184	Rodox
60	185	Charlie Brown Jr.
61	186	Pedro Luís E A Parede
62	187	Los Hermanos
63	188	Mundo Livre S/A
64	189	Otto
65	190	Instituto
66	191	Nação Zumbi
67	192	DJ Dolores & Orchestra Santa Massa
68	193	Seu Jorge
69	194	Sabotage E Instituto
70	195	Stereo Maracana
71	239	Academy of St. Martin in the Fields, Sir ...

2. Which artists did not record any tracks of the Latin genre.

 SELECT artist_Id, name FROM artist
WHERE artist_Id NOT IN (SELECT album.artist_Id FROM album, track, genre WHERE album.album_Id = track.album_Id AND track.genre_Id = genre.genre_Id AND genre.name = 'Latin')

```
SQL 1 ⊗
1   SELECT artist_Id, name FROM artist
2   WHERE artist_Id NOT IN ( SELECT album.artist_Id FROM album, track, genre
3   WHERE album.album_Id = track.album_Id AND track.genre_Id = genre.genre_Id AND genre.name = 'Latin')
```

	artist_id	name
1	1	AC/DC
2	2	Accept
3	3	Aerosmith
4	4	Alanis Morissette
5	5	Alice In Chains
6	7	Apocalyptica
7	8	Audioslave
8	9	BackBeat
9	10	Billy Cobham
10	11	Black Label Society
11	12	Black Sabbath
12	13	Body Count
13	14	Bruce Dickinson
14	15	Buddy Guy
15	19	Cidade Negra
16	22	Led Zeppelin
17	23	Frank Zappa & Captain Beefheart
18	25	Milton Nascimento & Bebeto
19	26	Azymuth
20	28	João Gilberto
21	29	Bebel Gilberto
22	30	Jorge Vercilo
23	31	Baby Consuelo
24	32	Ney Matogrosso
25	33	Luiz Melodia
26	34	Nando Reis

3. Which video track has the longest length?

SELECT t.track_Id, t.name FROM track t, media_type m WHERE milliseconds = (SELECT MAX(milliseconds)
 FROM track t, media_type m WHERE t.media_type_id = m.media_type_id
 AND m.name LIKE '%video%') AND t.media_type_id = m.media_type_id AND
m.name LIKE '%video%';

```
SQL 1 ⊗
1  ⊟ SELECT t.track_Id, t.name FROM track t, media_type m WHERE milliseconds = ( SELECT MAX(milliseconds)
2  └  FROM track t, media_type m WHERE t.media_type_id = m.media_type_id
3     AND m.name LIKE '%video%') AND t.media_type_id = m.media_type_id AND m.name LIKE '%video%';
```

	track_id	name
1	2820	Occupation / Precipice

4. Find the names of customers who live in the same city as the top employee (The one not managed by anyone).

SELECT first_name, last_name FROM customer WHERE city = (SELECT city FROM employee WHERE reports_to IS NULL)


```
SQL 1 ⊗
1     SELECT first_name, last_name FROM customer WHERE city = ( SELECT city FROM employee WHERE reports_to IS
2  |
```

	first_name	last_name
1	Mark	Philips

5. Find the managers of employees supporting Brazilian customers.

SELECT employee_id, first_name, last_name FROM employee e
WHERE e.employee_id IN (SELECT DISTINCT reports_to
FROM employee, customer WHERE employee_id = support_rep_id AND
customer.country = 'Brazil')

6. How many audio tracks in total were bought by German customers? And what was the total price paid for them?

SELECT COUNT(t.track_id), SUM(l.unit_price) FROM invoice_line l, invoice i, customer c, track t, media_type m
WHERE l.invoice_id = i.invoice_id AND i.customer_id = c.customer_id AND c.country = 'Germany'
AND l.track_id = t.track_id AND t.media_type_id = m.media_type_id AND
m.name LIKE '%audio%'

7. Which playlists have no Latin tracks?

SELECT playlist_id, name FROM Playlist WHERE Playlist_id NOT IN (
SELECT pt.playlist_id FROM Playlist_track pt, Track t, Genre g
WHERE pt.track_id = t.track_id AND t.genre_id = g.genre_id AND g.name = 'Latin');

```
SQL 1 ⊗
1  ⊟SELECT playlist_id, name FROM Playlist WHERE Playlist_id NOT IN (
2    SELECT pt.playlist_id FROM Playlist_track pt, Track t, Genre g
3    └WHERE pt.track_id = t.track_id AND t.genre_id = g.genre_id AND g.name = 'Latin');
4    |
```

	playlist_id	name
1	2	Movies
2	3	TV Shows
3	4	Audiobooks
4	6	Audiobooks
5	7	Movies
6	9	Music Videos
7	10	TV Shows
8	12	Classical
9	13	Classical 101 - Deep Cuts
10	14	Classical 101 - Next Steps
11	15	Classical 101 - The Basics
12	16	Grunge
13	17	Heavy Metal Classic
14	18	On-The-Go 1

8. What is the space, in bytes, occupied by the playlist "Grunge", and how much would it cost? (Assume that the cost of a playlist is the sum of the price of its constituent tracks).

SELECT SUM(bytes), SUM(unit_price) FROM Playlist p, Playlist_track pt, track t
 WHERE p.name ='Grunge' AND p.playList_id == pt.playList_id AND pt.track_id = t.track_id
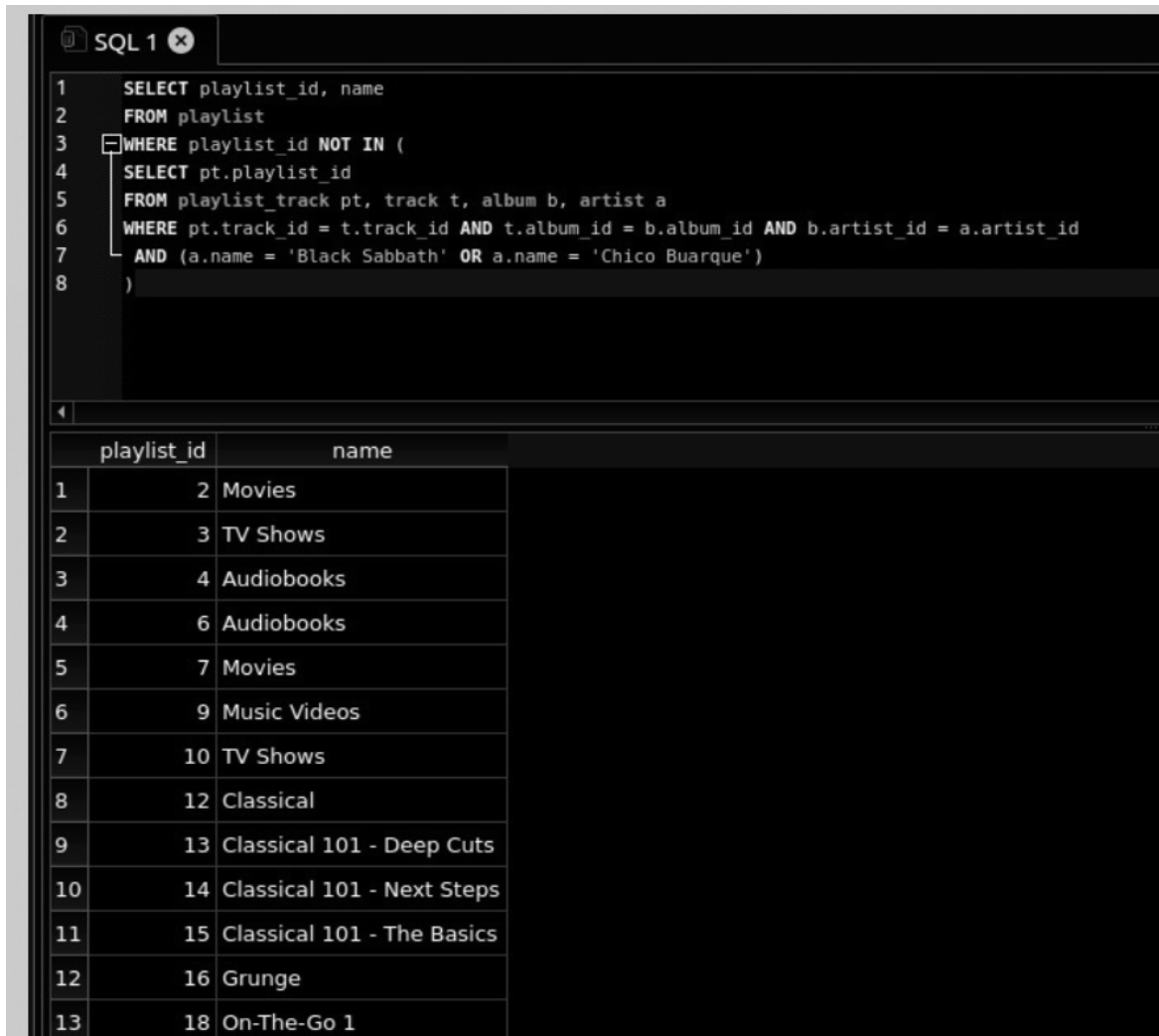
```
SQL 1 ⊗
1    SELECT SUM(bytes), SUM(unit_price) FROM Playlist p, Playlist_track pt, track t
2    WHERE p.name ='Grunge' AND p.playList_id == pt.playList_id AND pt.track_id = t.track_id
```

	SUM(bytes)	SUM(unit_price)
1	130886739	14.85

9. Which playlists do not contain any tracks for the artists "Black Sabbath" nor "Chico Buarque" ?

SELECT playlist_id, name
FROM playlist
WHERE playlist_id NOT IN (
SELECT pt.playlist_id
FROM playlist_track pt, track t, album b, artist a
WHERE pt.track_id = t.track_id AND t.album_id = b.album_id AND b.artist_id = a.artist_id
 AND (a.name = 'Black Sabbath' OR a.name = 'Chico Buarque')
)

```
SQL 1 ⊗
1    SELECT playlist_id, name
2    FROM playlist
3    WHERE playlist_id NOT IN (
4    SELECT pt.playlist_id
5    FROM playlist_track pt, track t, album b, artist a
6    WHERE pt.track_id = t.track_id AND t.album_id = b.album_id AND b.artist_id = a.artist_id
7    AND (a.name = 'Black Sabbath' OR a.name = 'Chico Buarque')
8    )
```

	playlist_id	name
1	2	Movies
2	3	TV Shows
3	4	Audiobooks
4	6	Audiobooks
5	7	Movies
6	9	Music Videos
7	10	TV Shows
8	12	Classical
9	13	Classical 101 - Deep Cuts
10	14	Classical 101 - Next Steps
11	15	Classical 101 - The Basics
12	16	Grunge
13	18	On-The-Go 1

10. List the names and the countries of those customers who are supported by an employee who was younger than 35 when hired.

SELECT c.FirstName, c.LastName, c.country FROM Customer c, Employee e WHERE c.supportRepId = e.employeeId AND TIMESTAMPDIFF(YEAR, birthdate, hiredate) < 35

11. List the genre of tracks which is contained in the most playlist.

SELECT * from track where genre_id = (select max(playlist_id) from playlist);

12. Find audio tracks which have a length longer than the average length of all the audio tracks.

SELECT * FROM track WHERE Milliseconds > (SELECT AVG(Milliseconds) FROM track);
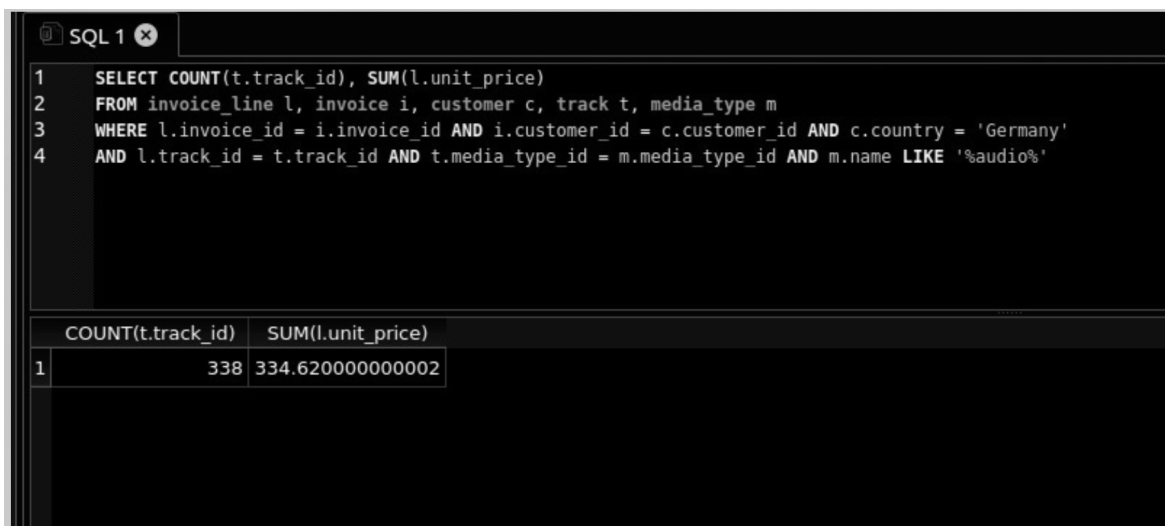

13. Which playlist(s) contain the largest number of pop tracks.

14. Find the number of employees live in the same city with each customer, sorted by descending order.

15. Which artist(s) has the most tracks which can be classified to Jazz.

16. Find the name of the German customer(s) who has paid the most in total without company name.

SELECT COUNT(t.track_id), SUM(l.unit_price)
FROM invoice_line l, invoice i, customer c, track t, media_type m
WHERE l.invoice_id = i.invoice_id AND i.customer_id = c.customer_id AND c.country = 'Germany'
AND l.track_id = t.track_id AND t.media_type_id = m.media_type_id AND
m.name LIKE '%audio%'

```
 SQL 1 ⊗
1    SELECT COUNT(t.track_id), SUM(l.unit_price)
2    FROM invoice_line l, invoice i, customer c, track t, media_type m
3    WHERE l.invoice_id = i.invoice_id AND i.customer_id = c.customer_id AND c.country = 'Germany'
4    AND l.track_id = t.track_id AND t.media_type_id = m.media_type_id AND m.name LIKE '%audio%'
```

COUNT(t.track_id)	SUM(l.unit_price)
1	338	334.620000000002

17. List the name and age of the employees who support more than 5 customers (Hint: You can use GETDATE() function to get the current date, and use an other function from last assignment to calculate ages)
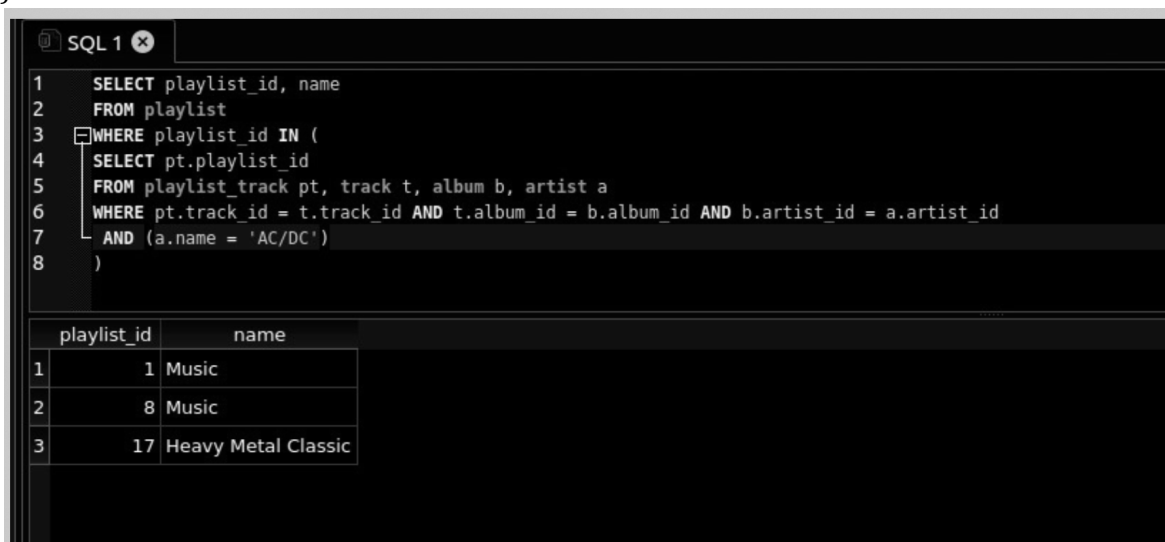
18. Find the manger who manages most employees but also being managed by someone else (Note: there are employees who do not have

managers, i.e., there may be NULL values in Reports To column).

19. List the name of the artists with more than 5 tracks.

20. Find the playlist(s) which contains most tracks by artist "AC/DC".

SELECT playlist_id, name
FROM playlist
WHERE playlist_id IN (
SELECT pt.playlist_id
FROM playlist_track pt, track t, album b, artist a
WHERE pt.track_id = t.track_id AND t.album_id = b.album_id AND b.artist_id = a.artist_id
 AND (a.name = 'AC/DC')
)

```
SQL 1 ⊗
1     SELECT playlist_id, name
2     FROM playlist
3    ⊟WHERE playlist_id IN (
4     SELECT pt.playlist_id
5     FROM playlist_track pt, track t, album b, artist a
6     WHERE pt.track_id = t.track_id AND t.album_id = b.album_id AND b.artist_id = a.artist_id
7     └ AND (a.name = 'AC/DC')
8     )
```

	playlist_id	name
1	1	Music
2	8	Music
3	17	Heavy Metal Classic