

# SQL Query Results for Group 01

Praneeth Kodavati

Krishnan

4th October 2025

## Question 1:

Find the manager(s) to whom the most number of employees report to. Print such managers' ID, name, and the total number of employees that report to them.

```
1 DROP VIEW IF EXISTS max_reporting;
2 DROP VIEW IF EXISTS reporting;
3 CREATE VIEW reporting AS (
4     SELECT reports_to, COUNT(employee_id) AS num_reports
5     FROM Employee
6     GROUP BY reports_to
7 );
8 CREATE VIEW max_reporting AS (
9     SELECT r.reports_to, r.num_reports
10    FROM reporting as r
11   WHERE r.num_reports = (SELECT MAX(num_reports) FROM reporting)
12 );
13 SELECT R.reports_to as Manager_Id,
14        E.first_name || CHR(32) || E.last_name as Manager_name
15        R.num_reports
16 FROM max_reporting as R, employee as E
17 WHERE R.reports_to = E.employee_id;
```

manager_id	manager_name	num_reports
2	Nancy Edwards	3

(1 row)

## Question 2:

Find the customer(s) who have purchased the maximum number of tracks. Print their ID, name, and total number of tracks they have purchased.

```
1 SELECT Customer_Id ,
2         First_Name || CHR(32) || Last_Name AS Customer_Name ,
3         num_tracks
4 FROM (
5     SELECT C.Customer_Id as Customer_Id ,
6           C.First_Name as First_Name ,
7           C.Last_Name as Last_Name ,
8           COUNT(T.Track_Id) as num_tracks
9 FROM Customer C, Invoice I, Invoice_Line IL, Track T
10 WHERE C.Customer_Id = I.Customer_Id
11       AND I.Invoice_Id = IL.Invoice_Id
12       AND IL.Track_Id = T.Track_Id
13 GROUP BY C.Customer_Id, C.First_Name, C.Last_Name
14 ) AS cust_track
15 WHERE num_tracks = (SELECT MAX(num_tracks) FROM cust_track);
```

customer_id	customer_name	num_tracks
29	Robert Brown	38
54	Steve Murray	38
4	Bjørn Hansen	38
34	João Fernandes	38
51	Joakim Johansson	38
52	Emma Jones	38
10	Eduardo Martins	38
35	Madalena Sampaio	38
45	Ladislav Kovács	38
6	Helena Holý	38
39	Camille Bernard	38
36	Hannah Schneider	38
31	Martha Silk	38
50	Enrique Muñoz	38
14	Mark Philips	38
22	Heather Leacock	38
13	Fernanda Ramos	38
2	Leonie Köhler	38
16	Frank Harris	38
11	Alexandre Rocha	38
44	Terhi Hämäläinen	38

42	Wyatt Girard	38
41	Marc Dubois	38
46	Hugh O'Reilly	38
40	Dominique Lefebvre	38
43	Isabelle Mercier	38
32	Aaron Mitchell	38
53	Phil Hughes	38
7	Astrid Gruber	38
9	Kara Nielsen	38
38	Niklas Schröder	38
15	Jennifer Peterson	38
26	Richard Cunningham	38
12	Roberto Almeida	38
48	Johannes Van der Berg	38
24	Frank Ralston	38
57	Luis Rojas	38
19	Tim Goyer	38
25	Victor Stevens	38
30	Edward Francis	38
21	Kathy Chase	38
49	Stanisław Wójcik	38
47	Lucas Mancini	38
3	François Tremblay	38
17	Jack Smith	38
20	Dan Miller	38
28	Julia Barnett	38
37	Fynn Zimmermann	38
33	Ellie Sullivan	38
1	Luís Gonçalves	38
5	František Wichterlová	38
18	Michelle Brooks	38
55	Mark Taylor	38
27	Patrick Gray	38
23	John Gordon	38
56	Diego Gutiérrez	38
58	Manoj Pareek	38
8	Daan Peeters	38

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(58 rows)

### Question 3:

Find the countries that have the highest average invoice total. Print country name and average invoice total.

```
1 DROP VIEW IF EXISTS Avg_Calc;
2 CREATE VIEW Avg_Calc AS (
3     SELECT Billing_Country AS Country,
4           AVG(Total) AS Average
5     FROM Invoice
6     GROUP BY Billing_Country
7 );
8 SELECT Country, Average as Average_Invoice_Total
9 FROM Avg_Calc
10 WHERE Average = (SELECT MAX(Average) FROM Avg_Calc);
```

country	average_invoice_total
Chile	6.66

(1 row)

## Question 4:

Find the total sales per genre. Print the genre and total sales in descending order of total sales values.

```
1 SELECT G.Name as Genre, SUM(Total) as Total_Sales
2 FROM Genre G, Track T, Invoice_Line IL, Invoice I
3 WHERE G.Genre_Id = T.Genre_Id
4       AND I.Invoice_Id = IL.Invoice_Id
5       AND IL.Track_Id = T.Track_Id
6 GROUP BY G.Name
7 ORDER BY Total_Sales DESC;
```

genre	total_sales
Rock	7720.02
Latin	3472.55
Metal	2093.13
Alternative & Punk	1961.66
TV Shows	817.71
Jazz	746.46
Drama	544.61
Blues	429.66
R&B/Soul	338.62
Reggae	332.64
Classical	317.04
Soundtrack	242.55
Pop	239.75
Alternative	211.17
Sci Fi & Fantasy	198.87
World	182.18
Hip Hop/Rap	166.41
Heavy Metal	161.37
Electronica/Dance	149.62
Easy Listening	138.60
Comedy	112.30
Science Fiction	102.41
Bossa Nova	86.13
Rock And Roll	83.16

(24 rows)

### Question 5:

Find the genre that has the maximum number of tracks. Print the genre and the number of tracks.

```
1 DROP VIEW IF EXISTS view_temp;
2 DROP VIEW IF EXISTS popular;
3 DROP VIEW IF EXISTS count_tracks;
4 CREATE VIEW count_tracks AS (
5     SELECT G.Name as Genre, COUNT(T.Track_Id) as num_tracks
6     FROM Genre G, Track T
7     WHERE G.Genre_Id = T.Genre_Id
8     GROUP BY G.Name
9 );
10 CREATE VIEW popular AS (
11     SELECT Genre as Genre, num_tracks as Max_num_of_tracks
12     FROM count_tracks
13     WHERE num_tracks = (SELECT MAX(num_tracks) FROM count_tracks)
14 );
15 SELECT * FROM popular;
```

genre	max_num_of_tracks
Rock	1297

(1 row)

## Question 6:

Find the top-3 genres that are purchased most by customers from USA. Print the genres and count of tracks purchased for the top-3 genres.

```
1 DROP VIEW IF EXISTS popular;
2 DROP VIEW IF EXISTS count_tracks;
3 CREATE VIEW count_tracks AS (
4     SELECT G.Name as Genre, COUNT(T.Track_Id) as num_tracks
5     FROM Genre G, Track T
6     WHERE G.Genre_Id = T.Genre_Id
7     GROUP BY G.Name
8 );
9 CREATE VIEW popular AS (
10     SELECT Genre as Genre, num_tracks as Max_num_of_tracks
11     FROM count_tracks
12     WHERE num_tracks = (SELECT MAX(num_tracks) FROM count_tracks)
13 );
14 SELECT G.Name as Genre, COUNT(T.Track_Id) as num_tracks
15 FROM Genre G, Track T, Invoice_Line IL, Invoice I, Customer C
16 WHERE G.Genre_Id = T.Genre_Id
17     AND I.Invoice_Id = IL.Invoice_Id
18     AND IL.Track_Id = T.Track_Id
19     AND C.Customer_Id = I.Customer_Id
20     AND C.Country = 'USA'
21 GROUP BY G.Name
22 ORDER BY num_tracks DESC
23 LIMIT 3;
```

genre	num_tracks
Rock	157
Latin	91
Metal	64

(3 rows)

## Question 7:

Find the count of customers who never bought tracks from the most popular genre.

```
1 DROP VIEW IF EXISTS popular;
2 DROP VIEW IF EXISTS count_tracks;
3 CREATE VIEW count_tracks AS (
4     SELECT G.Name as Genre, COUNT(T.Track_Id) as num_tracks
5     FROM Genre G, Track T
6     WHERE G.Genre_Id = T.Genre_Id
7     GROUP BY G.Name
8 );
9 CREATE VIEW popular AS (
10    SELECT Genre as Genre, num_tracks as Max_num_of_tracks
11    FROM count_tracks
12    WHERE num_tracks = (SELECT MAX(num_tracks) FROM count_tracks)
13 );
14 CREATE VIEW view_temp AS (
15    SELECT DISTINCT C.Customer_Id AS C_Id, G.Name AS Genre,
16        COUNT(T.Track_Id) as num_tracks
17    FROM popular P, Genre G, Track T, Invoice_Line IL, Invoice I,
18        Customer C
19    WHERE G.Genre_Id = T.Genre_Id
20        AND I.Invoice_Id = IL.Invoice_Id
21        AND IL.Track_Id = T.Track_Id
22        AND C.Customer_Id = I.Customer_Id
23        AND G.Name = P.Genre
24    GROUP BY C.Customer_Id, G.Name
25 );
26 SELECT COUNT(*)
27 FROM (SELECT DISTINCT Customer_Id FROM Customer C)
28 EXCEPT
29 (SELECT DISTINCT C_Id FROM view_temp);
```

---

**count**

---

(0 rows)



### Question 8:

Find the count of tracks that are in more than 5 playlists.

```
1 SELECT COUNT(Playlist_Id) AS count_of_tracks
2 FROM Playlist_Track
3 GROUP BY Track_Id
4 HAVING COUNT(Playlist_Id) > 5;
```

---

**count\_of\_tracks**

---

(0 rows)

### Question 9:

Find the number of tracks that appear in at least one playlist but were purchased fewer than 5 times in total.

```
1 SELECT COUNT(*) AS count_of_tracks
2 FROM (
3     (SELECT DISTINCT PT.Track_Id, COUNT(DISTINCT T.Track_Id)
4       FROM Playlist_Track as PT, Track as T
5       GROUP BY PT.Track_Id)
6 EXCEPT
7     (SELECT DISTINCT PT.Track_Id, COUNT(IL.Invoice_Line_Id)
8       FROM Playlist_Track as PT, Invoice_Line IL
9       WHERE PT.Track_Id = IL.Track_Id
10      GROUP BY PT.Track_Id
11      HAVING COUNT(IL.Invoice_Line_Id) >= 5)
12 );
```

---

count_of_tracks
-----------------

---

3503
------

---

(1 row)

## Question 10:

Find the count of customers who bought every genre at least once.

```
1 DROP VIEW IF EXISTS genres;  
2 CREATE VIEW genres AS (  
3     SELECT DISTINCT C.Customer_Id,  
4         COUNT(DISTINCT G.Genre_Id) as count_genre  
5     FROM Customer C, Invoice I, Invoice_Line IL, Track T, Genre G  
6     WHERE C.Customer_Id = I.Customer_Id  
7         AND I.Invoice_Id = IL.Invoice_Id  
8         AND IL.Track_Id = T.Track_Id  
9         AND T.Genre_Id = G.Genre_Id  
10    GROUP BY C.Customer_Id  
11 );  
12 SELECT COUNT(genres.Customer_Id)  
13 FROM genres, genre  
14 WHERE genres.count_genre = (SELECT DISTINCT COUNT(*) FROM Genre as  
    Genre_Count);
```

---

count
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---

0
---

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(1 row)