

15_Top 5 Artists Medium - Solution

Source - <https://datalemur.com/questions/top-fans-rank>

Running Notes

- Tables
 - **artists**
 - **songs**
 - **global_song_rank**
- find the top 5 artists whose songs appear most frequently in the Top 10 of the **global_song_rank** table.

Solution thinking flow

1. wrote the joins
2. saw the data
3. cleaned the output of the joins
4. filtered and found top 10
5. tried a having clause but understood having doesnt work with windowed functions
6. wrote the query as a cte
7. filtered it with where clause

```
SELECT a.artist_name,  
-- ,a.artist_name,a.label_owner,s.song_id,s.name,  
DENSE_RANK() OVER(  
ORDER BY count(g.day) DESC  
) AS artist_rank
```

```
--,g.rank
FROM artists as a
JOIN
songs as s
ON a.artist_id = s.artist_id
JOIN
global_song_rank as g
ON s.song_id = g.song_id AND rank <= 10
group by artist_name
HAVING DENSE_RANK() OVER(
ORDER BY count(g.day) DESC
) <= 5;
```

`HAVING` doesn't work due to `DENSE_RANK()` being a window function

So final query

```
WITH ranking_output_cte AS (SELECT a.artist_name,
--,a.artist_name,a.label_owner,s.song_id,s.name,
DENSE_RANK() OVER(
ORDER BY count(g.day) DESC
) AS artist_rank
--,g.rank
FROM artists as a
JOIN
songs as s
ON a.artist_id = s.artist_id
JOIN
global_song_rank as g
ON s.song_id = g.song_id AND rank <= 10
group by artist_name)

SELECT * FROM ranking_output_cte WHERE artist_rank<=5;
```

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