Spotify SQL Project

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```sql
---1)Retrieve the names of all tracks that have more than 1 billion streams0.



select * from spotify
where stream > 2200000000



--- 2)list the album and its count by using group by function.


select album,count(*) from spotify group by 1;


--- 3)Get the total number of comments for tracks where licensed = TRUE.


select comments ,licensed from spotify where licensed ='true';     ---14060---
```

```sql
--- 4)Find all tracks that belong to the album type single.

select track,album_type from spotify where album_type ='single';



--- 5)Count the total number of tracks by each artist.



select artist
       ,count(*) total_arrtist
       from spotify
       group by artist
       order by 2  ;
```

```
----------        ------medium level -------------------------

---1) calculated the average denceability  of Track in  each ablum

select album,
       avg (danceability) as avg_danceability
       from spotify
          group by 1
           order by 2 desc;
          ---- same problem----

select
      artist,
      avg(energy) as avg_energy from spotify group by 1

-- 2) find the top 5 tracks with the hightest energy level --

select
      track,
      max (energy)
      from spotify
      group by 1
      order by 2 desc
      limit 5;
```

```sql
-- 3) list all the tracks along with the views and likes where offical_video =true

select track,
       sum (views) as total_views,
       sum(likes) as total_views
       from spotify
       where official_video = 'true'
       group by 1   order by 2 desc;             ----1000 of 13651

-- 4) for  each  album, calculated the  total view oa all associated  tracks .

select
       album,
       track,
       sum(views) as total_view
       from spotify
       group by 1 , 2
       order by 3 desc;
```

```sql
---5) retrrive the track name that have been  stremed  on spotify  in each album


SELECT * FROM
(SELECT

     track,
     -- most_played_on,
     COALESCE(SUM(CASE WHEN most_played_on ='Youtube' THEN stream END ),0) as streamed_on_youtube,
     COALESCE (SUM(CASE WHEN most_played_on ='Spotify' THEN stream END ),0) as streamed_on_spotify
from  spotify
group by 1
)
where
        streamed_on_spotify > streamed_on_youtube
        and
        streamed_ON_youtube <>0
        order by 2 desc;
```

```
-- 1) find  the top 3 most-viewed track  for each artist using windows functions----


----find out each artist  and total views  for each track
----track with the heighest view  for each artists
----dense rank
----cte and filter  ranks<=3


with Ranking_artists   ----- this will help us to get top most-views  3 artists track
as
(select
       artist,
       track,
       sum(views) as total_views,
       dense_rank () over (partition by  artist order by sum(views)desc) as rank ---- this will give the rank for artist with diffrent track like 1
from spotify
group by 1,2
order by 1,3 desc
)
select * from Ranking_artists
where rank <=3;
```

```
--2) write a quary  to finnd  tracks where  the liveness  score is above the average

select *from spotify
select avg(liveness) from spotify;   --- frist find the average of livness                    ---0.19--

 select track ,artist, liveness from spotify
where liveness >(select avg(liveness) from spotify);


---3) use a with clause  to calculated the diffrece between the highest and the lowest energy values  for track in each column

 --- first put the min ,max aggragation function and
 --- use with cte function
 ----then diffrece min- max  from cte

with cte
as
(select
        album,
        max(energy) as maxenergy,
        min(energy) as minenergy
from spotify
group by 1
)
select  album,
      maxenergy - minenergy as diff_energy

 from cte
 order by 1;
```