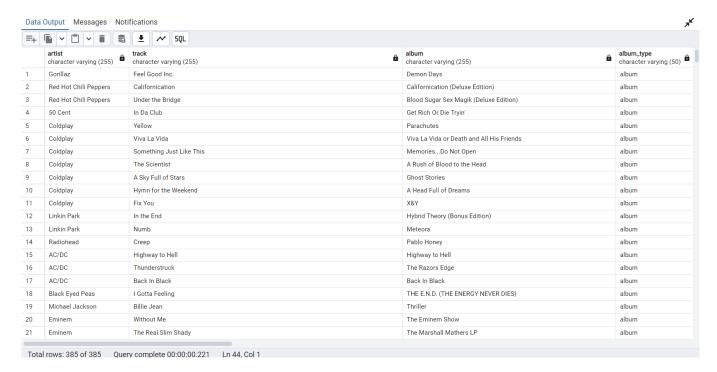
Output of Spotify SQL queries

```
DROP TABLE IF EXISTS spotify;
CREATE TABLE spotify (
  artist VARCHAR(255),
 track VARCHAR(255),
  album VARCHAR(255),
  album type VARCHAR(50),
  danceability FLOAT,
  energy FLOAT,
  loudness FLOAT,
  speechiness FLOAT,
  acousticness FLOAT,
  instrumentalness FLOAT,
  liveness FLOAT,
  valence FLOAT,
  tempo FLOAT,
  duration_min FLOAT,
  title VARCHAR(255),
  channel VARCHAR(255),
  views FLOAT,
  likes BIGINT,
  comments BIGINT,
```

```
licensed BOOLEAN,
  official_video BOOLEAN,
  stream BIGINT,
  energy_liveness FLOAT,
  most_played_on VARCHAR(50)
);
SELECT * FROM spotify
SELECT COUNT (DISTINCT album) FROM spotify;
SELECT COUNT (DISTINCT artist) FROM spotify;
--Easy Level
--1. Retrieve the names of all tracks that have more than 1 billion streams.
   SELECT * FROM spotify
      WHERE stream > 1000000000;
```



--2.List all albums along with their respective artists.

SELECT

DISTINCT album, artist FROM spotify
ORDER BY 1;

	album character varying (255)	artist character varying (255)
1	Justments	Bill Withers
2	'N Sync UK Version	*NSYNC
3	'The Sounds of Nightwish Reborn: Early Demos for "Dark Passion Play" and B-Sides'	Nightwish
4	- TRAGEDY +	\$NOT
5	!Volare! The Very Best of the Gipsy Kings	Gipsy Kings
6	"Awaken, My Love!"	Childish Gambino
7	"Heroes" (2017 Remaster)	David Bowie
8	"Let's Rock"	The Black Keys
9	"Let Go" Dj Pack	Dina Rae
10	"Miguel"	Miguel Bosé
11	#1 (Colby O'Donis Remix)	Colby O'Donis
12	#1s and then some	Brooks & Dunn
13	#3	The Script
14	#FREESANTANA	Juelz Santana
15	#NAME?	Pablo Alborán
16	#NAME?	Vanesa Martín
17	#NAME?	Antonio Orozco
18	#NAME?	Jesse & Joy
19	#NAME?	Juanes
20	#NAME?	David Bisbal
21	#NAME?	Abel Pintos
22	#NAME?	Fonseca

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

SELECT

SUM(comments) as total_comments

FROM spotify

WHERE licensed = 'true';



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

SELECT * FROM spotify

WHERE album_type = 'single';

=+		<u>+</u>	
	artist character varying (255)	track character varying (255)	album character varying (255)
1	Gorillaz	New Gold (feat. Tame Impala and Bootie Brown)	New Gold (feat. Tame Impala and Bootie Brown)
2	Gorillaz	New Gold (feat. Tame Impala and Bootie Brown) - Dom Dolla Re	New Gold (feat. Tame Impala and Bootie Brown) [Dom Dolla Rem
3	Gorillaz	Cracker Island (feat. Thundercat)	Cracker Island (feat. Thundercat)
1	50 Cent	Best Friend - Remix	Best Friend (Remix)
5	Metallica	Lux Æterna	Lux Æterna
5	Metallica	Screaming Suicide	Screaming Suicide
7	Daft Punk	Get Lucky (feat. Pharrell Williams & Nile Rodgers) - Radio Edit	Get Lucky (feat. Pharrell Williams & Nile Rodgers) [Radio Edit]
3	Linkin Park	Numb / Encore	Numb / Encore: MTV Ultimate Mash-Ups Presents Collision Cour
)	Black Eyed Peas	Pump It Louder	Pump It Louder
0	P!nk	Never Gonna Not Dance Again	Never Gonna Not Dance Again
11	P!nk	Raise Your Glass	Raise Your Glass
12	P!nk	TRUSTFALL	TRUSTFALL
13	Pharrell Williams	Down In Atlanta	Down In Atlanta
14	Pharrell Williams	Cash In Cash Out	Cash In Cash Out
15	Pharrell Williams	Hit Different	Hit Different
16	Pharrell Williams	Just A Cloud Away	Just A Cloud Away
17	Khalid	lovely (with Khalid)	lovely (with Khalid)
18	Khalid	Numb	Numb
19	Khalid	Silence	Silence
20	Khalid	Love Lies (with Normani)	Love Lies (with Normani)
21	Shakira	Shakira: Bzrp Music Sessions, Vol. 53	Shakira: Bzrp Music Sessions, Vol. 53

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

SELECT

artist,

COUNT(*) as total_no_songs

FROM spotify

GROUP BY artist

Data Output Messages Notifications

=+	□ ∨ □ ∨ □ □ □ □ □ □ □ □ □ □	
	artist character varying (255) total_bigint	no_songs
1	Lofi Fruits Music	10
2	Ray Charles	10
3	Joey Bada\$\$	10
4	La Mosca Tse-Tse	10
5	TheFatRat	10
6	Leo Dan	10
7	Tyga	10
8	Grupo Marca Registrada	10
9	Tyler, The Creator	10
10	NCT DREAM	10
11	Last Child	10
12	Plan B	10
13	Afgan	10
14	James Horner	10
15	Israel & Rodolffo	10
16	Xzibit	10
17	Otis Redding	10
18	Kato	10
19	Shakira	10
20	Foreigner	10
21	Stephen Cleobury	10
22 Tota	RZA I rows: 1000 of 2074	10 84 Ln 75, Col

--Medium Level

--1. Calculate the average danceability of tracks in each album.

SELECT

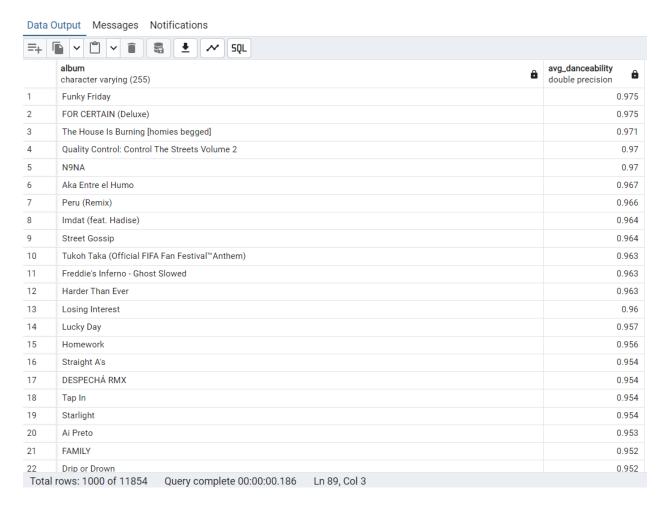
album,

avg(danceability) as avg_danceability

FROM spotify

GROUP BY 1

ORDER BY 2 DESC



--2. Find the top 5 tracks with the highest energy values.

SELECT

track,

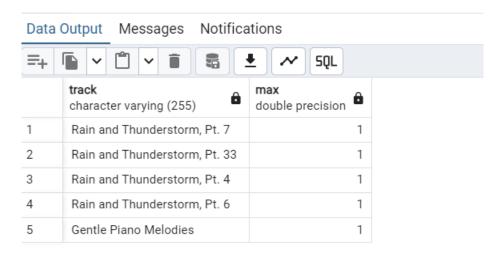
MAX(energy)

FROM spotify

GROUP BY 1

ORDER BY 2 DESC

LIMIT 5



Total rows: 5 of 5 Query complete 00:00:00.141 Ln 100, Col 4

--3.List all tracks along with their views and likes where official_video = TRUE.

SELECT

track,

SUM(views) as total_views,

SUM(likes) as total_likes

FROM spotify

WHERE official_video = 'true'

GROUP BY 1

ORDER BY 2 DESC

Data (Output Messages Notifications		
=+	<u> </u>		
	track character varying (255)	total_views double precision	total_likes numeric
1	Despacito	16159296273	101577278
2	See You Again (feat. Charlie Puth)	11547595554	80295292
3	Shape of You	5908398479	31047780
4	Calma - Remix	5322011392	25649519
5	This Is What You Came For	5252059812	21207312
6	Swalla (feat. Nicki Minaj & Ty Dolla \$ign)	5162403752	28864162
7	Wheels on the Bus	4898831101	14396841
8	Taki Taki (with Selena Gomez, Ozuna & Cardi B)	4828403435	37552053
9	Uptown Funk (feat. Bruno Mars)	4821016218	20067879
10	Thrift Shop (feat. Wanz)	4508467245	30242165
11	Échame La Culpa	4491334603	20006575
12	Something Just Like This	4236043204	20565056
13	Sin Pijama	4172961620	17249780
14	Somebody That I Used To Know	4114890942	29168472
15	Con Altura	4093098189	18536081
16	Perfect	4080224385	24814514
17	Bang Bang	4002768766	22355292
18	No Me Conoce - Remix	3958118245	11841081
19	Sunflower - Spider-Man: Into the Spider-Verse	3954778068	27499619
20	Sugar	3947319650	16146579
21	Dusk Till Dawn (feat. Sia) - Radio Edit	3907550097	28299420
22	Bole Chudivan	3817613826	17771858

--4. For each album, calculate the total views of all associated tracks.

SELECT

album,

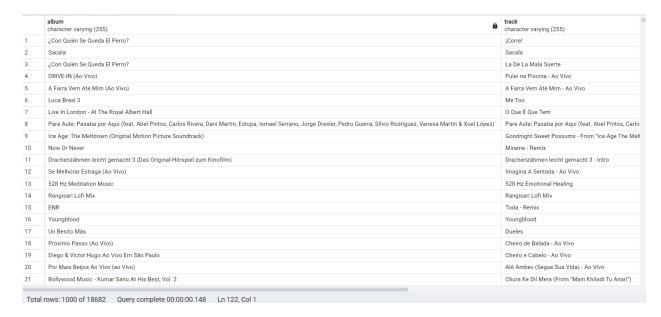
track,

SUM(views)

FROM spotify

GROUP BY 1,2

ORDER BY 3



--5.Retrieve the track names that have been streamed on Spotify more than YouTube.

SELECT * FROM

(SELECT

track,

COALESCE(SUM(CASE WHEN most_played_on =

'Youtube' THEN stream END),0) as streamed_on_youtube,

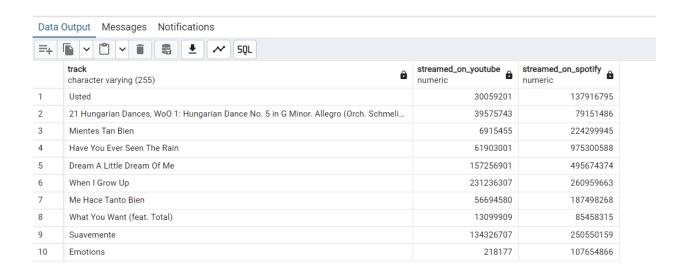
COALESCE(SUM(CASE WHEN most_played_on =

'Spotify' THEN stream END),0) as streamed_on_spotify

FROM spotify

GROUP BY 1

) as t1
WHERE
streamed_on_spotify > streamed_on_youtube
AND
streamed_on_youtube <> 0
LIMIT 10



--Advanced Level

--1. Find the top 3 most-viewed tracks for each artist using window functions.

WITH ranking_artist

AS

(SELECT

artist,

track,

SUM(views) as total_view, DENSE_RANK() OVER(PARTITION BY artist

ORDER BY SUM(views) DESC) as rank

FROM spotify

GROUP BY 1, 2

ORDER BY 1, 3 DESC

)

SELECT * FROM ranking_artist

WHERE rank <= 3

=+		✓ 5QL		
	artist character varying (255)	track character varying (255)	total_view double precision	rank bigint
	\$NOT	Tell Em	41100657	1
	\$NOT	Like Me (feat. iann dior)	15803517	2
	\$NOT	Mean	13563870	3
	\$uicideboy\$	Paris	175156959	1
	\$uicideboy\$	For the Last Time	91771038	2
	\$uicideboy\$	Kill Yourself (Part III)	31674988	3
	(G)I-DLE	POP/STARS	541864471	1
	(G)I-DLE	TOMBOY	204797335	2
	(G)I-DLE	Oh my god	191587399	3
0	*NSYNC	Bye Bye	315874581	1
1	*NSYNC	This I Promise You	252377383	2
2	*NSYNC	It's Gonna Be Me	172368673	3
3	070 Shake	Escapism Sped Up	25149399	1
4	070 Shake	Escapism Slowed Down	25149399	1
5	070 Shake	Escapism.	25149399	1
6	070 Shake	Guilty Conscience	10148280	2
7	070 Shake	Morrow	2815446	3
8	11:11 Music Group	hola como tale tale vu - 1, 2, 3	9509592	1
9	11:11 Music Group	after dark x sweater weather	1566827	2
0	11:11 Music Group	stargirl interlude (sped up)	1005798	3
1	112	Only You (feat. The Notorious B.I.G. & Mase) - Bad Boy Remix	76971300	1
2	112	Peaches & Cream	28261569	2

--2. Write a query to find tracks where the liveness score is above the average.

SELECT

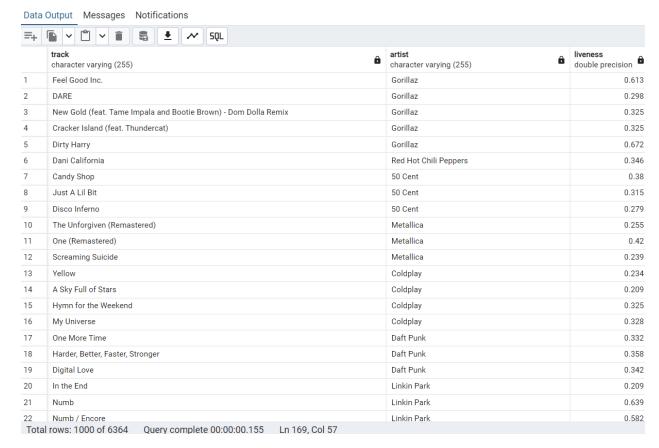
track,

artist,

liveness

FROM spotify

WHERE liveness > (SELECT AVG(liveness) FROM spotify)



--3.Use a WITH clause to calculate the difference between the highest and lowest energy values for tracks in each album.

WITH cte

AS

(SELECT

album,

```
MAX(energy) as highest_energy,

MIN(energy) as lowest_energery

FROM spotify

GROUP BY 1

)

SELECT

album,

highest_energy - lowest_energery as energy_diff

FROM cte

ORDER BY 2 DESC
```

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	album character varying (255)	energy_diff double precision
1	White Noise	0.906750000000000
2	Spotify Singles - Holiday	0.8360000000000000
3	Spotify Singles	0.823
4	UNDERTALE Soundtrack	0.81
5	Making Mirrors	0.810900000000000
6	Everytime We Touch (Premium Edition)	0.804999999999999
7	Unwritten	0.
8	If I Can Dream: Elvis Presley with the Royal Philharmonic Orchestra	0.78
9	Fallen	0.764999999999999
10	CeeLo's Magic Moment	0.76
11	Greatest Hits	0.74
12	Safe Haven	0.73
13	Pain Killer	0.73
14	Paranoid (Remaster)	0.732
15	Nevermind (Remastered)	0.7110000000000000
16	Texas Flood (Legacy Edition)	0.70
17	American Heartbreak	0.6970000000000000
18	For Lovers	0.688
19	Immortalized (Deluxe Edition)	0.686999999999999
20	Storytelling	0.685999999999999
21	A Brief Inquiry Into Online Relationships	0.681999999999999