SQL ASSIGNMENT 05

PROBLEM STATEMENT

1. Check the entire dataset

2. Number of songs on Spotify for each artist

3. Top 10 songs based on popularity

4. Total number of songs on spotify based on year

5. Top song for each year (2000-2022) based on popularity

6. Analysis based on Tempo : tempo > 121.08 -> 'Above Average Tempo' tempo = 121.08 -> 'Average Tempo' tempo < 121.08 -> 'Below Average Tempo'

7. Songs with Highest Tempo

8. Number of Songs for different Tempo Range : track_name, energy Modern_Music -> tempo BETWEEN 60.00 AND 100.00 Classical_Music -> tempo BETWEEN 100.001 AND 120.00 Dance_Music -> tempo BETWEEN 120.001 AND 150.01 HighTempo_Music -> tempo > 150.01

8.1 Number of Songs for different Tempo Range

9. Energy Analysis : TOP 10 track_name, danceability, track_popularity energy > 0.64 -> 'Above Average Energy energy = 0.64 -> 'Average Energy' energy < 0.64 -> 'Below Average Energy' energy BETWEEN 0.1 AND 0.3 -> 'Calm Music' energy BETWEEN 0.3 AND 0.6 -> 'Moderate Music' Energy >0.6 -> 'Energetic Music'

10. Number of Songs for different energy ranges(above)

11. Danceability Analysis : Top 20 track_name, danceability danceability BETWEEN 0.69 AND 0.79 -> 'Low Danceability' (danceability BETWEEN 0.49 AND 0.68) OR (danceability BETWEEN 0.79 AND 0.89) -> 'Moderate Danceability' (danceability BETWEEN 0.39 AND 0.49) OR (danceability BETWEEN 0.89 AND 0.99) -> 'High Danceability' danceability < 0.39 OR danceability > 0.99 -> 'Cant Dance on this one'

12. Number of Songs for different danceability ranges(above)

13. Loudness Analysis : Top 20 track_name, loudness, loudness BETWEEN -23.00 AND -15.00 ->'Low Loudness' loudness BETWEEN -14.99 AND -6.00 -> 'Below Average Loudness' loudness BETWEEN -5.99 AND -2.90 -> 'Above Average Loudness' loudness BETWEEN -2.89 AND -1.00 -> 'Peak Loudness'

14. Number of Songs for different loudness ranges(above)

15. Valence Analysis : Top 20 track_name, valence, track_popularity, valence > 0.535 -> Above Avg Valence valence = 0.535 -> Avg Valence valence < 0.535 -> Below Average'

16. Number of Songs for different valence ranges(above)

17. Speechiness Analsis : Top 20 track_name, speechiness, tempo, speechiness > 0.081-> Above Avg Speechiness speechiness = 0.081-> Avg Speechiness speechiness < 0.081-> Below Speechiness

17.1 Number of Songs for different speechiness ranges(above)

18. Acoustic Analysis : DISTINCT TOP 25 track_name, album, artist_name, acousticness (acousticness BETWEEN 0 AND 0.40000 -> 'Not Acoustic' (acousticness BETWEEN 0.40001 AND 0.80000) ->'Acoustic' (acousticness BETWEEN 0.80001 AND 1) ->'Highly Acoustic

18.1 Number of Songs for different acousticness ranges(above)

DATABASE

Created a Spotify Dataset Database in the Snowflake and then run a command **Use Spotify Dataset**

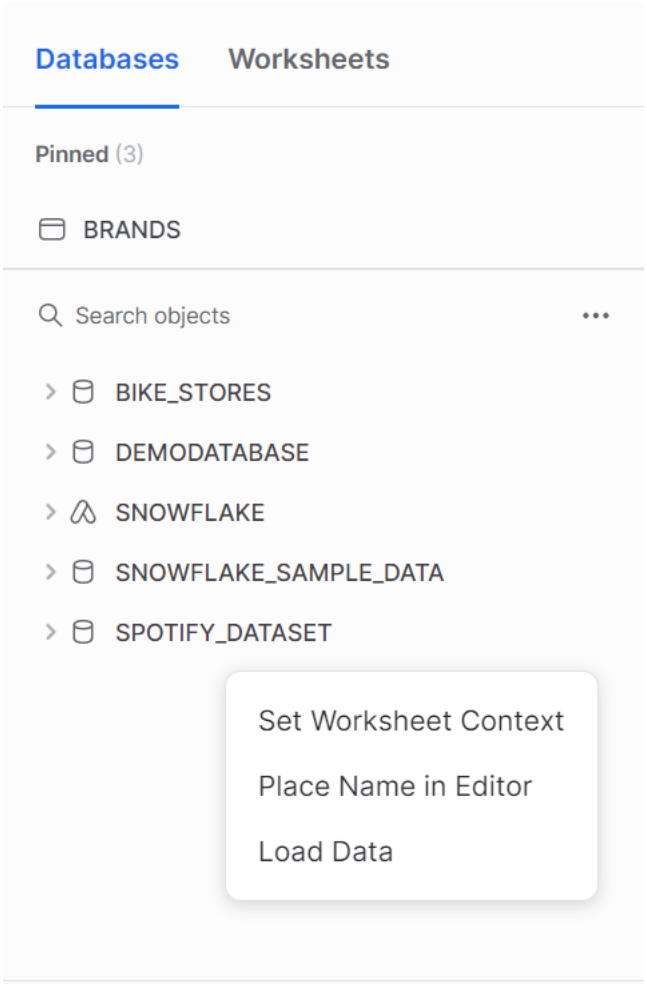
```
--CREATING A DATABASE
CREATE DATABASE SPOTIFY_DATASET;

--USE DATABASE
USE SPOTIFY_DATASET;
```

Creating a **Spotify_Playlist Table**

```
--CREATED A TABLE
CREATE OR REPLACE TABLE SPOTIFY_PLAYLIST
(
PLAYLIST_URL VARCHAR(100),
YEAR NUMBER(4,0),
TRACK_ID VARCHAR(50),
TRACK_NAME VARCHAR(100),
TRACK_POPULARITY NUMBER(3,0),
ALBUM VARCHAR(100),
ARTIST_ID VARCHAR(50),
ARTIST_NAME VARCHAR(50),
ARTIST_GENRES VARCHAR(200),
ARTIST_POPULARITY NUMBER(3,0),
DANCEABILITY FLOAT,
ENERGY FLOAT,
KEY NUMBER(3,0),
LOUDNESS FLOAT,
MODE NUMBER(3,0),
SPEECHINESS FLOAT,
ACOUSTICNESS FLOAT,
INSTRUMENTALNESS FLOAT,
LIVENESS FLOAT,
VALENCE FLOAT,
TEMPO FLOAT,
DURATION_MS NUMBER(7,0),
TIME_SIGNATURE NUMBER(1,0)
);
```

Loading Data into the **Spotify_Playlist Table**

--We can load data into the table by clicking the option **load data**



Q1. Check the entire dataset.

-- --CHECKING THE TOTAL NO OF RECORDS

```
--CHECKING THE TOTAL NO OF RECORDS
SELECT COUNT(*) FROM SPOTIFY_DATASET.PUBLIC.SPOTIFY_PLAYLIST;
```

OUTPUT

	COUNT(*)
1	2,299

--DESCRIBING THE TABLE

```
--DESCRIBING THE TABLE
DESCRIBE TABLE SPOTIFY_DATASET.PUBLIC.SPOTIFY_PLAYLIST;
```

OUTPUT

	name	type	kind	null?	default	primary key	unique key	check	expr
1	PLAYLIST_URL	VARCHAR(100)	COLUMN	Y	null	N	N	null	null
2	YEAR	NUMBER(4,0)	COLUMN	Y	null	N	N	null	null
3	TRACK_ID	VARCHAR(50)	COLUMN	Y	null	N	N	null	null
4	TRACK_NAME	VARCHAR(100)	COLUMN	Y	null	N	N	null	null
5	TRACK_POPULARITY	NUMBER(3,0)	COLUMN	Y	null	N	N	null	null
6	ALBUM	VARCHAR(100)	COLUMN	Y	null	N	N	null	null
7	ARTIST_ID	VARCHAR(50)	COLUMN	Y	null	N	N	null	null
8	ARTIST_NAME	VARCHAR(50)	COLUMN	Y	null	N	N	null	null
9	ARTIST_GENRES	VARCHAR(200)	COLUMN	Y	null	N	N	null	null
10	ARTIST_POPULARITY	NUMBER(3,0)	COLUMN	Y	null	N	N	null	null
11	DANCEABILITY	FLOAT	COLUMN	Y	null	N	N	null	null
12	ENERGY	FLOAT	COLUMN	Y	null	N	N	null	null

--CHECKING FOR THE NULL AND BLANK VALUE

```
--CHECKING FOR THE NULL AND BLANK VALUE
SELECT *
FROM SPOTIFY_DATASET.PUBLIC.SPOTIFY_PLAYLIST
WHERE PLAYLIST_URL IS NULL OR YEAR IS NULL OR TRACK_ID IS NULL OR TRACK_NAME IS NULL OR TRACK_POPULARITY IS NULL OR ALBUM IS NULL OR
ARTIST_ID IS NULL OR ARTIST_NAME IS NULL OR
ARTIST_GENRES IS NULL OR ARTIST_POPULARITY IS NULL OR DANCEABILITY IS NULL OR ENERGY IS NULL OR KEY IS NULL OR LOUDNESS IS NULL OR MODE IS
NULL OR SPEECHINESS IS NULL OR ACOUSTICNESS IS NULL OR
INSTRUMENTALNESS IS NULL OR LIVENESS IS NULL OR VALENCE IS NULL OR TEMPO IS NULL OR DURATION_MS IS NULL OR TIME_SIGNATURE IS NULL; ---
THERE IS ONLY 1 ROW WHICH CONTAINS NULL VALUE
```

OUTPUT

There is only **1 row** which contains the **null value**

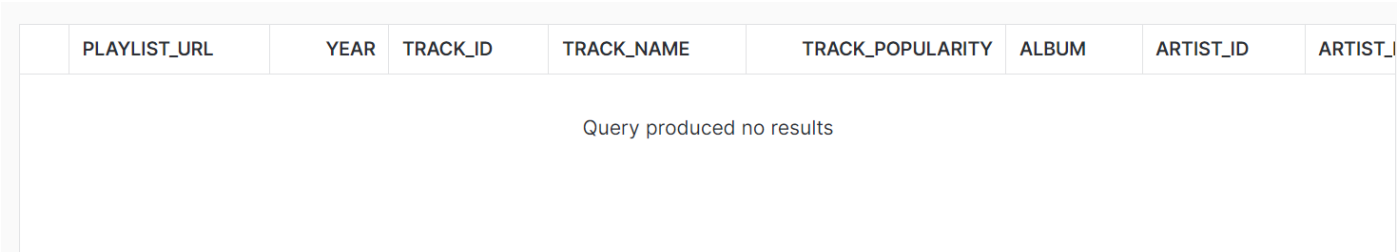
-- DELETING THE NULL VALUE

```
-- DELETING  THE NULL VALUE
DELETE
FROM SPOTIFY_PLAYLIST
WHERE TRACK_NAME = 'These Words';
```

--CHECKING NULL VALUE DELTED OR NOT

```
SELECT *
FROM SPOTIFY_PLAYLIST
WHERE TRACK_NAME = 'These Words';
```

OUTPUT



--Successfully Deleted

Q2. Number of songs on Spotify for each artist.

```
SELECT ARTIST_NAME ,COUNT(DISTINCT TRACK_ID) AS TOTAL_SONGS
FROM SPOTIFY_DATASET.PUBLIC.SPOTIFY_PLAYLIST
GROUP BY 1
ORDER BY TOTAL_SONGS DESC ;
```

OUTPUT

	ARTIST_NAME	TOTAL_SONGS
1	Taylor Swift	30
2	Drake	30
3	Rihanna	24
4	BeyoncÃ©	22
5	Calvin Harris	21
6	Ariana Grande	20
7	Justin Bieber	19
8	P!nk	19
9	Eminem	18
10	Ed Sheeran	18
11	Kanye West	17
12	Katy Perry	17

Q3. Top 10 songs based on popularity.

```sql
SELECT TRACK_NAME,TRACK_POPULARITY AS POPULARITY
FROM SPOTIFY_DATASET.PUBLIC.SPOTIFY_PLAYLIST
ORDER BY POPULARITY DESC
LIMIT 10;
```

OUTPUT

	TRACK_NAME	POPULARITY
1	Cruel Summer	100
2	august	93
3	I'm Good (Blue)	93
4	Anti-Hero	93
5	Starboy	92
6	I Ain't Worried	92
7	Blinding Lights	92
8	Calm Down (with Selena Gomez)	92
9	Sweater Weather	91
10	Yellow	91

Q4. Total number of songs on Spotify based on year.

```sql
--4. Total number of songs on spotify based on year

SELECT YEAR,COUNT(DISTINCT TRACK_ID) AS TOTAL_SONGS
FROM SPOTIFY_DATASET.PUBLIC.SPOTIFY_PLAYLIST
GROUP BY YEAR
ORDER BY YEAR DESC;
```

OUTPUT

	YEAR	TOTAL_SONGS
1	2,022	100
2	2,021	100
3	2,020	100
4	2,019	100
5	2,018	100
6	2,017	100
7	2,016	100
8	2,015	100
9	2,014	100
10	2,013	100
11	2,012	100
12	2,011	100

Q5. Top song for each year (2000-2022) based on popularity.

```
--5. Top song for each year (2000-2022) based on popularity


SELECT YEAR,TRACK_NAME,TRACK_POPULARITY
FROM SPOTIFY_DATASET.PUBLIC.SPOTIFY_PLAYLIST
WHERE
(YEAR,TRACK_POPULARITY)
IN (SELECT YEAR,MAX(TRACK_POPULARITY) AS POPULARITY
FROM SPOTIFY_DATASET.PUBLIC.SPOTIFY_PLAYLIST
GROUP BY 1)
ORDER BY 1 ;
```

OUTPUT

	YEAR	TRACK_NAME	TRACK_POPULARITY
1	2,000	Yellow	91
2	2,001	Stan	84
3	2,001	The Middle	84
4	2,002	Without Me	89
5	2,003	Seven Nation Army	86
6	2,004	Mr. Brightside	87
7	2,004	Numb	87
8	2,004	Gasolina	87
9	2,005	Mockingbird	90
10	2,006	Hips Don't Lie (feat. Wyclef Jean)	86
11	2,006	Promiscuous	86
12	2,007	Umbrella	86

Q6. Analysis based on Tempo:

tempo > 121.08 -> 'Above Average Tempo'

tempo = 121.08 -> 'Average Tempo'

tempo < 121.08 -> 'Below Average Tempo' .

```
SELECT TRACK_NAME,TRACK_POPULARITY,ARTIST_NAME,TEMPO,
CASE
    WHEN TEMPO > 121.08 THEN 'Above Average Tempo'
    WHEN TEMPO = 121.08 THEN 'Average Tempo'
    WHEN TEMPO < 121.08 THEN 'Below Average Tempo'
END AS Tempo_Bucket
FROM SPOTIFY_PLAYLIST
ORDER BY 4 DESC;
```

OUTPUT

	TRACK_NAME	TRACK_POPULARITY	ARTIST_NAME	··· TEMPO	TEMPO_BUCKET
1	Buttons	67	The Pussycat Dolls	210.857	Above Average Tempo
2	We Don't Talk About Bruno	77	Carolina GaitÃ¡n - La Ga	205.863	Above Average Tempo
3	FourFiveSeconds	80	Rihanna	205.846	Above Average Tempo
4	Honey Bee	66	Blake Shelton	205.57	Above Average Tempo
5	BIG BANK (feat. 2 Chainz, Big Sean, Nicki Minaj)	66	YG	203.911	Above Average Tempo
6	Peaches & Cream	66	112	203.862	Above Average Tempo
7	Pure Water (with Migos)	76	Mustard	202.015	Above Average Tempo
8	Party Up	73	DMX	201.936	Above Average Tempo
9	The Motto	77	Drake	201.8	Above Average Tempo
10	Naughty Girl	69	BeyoncÃ©	200.053	Above Average Tempo
11	Never Leave You (Uh Oooh, Uh Oooh)	65	Lumidee	199.958	Above Average Tempo
12	This Ain't A Scene, It's An Arms Race	73	Fall Out Boy	199.935	Above Average Tempo

Q7. Songs with Highest Tempo

```sql
--7. Songs with Highest Tempo

SELECT TRACK_NAME, TEMPO
FROM SPOTIFY_PLAYLIST
ORDER BY TEMPO DESC
LIMIT 1;
```

OUTPUT

	TRACK_NAME	TEMPO
1	Buttons	210.857

Q8. Number of Songs for different Tempo Range : track_name, energy

Modern_Music -> tempo BETWEEN 60.00 AND 100.00

Classical_Music -> tempo BETWEEN 100.001 AND 120.00

Dance_Music -> tempo BETWEEN 120.001 AND 150.01

HighTempo_Music -> tempo > 150.01

```sql
SELECT TRACK_NAME,ENERGY,COUNT( DISTINCT TRACK_ID)AS TOTAL_SONGS,
CASE
    WHEN TEMPO BETWEEN 60.00 AND 100.00 THEN 'Modern_Music'
    WHEN TEMPO BETWEEN 100.001 AND 120.00 THEN 'Classical_Music'
    WHEN TEMPO  BETWEEN 120.001 AND 150.01 THEN 'Dance_Music'
    ELSE 'HighTempo_Music'
END AS TEMPO_BUCKET
FROM SPOTIFY_PLAYLIST
 GROUP BY 1,2,4;
```

OUTPUT

	TRACK_NAME	ENERGY	TOTAL_SONGS	TEMPO_BUCKET
1	Yellow	0.661	1	HighTempo_Music
2	All The Small Things	0.897	1	Dance_Music
3	Breathe	0.496	1	Dance_Music
4	In the End	0.864	1	Classical_Music
5	Bye Bye Bye	0.926	1	HighTempo_Music
6	Thong Song	0.888	1	Dance_Music
7	The Real Slim Shady	0.661	1	Classical_Music
8	Otherside	0.795	1	Dance_Music
9	Forgot About Dre	0.74	1	Dance_Music
10	Big Pimpin'	0.814	1	Dance_Music
11	Sandstorm	0.965	1	Dance_Music
12	Amazed	0.543	1	Dance_Music

Q8.1 Number of Songs for different Tempo Range

```
--8.1  Number of Songs for different Tempo Range

 SELECT COUNT(DISTINCT TRACK_ID)AS TOTAL_SONGS,
 CASE
     WHEN TEMPO BETWEEN 60.00 AND 100.00 THEN 'Modern_Music'
     WHEN TEMPO BETWEEN 100.001 AND 120.00 THEN 'Classical_Music'
     WHEN TEMPO  BETWEEN 120.001 AND 150.01 THEN 'Dance_Music'
     ELSE 'HighTempo_Music'
END AS TEMPO_BUCKET
FROM SPOTIFY_PLAYLIST
 GROUP BY 2
 ORDER BY 1 DESC;
```

OUTPUT

	TOTAL_SONGS	TEMPO_BUCKET
1	784	Dance_Music
2	609	Modern_Music
3	491	Classical_Music
4	317	HighTempo_Music

Q9 Energy Analysis : TOP 10 track_name, danceability, track_popularity

energy > 0.64 -> 'Above Average Energy

energy = 0.64 -> 'Average Energy'

energy < 0.64 -> 'Below Average Energy'

energy BETWEEN 0.1 AND 0.3 -> 'Calm Music'

energy BETWEEN 0.3 AND 0.6 -> 'Moderate Music'

Energy >0.6 -> 'Energetic Music'

```
SELECT TRACK_NAME,DANCEABILITY,TRACK_POPULARITY,ENERGY,
CASE
    WHEN ENERGY > 0.64 THEN 'Above Average Energy'
    WHEN ENERGY = 0.64 THEN 'Average Energy'
    WHEN ENERGY < 0.64 THEN 'Below Average Energy'
    WHEN ENERGY BETWEEN 0.1 AND 0.3 THEN 'Calm Music'
    WHEN ENERGY BETWEEN 0.3 AND 0.6 THEN 'Moderate Music'
    WHEN ENERGY > 0.6 THEN 'Energetic Music'
END AS ENERGY_RANGES
FROM SPOTIFY_PLAYLIST
ORDER BY ENERGY DESC
LIMIT 10;
```

OUTPUT

	TRACK_NAME	··· DANCEABILITY	TRACK_POPULARITY	ENERGY	ENERGY_RANGES
1	Come With Me - Radio Edit	0.739	62	0.999	Above Average Energy
2	When You Were Young	0.467	80	0.988	Above Average Energy
3	American Idiot	0.38	82	0.988	Above Average Energy
4	All I Ever Wanted - Radio Edit	0.645	68	0.984	Above Average Energy
5	Say Hey (I Love You) (feat. Cherine Tanya Anderson	0.738	67	0.983	Above Average Energy
6	Don't Call Me Baby	0.808	58	0.982	Above Average Energy
7	Something	0.644	69	0.981	Above Average Energy
8	Brianstorm	0.421	63	0.98	Above Average Energy
9	Faint	0.554	82	0.978	Above Average Energy
10	Now You're Gone (feat. DJ Mental Theo's Bazzheac	0.639	68	0.976	Above Average Energy

Q10 Number of Songs for different energy ranges(above)

```sql
--10. Number of Songs for different energy ranges(above)

SELECT COUNT(DISTINCT TRACK_ID) AS TOTAL_SONGS,
 CASE
      WHEN ENERGY > 0.64 THEN 'Above Average Energy'
      WHEN ENERGY = 0.64 THEN 'Average Energy'
      WHEN ENERGY < 0.64 THEN 'Below Average Energy'
      WHEN ENERGY BETWEEN 0.1 AND 0.3 THEN 'Calm Music'
      WHEN ENERGY BETWEEN 0.3 AND 0.6 THEN 'Moderate Music'
      WHEN ENERGY > 0.6 THEN 'Energetic Music'
END AS ENERGY_RANGES
FROM SPOTIFY_PLAYLIST
GROUP BY 2;
```

OUTPUT

	TOTAL_SONGS	ENERGY_RANGES
1	1,447	Above Average Energy
2	753	Below Average Energy
3	1	Average Energy

Q11 Danceability Analysis : Top 20 track_name, danceability

danceability BETWEEN 0.69 AND 0.79 -> 'Low Danceability'

(danceability BETWEEN 0.49 AND 0.68) OR (danceability BETWEEN 0.79 AND 0.89) -> 'Moderate Danceability'

(danceability BETWEEN 0.39 AND 0.49) OR (danceability BETWEEN 0.89 AND 0.99) -> 'High Danceability'

danceability < 0.39 OR danceability > 0.99 -> 'Cant Dance on this one'

```
SELECT TRACK_NAME, DANCEABILITY,
CASE
    WHEN DANCEABILITY BETWEEN 0.69 AND 0.79 THEN 'Low Danceability'
    WHEN DANCEABILITY BETWEEN 0.49 AND 0.68 OR DANCEABILITY BETWEEN 0.79 AND 0.89 THEN 'Moderate Danceability'
    WHEN DANCEABILITY BETWEEN 0.39 AND 0.49 OR DANCEABILITY BETWEEN 0.89 AND 0.99 THEN 'High Danceability'
    WHEN DANCEABILITY < 0.39 OR DANCEABILITY > 0.99 THEN 'Cant Dance on this one'
    ELSE 'OTHER'
END AS DANCEABILITY_BUCKET
FROM SPOTIFY_PLAYLIST
ORDER BY 2 DESC
LIMIT 20;
```

OUTPUT

	TRACK_NAME	··· DANCEABILITY	DANCEABILITY_BUCKET
1	Give It To Me	0.975	High Danceability
2	SexyBack (feat. Timbaland)	0.967	High Danceability
3	GIRL LIKE ME	0.965	High Danceability
4	Get Up (feat. Chamillionaire)	0.964	High Danceability
5	Anaconda	0.964	High Danceability
6	Yes Indeed	0.963	High Danceability
7	Shake That	0.963	High Danceability
8	Hot In Herre	0.956	High Danceability
9	When You Look At Me - Radio Edit	0.955	High Danceability
10	Temperature	0.951	High Danceability
11	Super Freaky Girl	0.95	High Danceability
12	We Be Burnin'	0.95	High Danceability

Q12 Number of Songs for different danceability ranges(above)

```sql
---12. Number of Songs for different danceability ranges(above)

SELECT COUNT(DISTINCT TRACK_ID) AS TOTAL_SONGS,
CASE
    WHEN DANCEABILITY BETWEEN 0.69 AND 0.79 THEN 'Low Danceability'
    WHEN DANCEABILITY BETWEEN 0.49 AND 0.68 OR DANCEABILITY BETWEEN 0.79 AND 0.89 THEN 'Moderate Danceability'
    WHEN DANCEABILITY BETWEEN 0.39 AND 0.49 OR DANCEABILITY BETWEEN 0.89 AND 0.99 THEN 'High Danceability'
    WHEN DANCEABILITY < 0.39 OR DANCEABILITY > 0.99 THEN 'Cant Dance on this one'
    ELSE 'OTHER'
END AS DANCEABILITY_BUCKET
FROM SPOTIFY_PLAYLIST
GROUP BY 2
ORDER BY 1 DESC;
```

OUTPUT

	TOTAL_SONGS	DANCEABILITY_BUCKET
1	1,218	Moderate Danceability
2	556	Low Danceability
3	279	High Danceability
4	85	Cant Dance on this one
5	63	OTHER

Q13 Loudness Analysis : Top 20 track_name, loudness,

loudness BETWEEN -23.00 AND -15.00 ->'Low Loudness'

loudness BETWEEN -14.99 AND -6.00 -> 'Below Average Loudness'

loudness BETWEEN -5.99 AND -2.90 -> 'Above Average Loudness'

loudness BETWEEN -2.89 AND -1.00 -> 'Peak Loudness'

```
SELECT TRACK_NAME,LOUDNESS,
CASE
   WHEN LOUDNESS BETWEEN -23.00 AND -15.00 THEN 'Low Loudness'
   WHEN LOUDNESS BETWEEN -14.99 AND -6.00  THEN 'Below Average Loudness'
   WHEN LOUDNESS BETWEEN -5.99 AND -2.90   THEN 'Above Average Loudness'
   WHEN LOUDNESS BETWEEN -2.89 AND -1.00   THEN  'Peak Loudness'
   ELSE 'High Peak Loudness'
END AS LOUDNESS_BUCKET
FROM SPOTIFY_PLAYLIST
ORDER BY 2 DESC
LIMIT 20;
```

OUTPUT

	TRACK_NAME	LOUDNESS	LOUDNESS_BUCKET
1	In For The Kill	-0.276	High Peak Loudness
2	Gold Dust - Radio Edit	-0.74	High Peak Loudness
3	Louder (feat. Sian Evans)	-1.089	Peak Loudness
4	Not Afraid	-1.19	Peak Loudness
5	We Made You	-1.203	Peak Loudness
6	Forgot About Dre	-1.299	Peak Loudness
7	Fighter	-1.357	Peak Loudness
8	Just the Girl	-1.6	Peak Loudness
9	Crazy	-1.609	Peak Loudness
10	Play Hard (feat. Ne-Yo & Ako	-1.702	Peak Loudness
11	Fit but You Know It	-1.729	Peak Loudness
12	Overprotected - Radio Edit	-1.73	Peak Loudness

Q14 Number of Songs for different loudness ranges(above)

```
SELECT COUNT(DISTINCT TRACK_ID) AS TOTAL_SONGS,
CASE
   WHEN LOUDNESS BETWEEN -23.00 AND -15.00 THEN 'Low Loudness'
   WHEN LOUDNESS BETWEEN -14.99 AND -6.00  THEN 'Below Average Loudness'
   WHEN LOUDNESS BETWEEN -5.99 AND -2.90   THEN 'Above Average Loudness'
   WHEN LOUDNESS BETWEEN -2.89 AND -1.00   THEN  'Peak  Loudness'
   ELSE 'OTHER'
END AS LOUDNESS_BUCKET
FROM SPOTIFY_PLAYLIST
GROUP BY 2
ORDER BY 1 DESC;
```

OUTPUT

	TOTAL_SONGS	LOUDNESS_BUCKET
1	1,248	Above Average Loudness
2	864	Below Average Loudness
3	81	Peak Loudness
4	6	Low Loudness
5	2	OTHER

Q15 Valence Analysis : Top 20 track_name, valence, track_popularity,

valence > 0.535 -> Above Avg Valence

valence = 0.535 -> Avg Valence

valence < 0.535 -> Below Average'

```
SELECT TRACK_NAME, VALENCE,TRACK_POPULARITY,
CASE
    WHEN VALENCE > 0.535 THEN 'Above Avg Valence'
    WHEN VALENCE = 0.535 THEN 'Avg Valence'
    WHEN VALENCE < 0.535 THEN 'Below Average Valence'
    ELSE 'OTHERS'
END AS VALENCE_BUCKET
FROM SPOTIFY_PLAYLIST
ORDER BY 2 DESC
LIMIT 20;
```

OUTPUT

	TRACK_NAME	VALENCE	TRACK_POPULARITY	VALENCE_BUCKET
1	Last Night	0.974	59	Above Avg Valence
2	La Camisa Negra	0.973	76	Above Avg Valence
3	Shalala Lala	0.973	63	Above Avg Valence
4	Doja	0.972	86	Above Avg Valence
5	Family Affair	0.969	80	Above Avg Valence
6	There's Nothing Holdin' Me Back	0.969	87	Above Avg Valence
7	Beat Again - Radio Edit	0.967	57	Above Avg Valence
8	Never Let You Go - 2008 Remaster	0.967	67	Above Avg Valence
9	DARE	0.966	76	Above Avg Valence
10	The Seed (2.0)	0.966	66	Above Avg Valence
11	In the Morning	0.966	60	Above Avg Valence
12	Lucky	0.966	69	Above Avg Valence

Q16 Number of Songs for different loudness ranges(above)

```sql
----16. Number of Songs for different loudness ranges(above)

SELECT COUNT(DISTINCT TRACK_ID) AS TOTAL_SONGS,
CASE
    WHEN VALENCE > 0.535 THEN 'Above Avg Valence'
    WHEN VALENCE = 0.535 THEN 'Avg Valence'
    WHEN VALENCE < 0.535 THEN 'Below Average Valence'
    ELSE 'OTHERS'
END AS VALENCE_BUCKET
FROM SPOTIFY_PLAYLIST
GROUP BY 2
ORDER BY 1 DESC;
```

OUTPUT

	TOTAL_SONGS	VALENCE_BUCKET
1	1,120	Above Avg Valence
2	1,078	Below Average Valence
3	3	Avg Valence

Q17 Speechiness Analsis : Top 20 track_name, speechiness, tempo,

speechiness > 0.081-> Above Avg Speechiness

speechiness = 0.081-> Avg Speechiness

speechiness < 0.081-> Below Speechiness

```
SELECT TRACK_NAME,SPEECHINESS,TEMPO,
CASE
   WHEN SPEECHINESS > 0.081 THEN 'Above Avg Speechiness'
   WHEN SPEECHINESS = 0.081 THEN 'Avg Speechiness'
   WHEN SPEECHINESS < 0.081 THEN 'Below Speechiness'
   ELSE 'OTHERS'
END AS SPEECHINESS_BUCKET
FROM SPOTIFY_PLAYLIST
ORDER BY 2 DESC
LIMIT 20;
```

OUTPUT

	TRACK_NAME	SPEECHINESS	TEMPO	SPEECHINESS_BUCKET
1	This Is Why I'm Hot	0.576	80.021	Above Avg Speechiness
2	Yes Indeed	0.53	119.957	Above Avg Speechiness
3	Caroline	0.505	120.04	Above Avg Speechiness
4	Gossip Folks (feat. Ludacris)	0.505	121.732	Above Avg Speechiness
5	Because I Got High	0.488	166.01	Above Avg Speechiness
6	ELEMENT.	0.485	189.891	Above Avg Speechiness
7	I Need a Girl (Pt. 2) [feat. Loon, Ginuwine, Mario Wi	0.483	199.764	Above Avg Speechiness
8	Life Is Good (feat. Drake)	0.481	142.037	Above Avg Speechiness
9	You	0.47	130.159	Above Avg Speechiness
10	TKN (feat. Travis Scott)	0.467	94.634	Above Avg Speechiness
11	Pop Out (feat. Lil Tjay)	0.467	168.112	Above Avg Speechiness
12	Youngblood	0.463	120.274	Above Avg Speechiness

Q17.1 Number of Songs for different speechiness ranges(above)

```
SELECT COUNT(DISTINCT TRACK_ID) AS TOTAL_SONGS,
CASE
    WHEN SPEECHINESS > 0.081 THEN 'Above Avg Speechiness'
    WHEN SPEECHINESS = 0.081 THEN 'Avg Speechiness'
    WHEN SPEECHINESS < 0.081 THEN 'Below Speechiness'
    ELSE 'OTHERS'
END AS SPEECHINESS_BUCKET
FROM SPOTIFY_PLAYLIST
GROUP BY 2
ORDER BY 1 DESC;
```

OUTPUT

	TOTAL_SONGS	SPEECHINESS_BUCKET
1	1,405	Below Speechiness
2	793	Above Avg Speechiness
3	3	Avg Speechiness

Q18 Acoustic Analysis : DISTINCT TOP 25 track_name, album, artist_name, acousticness

(acousticness BETWEEN 0 AND 0.40000 -> 'Not Acoustic'

(acousticness BETWEEN 0.40001 AND 0.80000) ->'Acoustic'

(acousticness BETWEEN 0.80001 AND 1) ->'Highly Acoustic

```
SELECT TRACK_NAME, ALBUM, ARTIST_NAME, ACOUSTICNESS,
CASE
    WHEN ACOUSTICNESS BETWEEN 0 AND 0.40000 THEN 'Not Acoustic'
    WHEN ACOUSTICNESS BETWEEN  0.40001 AND 0.80000 THEN 'Acoustic'
    WHEN ACOUSTICNESS BETWEEN  0.80001 AND 1 THEN 'Highly Acoustic'
    ELSE 'OTHER'
 END AS ACOUSTICNESS_BUCKET
FROM SPOTIFY_PLAYLIST
ORDER BY 4 DESC
LIMIT 25;
```

OUTPUT

	TRACK_NAME	ALBUM	ARTIST_NAME	ACOUSTICNESS	ACOUSTICNESS_BUCKET
1	when the party's over	WHEN WE ALL FALL ASLEEP, WHERE DO WE GO?	Billie Eilish	0.978	Highly Acoustic
2	Mad World	Trading Snakeoil for Wolftickets	Gary Jules	0.976	Highly Acoustic
3	Everytime	In The Zone	Britney Spears	0.966	Highly Acoustic
4	Lost Boy	Lost Boy	Ruth B.	0.965	Highly Acoustic
5	Goodbye My Lover	Back to Bedlam	James Blunt	0.953	Highly Acoustic
6	Skinny Love	Birdy	Birdy	0.952	Highly Acoustic
7	Angels	Coexist	The xx	0.95	Highly Acoustic
8	Stay	Unapologetic (Edited Version)	Rihanna	0.945	Highly Acoustic
9	Holocene	Bon Iver	Bon Iver	0.943	Highly Acoustic
10	Your Power	Your Power	Billie Eilish	0.937	Highly Acoustic
11	lovely (with Khalid)	lovely (with Khalid)	Billie Eilish	0.934	Highly Acoustic
12	lovely (with Khalid)	lovely (with Khalid)	Billie Eilish	0.934	Highly Acoustic

Q18.1 Number of Songs for different Acousticness ranges(above)

```sql
--18.1 Number of Songs for different acousticness ranges(above)

SELECT COUNT(DISTINCT TRACK_ID) AS TOTAL_SONGS,
CASE
    WHEN ACOUSTICNESS BETWEEN 0 AND 0.40000 THEN 'Not Acoustic'
    WHEN ACOUSTICNESS BETWEEN  0.40001 AND 0.80000 THEN 'Acoustic'
    WHEN ACOUSTICNESS BETWEEN  0.80001 AND 1 THEN 'Highly Acoustic'
    ELSE 'OTHER'
 END AS ACOUSTICNESS_BUCKET
FROM SPOTIFY_PLAYLIST
GROUP BY 2
ORDER BY 1 DESC;
```

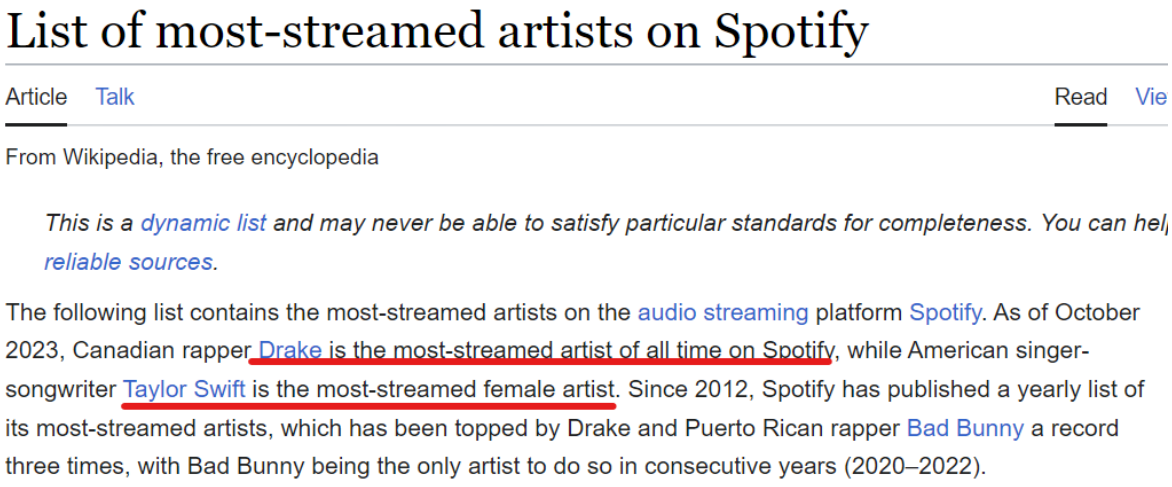
OUTPUT

	TOTAL_SONGS	ACOUSTICNESS_BUCKET
1	1,932	Not Acoustic
2	219	Acoustic
3	50	Highly Acoustic

**********INSIGHTS**********

1. There are Total **2,299 Records** present in the Dataset.

2. **Taylor Swift** and **Drake** are the artists who have the **highest number of songs** available on Spotify. They are the most streamed artist on Spotify. Below I am providing a Snippets of Wikipedia which also concludes the same.



List of most-streamed artists on Spotify

Article Talk Read Vie

From Wikipedia, the free encyclopedia

This is a dynamic list and may never be able to satisfy particular standards for completeness. You can hel reliable sources.

The following list contains the most-streamed artists on the audio streaming platform Spotify. As of October 2023, Canadian rapper Drake is the most-streamed artist of all time on Spotify, while American singer-songwriter Taylor Swift is the most-streamed female artist. Since 2012, Spotify has published a yearly list of its most-streamed artists, which has been topped by Drake and Puerto Rican rapper Bad Bunny a record three times, with Bad Bunny being the only artist to do so in consecutive years (2020–2022).

3. **“Cruel Summer”** is the most Popular **Song** followed by “August”, “I am good(blue)” and others.

4. The **Total No of Songs** released on the Spotify in each **year** is **100**.

5. In **2000 “Yellow”** is the most streamed song. & **In 2022 “Anti-Hero”** & **“I'm Good (Blue)”**is the most streamed Song.

6. Among All the Songs **Buttons** Song has the **Highest Tempo**.

7. **Dance_Music** Tempo Range has **750+ Songs** available on the Spotify.

8. Among All the Songs **“Come with Me - Radio Edit”** has the **Highest Energy**.

9. Based on **Energy**, **1447 songs** fall into the range of **Above average** Energy followed by **753 Songs** falls into the range of **Below Average Energy** and **1** song falls into the range of **Average Energy**.

10. Among All the Songs **“Give It to Me”** has the **Highest Danceability**.

11. Total **1218 Songs** are Available on the Spotify which has **“Moderate Danceability”** whereas **85 Songs** are there on which **“People Can’t Dance”**.

12. **” In For the Kill”** and the **“Gold Dust - Radio Edit”** are the two songs which have **High Peak Loudness**.

13. Among All the Songs **1248 songs** have **Above Average Loudness**.

14. Based on Valence, **“Last Night”** Song has the **Above Average Valence**.

15. Based on Speechiness, **“This is Why I’m hot”** has **Above Average Speechiness**.

16. **“When the Party’s Over – By Billie Eilish”** is the **Highly Acoustic Song**.