

SQL PROJECT

SPOTIFY TRACKS DATASET ANALYSIS

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COURSE:MASTER IN DATA SCIENCE AND ANALYTICS WITH AI

ABOUT DATASET:

This is a dataset of Spotify tracks over a range of **125** different genres. Each track has some audio features associated with it.

Usage

The dataset can be used for:

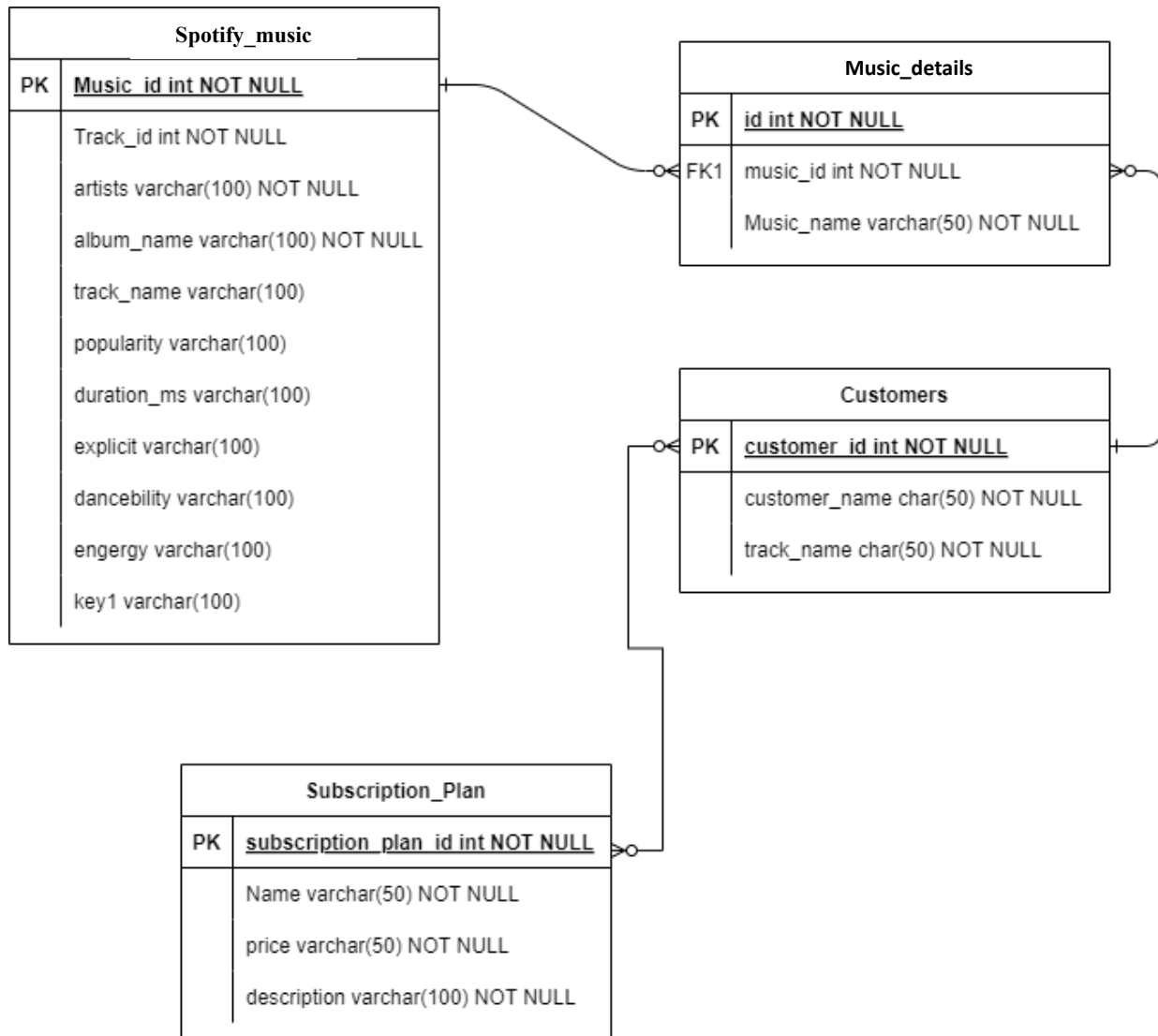
- Building a **Recommendation System** based on some user input or preference.
- **Classification** purposes based on audio features and available genres.

Available Tables:

- Music
- Music_details
- Customer
- Subscription_plan

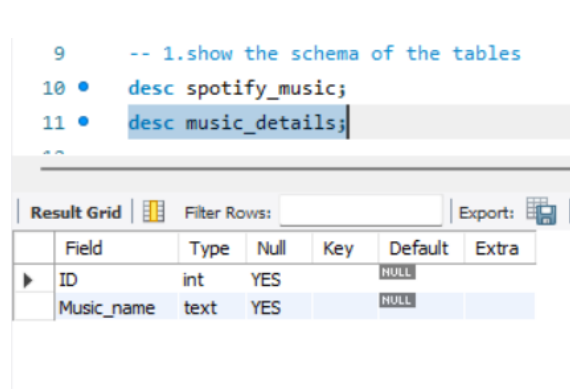
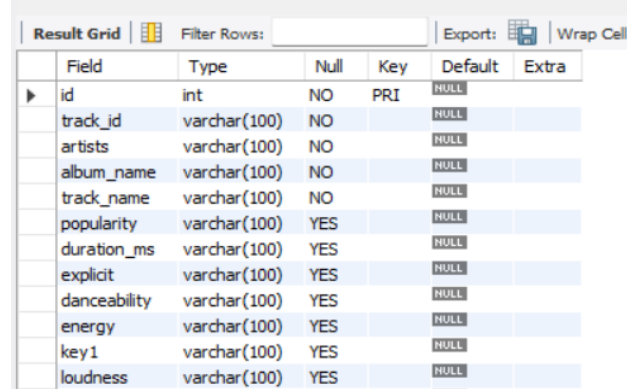
DATASET FROM:KAGGLE

Entity Relationship Diagram



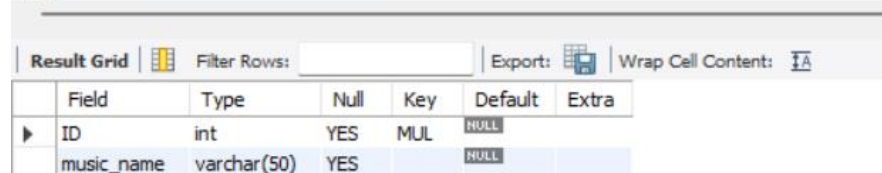
1. Show the schema of the table.

```
9 -- 1.show the schema of the tables
10 • desc spotify_music;
11 • desc music_details;
```



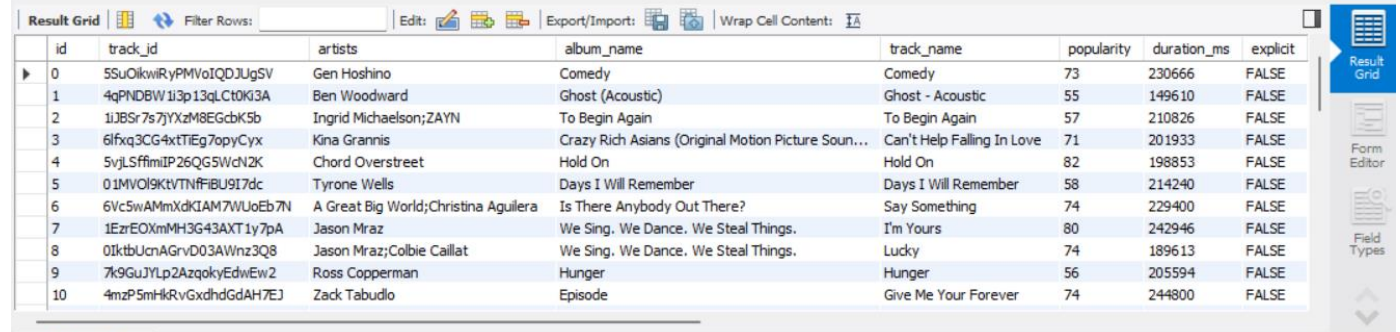
2. Create second table named as Music_details with foreign key in table.

```
133 • create table music_details1(ID int,music_name varchar(50),
134 • foreign key(ID) references spotify_music(id));
135 • desc music_details1;
```



3. Show whole record of table.

```
13 -- 2.show whole record of table
14 • select * from spotify_music;
```



4. Write a query to change table name spotify_music to spotify_music1.

```
17 • alter table spotify_music
18   rename spotify_music1;
19 • show tables;
```

Result Grid | Filter Rows: | Export: | Wrap

Tables_in_spotify
▶ detailview
music_details1
spotify_music1

5. Change column name of id to music_id.

```
24 • alter table spotify_music1
25   change column id music_id int;
26 • desc spotify_music1;
```

Result Grid | Filter Rows: | Export: | Wrap

	Field	Type	Null	Key	Default	Extra
▶	music_id	int	NO	PRI	NULL	
	track_id	varchar(100)	NO		NULL	
	artists	varchar(100)	NO		NULL	
	album_name	varchar(100)	NO		NULL	
	track_name	varchar(100)	NO		NULL	
	popularity	varchar(100)	YES		NULL	
	duration_ms	varchar(100)	YES		NULL	
	explicit	varchar(100)	YES		NULL	
	danceability	varchar(100)	YES		NULL	
	energy	varchar(100)	YES		NULL	
	key1	varchar(100)	YES		NULL	
	loudness	varchar(100)	YES		NULL	

Result 3 x

6. Write a query to fetch artist name using distinct.

```
29 • select distinct artists from spotify_music1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

artists
▶ Gen Hoshino
Ben Woodward
Ingrid Michaelson;ZAYN
Kina Grannis
Chord Overstreet
Tyrone Wells
A Great Big World;Christina Aguilera
Jason Mraz
Jason Mraz;Colbie Caillat
Ross Copperman
Zack Tabudlo
Dan Berk

7. Query to fetch columns music_id,artists,album_name,track_name,popularity whose popularity is 74.

```

32 • select music_id,artists,album_name,track_name,popularity from spotify_music1
33 WHERE popularity =74;

```

	music_id	artists	album_name	track_name	popularity
▶	6	A Great Big World;Christina Aguilera	Is There Anybody Out There?	Say Something	74
	8	Jason Mraz;Colbie Caillat	We Sing. We Dance. We Steal Things.	Lucky	74
	10	Zack Tabudlo	Episode	Give Me Your Forever	74
*	NULL	NULL	NULL	NULL	NULL

8. Query to fetch data where album_name and track_name are same and popularity should be greater than 56.

```

36 • select music_id,artists,album_name,track_name,popularity from spotify_music1
37 where album_name=track_name AND popularity>56;

```

	music_id	artists	album_name	track_name	popularity
▶	0	Gen Hoshino	Comedy	Comedy	73
	2	Ingrid Michaelson;ZAYN	To Begin Again	To Begin Again	57
	4	Chord Overstreet	Hold On	Hold On	82
	5	Tyrone Wells	Days I Will Remember	Days I Will Remember	58
	13	Anna Hamilton	Bad Liar	Bad Liar	62
*	NULL	NULL	NULL	NULL	NULL

9. Query to fetch data where album_name and track_name are same or popularity is 56.

```

40 • select music_id,artists,album_name,track_name,popularity from spotify_music1
41 where album_name=track_name OR popularity=56;

```

	music_id	artists	album_name	track_name	popularity
▶	0	Gen Hoshino	Comedy	Comedy	73
	2	Ingrid Michaelson;ZAYN	To Begin Again	To Begin Again	57
	4	Chord Overstreet	Hold On	Hold On	82
	5	Tyrone Wells	Days I Will Remember	Days I Will Remember	58
	9	Ross Copperman	Hunger	Hunger	56
	12	Dan Berk	Solo	Solo	52
	13	Anna Hamilton	Bad Liar	Bad Liar	62
	14	Chord Overstreet;Deepend	Hold On (Remix)	Hold On - Remix	56
	16	Andrew Foy;Renee Foy	ily (i love you baby)	ily (i love you baby)	56
	17	Andrew Foy;Renee Foy	At My Worst	At My Worst	54
*	NULL	NULL	NULL	NULL	NULL

10. Write a query to fetch data where popularity should not be 74.

```

44 • select music_id,artists,album_name,track_name,popularity from spotify_music1
45 where NOT popularity=74;

```

	music_id	artists	album_name	track_name	popularity
▶	0	Gen Hoshino	Comedy	Comedy	73
	1	Ben Woodward	Ghost (Acoustic)	Ghost - Acoustic	55
	2	Ingrid Michaelson;ZAYN	To Begin Again	To Begin Again	57
	3	Kina Grannis	Crazy Rich Asians (Original Motion Picture Soun...	Can't Help Falling In Love	71
	4	Chord Overstreet	Hold On	Hold On	82
	5	Tyrone Wells	Days I Will Remember	Days I Will Remember	58
	7	Jason Mraz	We Sing. We Dance. We Steal Things.	I'm Yours	80
	9	Ross Copperman	Hunger	Hunger	56
	11	Jason Mraz	Love Is a Four Letter Word	I Won't Give Up	69
	12	Dan Berk	Solo	Solo	52
	13	Anna Hamilton	Bad Liar	Bad Liar	62
	14	Chord Overstreet;Dee...	Hold On (Remix)	Hold On - Remix	56

11. Write query to fetch data where popularity is between 60 to 70.

```

48 • select music_id,artists,album_name,track_name,popularity from spotify_music1
49 where popularity BETWEEN 60 AND 70;

```

	music_id	artists	album_name	track_name	popularity
▶	11	Jason Mraz	Love Is a Four Letter Word	I Won't Give Up	69
	13	Anna Hamilton	Bad Liar	Bad Liar	62
	18	Jason Mraz;Colbie Caillat	We Sing. We Dance. We Steal Things.	Lucky	68
	19	Boyce Avenue;Bea Miller	Cover Sessions, Vol. 4	Photograph	67
	21	Boyce Avenue;Jennel Garcia	Cover Sessions, Vol. 3	Demons	63
	22	A Great Big World;Christina Aguilera	Is There Anybody Out There? - Track by Track ...	Say Something	70
*	NULL	NULL	NULL	NULL	NULL

12. write query to fetch data where popularity is not between 60 to 70.

```









52 • select music_id,artists,album_name,track_name,popularity from spotify_music1
53 where popularity NOT BETWEEN 60 AND 70;
54

```

	music_id	artists	album_name	track_name	popularity
▶	0	Gen Hoshino	Comedy	Comedy	73
	1	Ben Woodward	Ghost (Acoustic)	Ghost - Acoustic	55
	2	Ingrid Michaelson;ZAYN	To Begin Again	To Begin Again	57
	3	Kina Grannis	Crazy Rich Asians (Original Motion Picture Soun...	Can't Help Falling In Love	71
	4	Chord Overstreet	Hold On	Hold On	82
	5	Tyrone Wells	Days I Will Remember	Days I Will Remember	58
	6	A Great Big World;Christina Aguilera	Is There Anybody Out There?	Say Something	74
	7	Jason Mraz	We Sing. We Dance. We Steal Things.	I'm Yours	80
	8	Jason Mraz;Colbie Caillat	We Sing. We Dance. We Steal Things.	Lucky	74
	9	Ross Copperman	Hunger	Hunger	56
	10	Zack Tabudlo	Episode	Give Me Your Forever	74
	12	Dan Berk	Solo	Solo	52






13. Write a query to fetch data where popularity is 52 or 62 or 69.

```
57 • select music_id,artists,album_name,track_name,popularity from spotify_music1
58 where popularity IN(52,62,69);
```

Result Grid			Filter Rows: <input type="text"/>		Edit: 				Export/Import: 			Wrap Cell Content: 
	music_id	artists	album_name		track_name							
▶	11	Jason Mraz	Love Is a Four Letter Word		I Won't Give Up							69
	12	Dan Berk	Solo		Solo							52
	13	Anna Hamilton	Bad Liar		Bad Liar							62
*	NULL	NULL	NULL		NULL							NULL

14. Write a query to fetch data where artists starts from z.

```
65 • select music_id,artists from spotify_music1
66 where artists LIKE 'Z%';
```

Result Grid			Filter Rows: <input type="text"/>	Edit: 		
	music_id	artists				
▶	10	Zack Tabudlo				
*	NULL	NULL				

15.write a query to fetch top 5 record from table.

```
69 • select * from spotify_music1
70 limit 5;
```

[illegible]

16. Write a query to show top 5 highest popularity of music.

```
72 • select music_id,artists,album_name,popularity from spotify_music1
73 order by popularity desc limit 5;
74
```

music_id	artists	album_name	popularity
4	Chord Overstreet	Hold On	82
7	Jason Mraz	We Sing. We Dance. We Steal Things.	80
20	Jason Mraz	We Sing. We Dance. We Steal Things.	75
6	A Great Big World;Christina Aguilera	Is There Anybody Out There?	74
8	Jason Mraz;Colbie Caillat	We Sing. We Dance. We Steal Things.	74
NULL	NULL	NULL	NULL

17. Write a query concat two columns artists and album_name.

```
76 • select concat(artists,' ',album_name) from spotify_music1;
77
```

concat(artists,' ',album_name)
Gen Hoshino Comedy
Ben Woodward Ghost (Acoustic)
Ingrid Michaelson;ZAYN To Begin Again
Kina Grannis Crazy Rich Asians (Original Motion...
Chord Overstreet Hold On
Tyrone Wells Days I Will Remember
A Great Big World;Christina Aguilera Is There A...
Jason Mraz We Sing. We Dance. We Steal Thin...

18. Write a query to gives artists name in uppar case.

```
79 • select upper(artists) as UpperCase,artists from spotify_music1 limit 10;
80
```

UpperCase	artists
GEN HOSHINO	Gen Hoshino
BEN WOODWARD	Ben Woodward
INGRID MICHAELSON;ZAYN	Ingrid Michaelson;ZAYN
KINA GRANNIS	Kina Grannis
CHORD OVERSTREET	Chord Overstreet
TYRONE WELLS	Tyrone Wells
A GREAT BIG WORLD;CHRISTINA AGUILERA	A Great Big World;Christina Aguilera
JASON MRAZ	Jason Mraz

19. Use of maths functions.

1)Ceil() and Abs().

```
82 • select danceability,ceil(danceability) from spotify_music1 limit 10;
```

```
83
```

danceability	ceil(danceability)
0.676	1
0.42	1
0.438	1
0.266	1
0.618	1
0.688	1
0.407	1
0.703	1

```
84 -- abs() function
```

```
85 • select loudness,abs(loudness) from spotify_music1 limit 10;
```

```
86
```

loudness	abs(loudness)
-6.746	6.746
-17.235	17.235
-9.734	9.734
-18.515	18.515
-9.681	9.681
-8.807	8.807
-8.822	8.822
-9.331	9.331

20.Date Functions.

1)now() and curdate()

```
88 • select now() as current_date_time;
```

```
89
```

current_date_time
2024-06-15 13:05:57

```
--
```

```
91 • select curdate();
```

```
92
```

curdate()
2024-06-15

21. Write a query to fetch number of artists in table.

```
94 -- Write a query to fetch number of artists in table.
```

```
95 • select count(artists) as number_of_artists from spotify_music1;
```

```
96
```

number_of_artists
46

22. Write a query to show highest popularity in table.

```
99 • select max(popularity) as highest_popularity from spotify_music1;
```

```
100
```

highest_popularity
82

23. Write a query to show lowest popularity in table.

```
132 • select min(popularity) from spotify_music1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

min(popularity)
0

24. write a query to fetch number of album_name done by artists.

```
103 • select artists, count(album_name) as no_of_album from spotify_music1
104 group by artists;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

artists	no_of_album
Gen Hoshino	1
Ben Woodward	1
Ingrid Michaelson;ZAYN	1
Kina Grannis	1
Chord Overstreet	2
Tyrone Wells	1
A Great Big World;Christina Aguilera	2
Jason Mraz	12
Jason Mraz;Colbie Caillat	2
Ross Copperman	1
Zack Tabudlo	1
Dan Berk	1

25. Write a query to fetch artists name whose number of albums are more than 2.



```
106 • select artists, count(album_name) as no_of_album from spotify_music1
107 group by artists
108 having count(album_name) > 2;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

artists	no_of_album
Jason Mraz	12
Brandi Carlile;Sam Smith	3
Brandi Carlile	4
Brandi Carlile;Lucius	3




26.write a query to find highest popularity of album using subquery.

```
111 • select artists,album_name,popularity from spotify_music1
112 where popularity=(select max(popularity) from spotify_music1);
113
```

Result Grid			
Filter Rows: <input type="text"/>			
Export: 			
Wrap Cell Content: 			
	artists	album_name	popularity
▶	Chord Overstreet	Hold On	82

27.write a query to find 2nd highest popularity of album using subquery.

```
114 -- 25.write a query to find 2nd highest popularity of album using subquery.
115 • select artists,album_name,popularity from spotify_music1
116 where popularity=(select max(popularity) from spotify_music1
117 where popularity <(select max(popularity) from spotify_music1));
118
119 -- 2nd highest popularity of album using subquery with order by clause
120 • select artists,album_name,popularity from spotify_music1
121 where popularity <(select max(popularity) from spotify_music1)
122 order by popularity desc limit 1;
123
```

Result Grid			
Filter Rows: <input type="text"/>			
Export: 			
Wrap Cell Content: 			
Fetch rows: 			
	artists	album_name	popularity
▶	Jason Mraz	We Sing. We Dance. We Steal Things.	80

28.write a query to find the artists whose album name and track name should match with music id 10 and 44 using subquery.

```

126 • select music_id,artists,album_name,track_name,popularity from spotify_music1
127 where (album_name,track_name) in (
128 select album_name,track_name from spotify_music1
129 where music_id in(10,44));
130

```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Co

	music_id	artists	album_name	track_name	popularity
▶	10	Zack Tabudlo	Episode	Give Me Your Forever	74
	44	Brandi Carlile	Finest Country	Speak Your Mind (From the Netflix Series "We T...	0
✱	NULL	NULL	NULL	NULL	NULL

29. Write a query to find music_id,id,artists,popularity and music_name.

```

139 • select spotify_music1.music_id,table2.id,spotify_music1.artists,spotify_music1.popularity,table2.music_name
140 from spotify_music1
141 inner join table2
142 on spotify_music1.music_id=table2.id;
143

```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	music_id	id	artists	popularity	music_name
▶	0	0	Gen Hoshino	73	art punk
	1	1	Ben Woodward	55	country blues
	2	2	Ingrid Michaelson;ZAYN	57	soul
	3	3	Kina Grannis	71	beach music
	4	4	Chord Overstreet	82	beautiful music
	5	5	Tyrone Wells	58	ancient
	6	6	A Great Big World;Christina Aguilera	74	ancient
	7	7	Jason Mraz	80	ancient

30. Create view.

```
174 • create view detailView1 as select music_id,album_name,artists from spotify_music1
175     where music_id<21;
176 • select * from detailView1;
177 |
178
```

Result Grid			Filter Rows:	Export:	Wrap Cell Content:
	music_id	album_name	artists		
12		Solo	Dan Berk		
13		Bad Liar	Anna Hamilton		
14		Hold On (Remix)	Chord Overstreet;Deepend		
15		The Boy Who Never	Landon Pigg		
16		ily (i love you baby)	Andrew Foy;Renee Foy		
17		At My Worst	Andrew Foy;Renee Foy		
18		We Sing. We Dance. We Steal Things.	Jason Mraz;Colbie Caillat		
19		Cover Sessions, Vol. 4	Boyce Avenue;Bea Miller		
20		We Sing. We Dance. We Steal Things.	Jason Mraz		