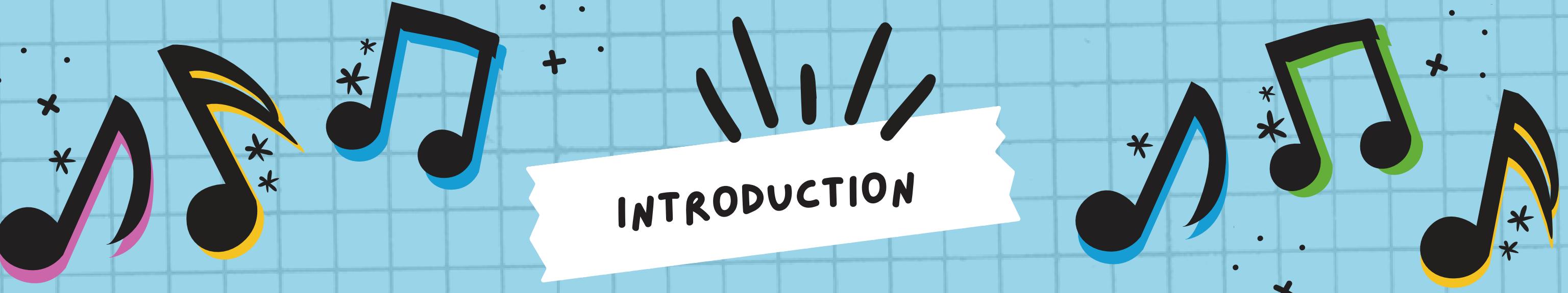




MUSIC STORE

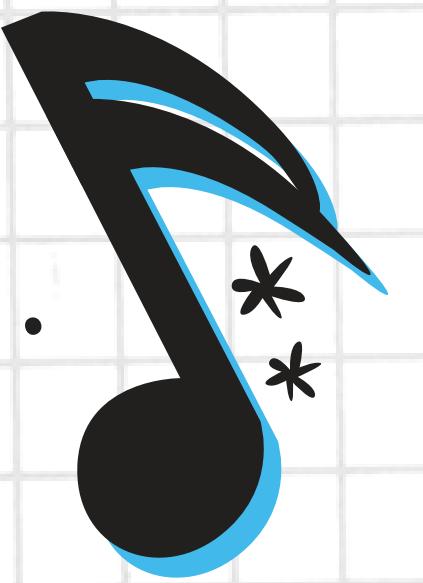
# MUSIC STORE ANALYSIS

BY DOAN PHAN THANH



## INTRODUCTION

THE PROJECT ANALYZES SALES DATA TO IDENTIFY TRENDS AND CUSTOMER PREFERENCES FOR OPTIMIZING INVENTORY, ENHANCING MARKETING, AND IMPROVING CUSTOMER EXPERIENCE AT A MUSIC STORE.

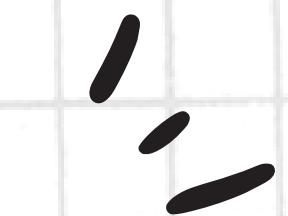


## QUESTION #1



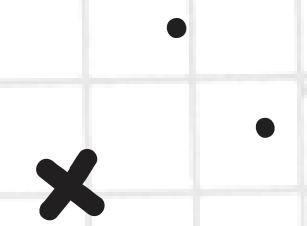
WHO IS THE SENIOR MOST EMPLOYEE  
BASED ON JOB TITLE?

-----  
SELECT TOP 1 TITLE, LAST\_NAME, FIRST\_NAME  
FROM EMPLOYEE  
ORDER BY LEVELS DESC;



RESULT

	title	last_name	first_name
1	Senior General Manager	Madan	Mohan





## QUESTION #2



WHICH COUNTRIES HAVE THE MOST INVOICES?

---

```
SELECT COUNT(*) AS C, BILLING_COUNTRY
FROM INVOICE
GROUP BY BILLING_COUNTRY
ORDER BY C DESC
```

### RESULT

c	billing_country
1	USA
2	Canada
3	Brazil
4	France
5	Germany
6	Czech Republic
7	Portugal
8	United Kingdom
9	India
10	Ireland



## QUESTION #3

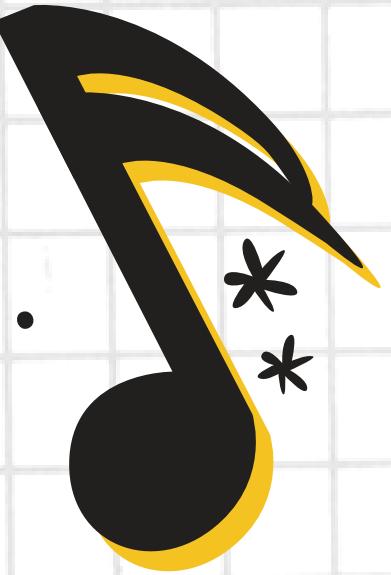
WHAT ARE TOP 3 VALUES OF TOTAL INVOICE

---

```
SELECT TOP 3 TOTAL  
FROM INVOICE  
ORDER BY TOTAL DESC
```

RESULT

	total
1	23.7600002288818
2	19.7999992370605
3	19.7999992370605



## QUESTION #4



WHICH CITY HAS THE BEST CUSTOMERS? WE WOULD LIKE TO THROW A PROMOTIONAL MUSIC FESTIVAL IN THE CITY WE MADE THE MOST MONEY. WRITE A QUERY THAT RETURNS ONE CITY THAT HAS THE HIGHEST SUM OF INVOICE TOTALS. RETURN BOTH THE CITY NAME & SUM OF ALL INVOICE TOTALS

---

```
SELECT SUM(TOTAL) AS INVOICE_TOTAL, BILLING_CITY  
FROM INVOICE  
GROUP BY BILLING_CITY  
ORDER BY INVOICE_TOTAL
```

RESULT

	invoice_total	billing_city
1	29.6999998092651	Edmonton
2	37.6199996471405	Copenhagen
3	39.5999991893768	Buenos Aires
4	40.5899987220764	Toronto
5	50.4900009632111	Rome
6	54.4499995708466	Cupertino
7	60.3899998664856	Brussels
8	62.3699994087219	Halifax
9	64.3499999046326	Lyon
10	65.3400001525879	Amsterdam



## QUESTION #5



WHO IS THE BEST CUSTOMER? THE CUSTOMER WHO HAS SPENT THE MOST MONEY WILL BE DECLARED THE BEST CUSTOMER. WRITE A QUERY THAT RETURNS THE PERSON WHO HAS SPENT THE MOST MONEY?

```
SELECT TOP 1 C.CUSTOMER_ID, C.FIRST_NAME, C.LAST_NAME, SUM(I.TOTAL) AS TOTAL  
FROM CUSTOMER C  
JOIN INVOICE I ON C.CUSTOMER_ID = I.CUSTOMER_ID  
GROUP BY C.CUSTOMER_ID, C.FIRST_NAME, C.LAST_NAME  
ORDER BY TOTAL DESC
```

### RESULT

	customer_id	first_name	last_name	total
1	5	František	Wichterlová	144.539998054504

## QUESTION #6

WRITE QUERY TO RETURN THE EMAIL, FIRST NAME, LAST NAME,  
& GENRE OF ALL ROCK MUSIC LISTENERS. RETURN YOUR LIST  
ORDERED ALPHABETICALLY BY EMAIL STARTING WITH A

```
-----  
SELECT DISTINCT C.EMAIL, C.FIRST_NAME, C.LAST_NAME  
FROM CUSTOMER C  
JOIN INVOICE I ON C.CUSTOMER_ID = I.CUSTOMER_ID  
JOIN INVOICE_LINE L ON I.INVOICE_ID = L.INVOICE_ID  
JOIN TRACK T ON T.TRACK_ID = L.TRACK_ID  
JOIN GENRE G ON T.GENRE_ID = G.GENRE_ID  
WHERE G.NAME LIKE 'ROCK'
```

### RESULT

	email	first_name	last_name
1	aaronmitchell@yahoo.ca	Aaron	Mitchell
2	alero@uol.com.br	Alexandre	Rocha
3	astrid.gruber@apple.at	Astrid	Gruber
4	bjom.hansen@yahoo.no	Bjørn	Hansen
5	camille.bernard@yahoo.fr	Camille	Bernard
6	daan_peeters@apple.be	Daan	Peeters
7	diego.gutierrez@yahoo.ar	Diego	Gutiérrez
8	dmiller@comcast.com	Dan	Miller
9	dominiquelefrevre@gmail.com	Dominique	Lefebvre
10	edfrancis@yahoo.ca	Edward	Francis

## QUESTION #7

LET'S INVITE THE ARTISTS WHO HAVE WRITTEN THE MOST ROCK MUSIC IN OUR DATASET. WRITE A QUERY THAT RETURNS THE ARTIST NAME AND TOTAL TRACK COUNT OF THE TOP 10 ROCK BANDS

```
SELECT TOP 10 A.ARTIST_ID, A.NAME, COUNT(A.ARTIST_ID)
AS NUMBER_OF_SONGS
FROM ARTIST A
JOIN ALBUM ALB ON A.ARTIST_ID = ALB.ARTIST_ID
JOIN TRACK T ON ALB.ALBUM_ID = T.ALBUM_ID
WHERE T.GENRE_ID = 1
GROUP BY A.ARTIST_ID, A.NAME
ORDER BY NUMBER_OF_SONGS DESC
```

RESULT

	artist_id	name	number_of_songs
1	22	Led Zeppelin	114
2	150	U2	112
3	58	Deep Purple	92
4	90	Iron Maiden	81
5	118	Pearl Jam	54
6	152	Van Halen	52
7	51	Queen	45
8	142	The Rolling Stones	41
9	76	Creedence Clearwater Revival	40
10	52	Kiss	35



## QUESTION #8



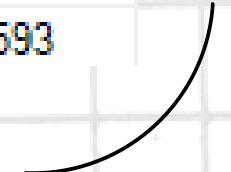
RETURN ALL THE TRACK NAMES THAT HAVE A SONG LENGTH LONGER THAN THE AVERAGE SONG LENGTH. RETURN THE NAME AND MILLISECONDS FOR EACH TRACK. ORDER BY THE SONG LENGTH WITH THE LONGEST SONGS LISTED FIRST

---

```
SELECT NAME, MILLISECONDS  
FROM TRACK  
WHERE MILLISECONDS > (SELECT AVG(MILLISECONDS) FROM TRACK)  
ORDER BY MILLISECONDS DESC;
```

### RESULT

	name	milliseconds
1	Occupation / Precipice	5286953
2	Through a Looking Glass	5088838
3	Greetings from Earth, Pt. 1	2960293
4	The Man With Nine Lives	2956998
5	Battlestar Galactica, Pt. 2	2956081
6	Battlestar Galactica, Pt. 1	2952702
7	Murder On the Rising Star	2935894
8	Battlestar Galactica, Pt. 3	2927802
9	Take the Celestra	2927677
10	Fire In Space	2926593





## QUESTION #9

FIND HOW MUCH AMOUNT SPENT BY EACH CUSTOMER ON ARTISTS? WRITE A QUERY TO RETURN CUSTOMER NAME, ARTIST NAME AND TOTAL SPENT

---

```
WITH BEST_SELLING_ARTIST AS (
    SELECT TOP 1 A.ARTIST_ID, A.NAME, SUM(L.UNIT_PRICE * L.QUANTITY) AS TOTAL_SALES
    FROM ARTIST A
    JOIN ALBUM ALB ON A.ARTIST_ID = ALB.ARTIST_ID
    JOIN TRACK T ON T.ALBUM_ID = ALB.ALBUM_ID
    JOIN INVOICE_LINE L ON L.TRACK_ID = T.TRACK_ID
    GROUP BY A.ARTIST_ID, A.NAME
    ORDER BY TOTAL_SALES DESC)

SELECT C.CUSTOMER_ID, C.FIRST_NAME, C.LAST_NAME, BSA.NAME AS ARTIST_NAME, SUM(L.UNIT_PRICE * L.QUANTITY) AS AMOUT_SPENT
FROM CUSTOMER C
JOIN INVOICE I ON C.CUSTOMER_ID = I.CUSTOMER_ID
JOIN INVOICE_LINE L ON L.INVOICE_ID = I.INVOICE_ID
JOIN TRACK T ON T.TRACK_ID = L.TRACK_ID
JOIN ALBUM ALB ON ALB.ALBUM_ID = T.ALBUM_ID
JOIN BEST_SELLING_ARTIST BSA ON BSA.ARTIST_ID = ALB.ARTIST_ID
GROUP BY C.CUSTOMER_ID, C.FIRST_NAME, C.LAST_NAME, BSA.NAME
ORDER BY AMOUT_SPENT DESC
```

### RESULT

	customer_id	first_name	last_name	artist_name	amout_spent
1	46	Hugh	O'Reilly	Queen	27.7200002670288
2	38	Niklas	Schröder	Queen	18.8100001811981
3	3	François	Tremblay	Queen	17.8200001716614
4	34	João	Fernandes	Queen	16.8300001621246
5	41	Marc	Dubois	Queen	11.8800001144409
6	53	Phil	Hughes	Queen	11.8800001144409
7	47	Lucas	Mancini	Queen	10.8900001049042
8	33	Ellie	Sullivan	Queen	10.8900001049042
9	5	František	Wichterlová	Queen	3.9600003814697
10	20	Dan	Miller	Queen	3.9600003814697

## QUESTION #10

WE WANT TO FIND OUT THE MOST POPULAR MUSIC GENRE FOR EACH COUNTRY. WE DETERMINE THE MOST POPULAR GENRE AS THE GENRE WITH THE HIGHEST AMOUNT OF PURCHASES. WRITE A QUERY THAT RETURNS EACH COUNTRY ALONG WITH THE TOP GENRE. FOR COUNTRIES WHERE THE MAXIMUM NUMBER OF PURCHASES IS SHARED RETURN ALL GENRES.

```
WITH MOST_POPULAR_GENRE AS (
    SELECT TOP 1 G.NAME AS GENRE_NAME, COUNT(*) AS GENRE_ID
    FROM INVOICE_LINE L
    JOIN TRACK T ON T.TRACK_ID = L.TRACK_ID
    JOIN GENRE G ON G.GENRE_ID = T.GENRE_ID
    GROUP BY G.NAME
    ORDER BY COUNT(*) DESC)
SELECT C.COUNTRY, GENRE_NAME, COUNT(L.QUANTITY) AS PURCHASES
FROM CUSTOMER C
JOIN INVOICE I ON C.CUSTOMER_ID = I.CUSTOMER_ID
JOIN INVOICE_LINE L ON L.INVOICE_ID = I.INVOICE_ID
JOIN TRACK T ON T.TRACK_ID = L.TRACK_ID
JOIN GENRE G ON G.GENRE_ID = T.GENRE_ID
JOIN MOST_POPULAR_GENRE MPG ON G.NAME = MPG.GENRE_NAME
GROUP BY C.COUNTRY, GENRE_NAME
```

### RESULT

	country	genre_name	purchases
1	Argentina	Rock	11
2	Australia	Rock	34
3	Austria	Rock	40
4	Belgium	Rock	26
5	Brazil	Rock	205
6	Canada	Rock	333
7	Chile	Rock	61
8	Czech Republic	Rock	143
9	Denmark	Rock	24
10	Finland	Rock	46

## QUESTION #11

WRITE A QUERY THAT DETERMINES THE CUSTOMER THAT HAS SPENT THE MOST ON MUSIC FOR EACH COUNTRY. WRITE A QUERY THAT RETURNS THE COUNTRY ALONG WITH THE TOP CUSTOMER AND HOW MUCH THEY SPENT. FOR COUNTRIES WHERE THE TOP AMOUNT SPENT IS SHARED, PROVIDE ALL CUSTOMERS WHO SPENT THIS AMOUNT

```
-----  
WITH CUSTOMER_WITH_COUNTRY AS (  
    SELECT C.CUSTOMER_ID, C.FIRST_NAME, C.LAST_NAME, I.BILLING_COUNTRY, SUM(I.TOTAL) AS TOTAL_SPENDING,  
    ROW_NUMBER() OVER(PARTITION BY I.BILLING_COUNTRY ORDER BY SUM(I.TOTAL) DESC) AS RowNo  
    FROM INVOICE I  
    JOIN CUSTOMER C ON C.CUSTOMER_ID = I.CUSTOMER_ID  
    GROUP BY C.CUSTOMER_ID, C.FIRST_NAME, C.LAST_NAME, I.BILLING_COUNTRY)  
  
SELECT *  
FROM CUSTOMER_WITH_COUNTRY  
WHERE RowNo <= 1
```

RESULT

	customer_id	first_name	last_name	billing_country	total_spending	RowNo
1	56	Diego	Gutiérrez	Argentina	39.5999991893768	1
2	55	Mark	Taylor	Australia	81.1800003051758	1
3	7	Astrid	Gruber	Austria	69.299998998642	1
4	8	Daan	Peeters	Belgium	60.3899998664856	1
5	1	Luis	Gonçalves	Brazil	108.899999380112	1
6	3	François	Tremblay	Canada	99.9899981021881	1
7	57	Luis	Rojas	Chile	97.0199997425079	1
8	5	František	Wichterlová	Czech Republic	144.539998054504	1
9	9	Kara	Nielsen	Denmark	37.6199996471405	1
10	44	Terhi	Hämäläinen	Finland	79.2000005245209	1



AND THAT'S A WRAP.

**THANK YOU!**