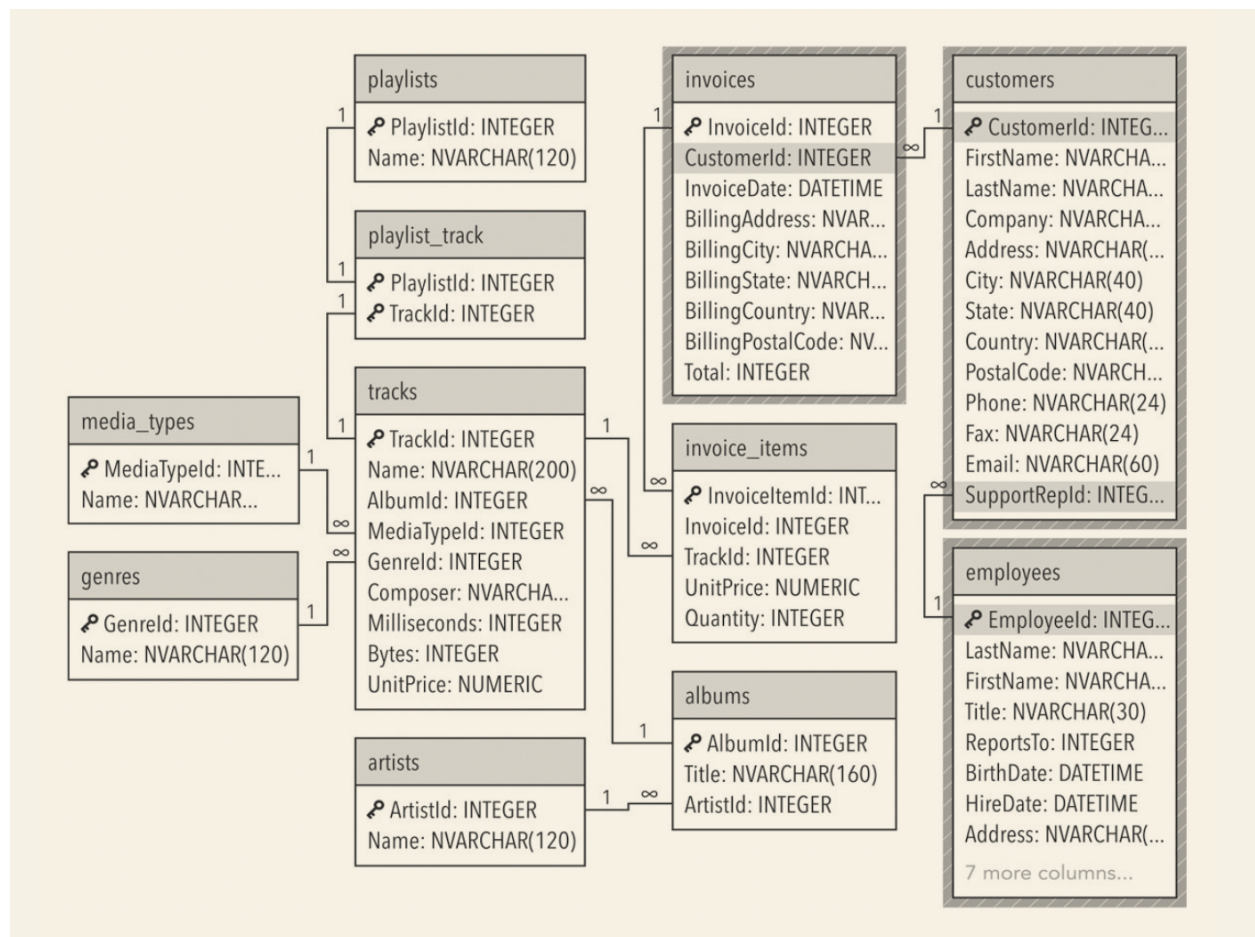


sTunes Project Report

Ryan Susilo



Source: www.clydebankmedia.com/sql-assets

Q: How many customers' last names begin with B?

A: There are 4 customers.

```
SELECT
    LastName
FROM
    customers
WHERE
    LastName LIKE 'B%'
```

	FirstName	LastName
1	Michelle	Brooks
2	Julia	Barnett
3	Robert	Brown
4	Camille	Bernard

Q: How many customers do not have a postal code listed?

A: There are 4 customers.

```

SELECT
    FirstName || ' ' || LastName,
    PostalCode
FROM
    customers
WHERE
    PostalCode IS NULL

```

	FirstName ' ' LastName	PostalCode
1	João Fernandes	NULL
2	Madalena Sampaio	NULL
3	Hugh O'Reilly	NULL
4	Luís Rojas	NULL

Q: Create a new field that labels all sales from billing country USA as "Domestic Sales" and all other sales as "Foreign Sales."

```

SELECT
    InvoiceDate,
    BillingAddress,
    BillingCity,
    BillingCountry,
    Total,
    CASE
    WHEN BillingCountry = 'USA' THEN 'Domestic Sales'

```

```

        ELSE 'Foreign Sales'
      END AS SalesType
FROM
    invoices
ORDER BY
    SalesType

```

	InvoiceDate	BillingAddress	BillingCity	BillingCountry	Total	SalesType
1	2009-01-19 00:00:00	Berger Straße 10	Frankfurt	Germany	0.99	Foreign Sales
2	2009-02-19 00:00:00	1600 Amphitheatre Parkway	Mountain View	USA	0.99	Domestic Sales
3	2009-03-22 00:00:00	110 Raeburn Pl	Edinburgh	United Kingdom	0.99	Foreign Sales
4	2009-04-22 00:00:00	5112 48 Street	Yellowknife	Canada	0.99	Foreign Sales
5	2009-05-23 00:00:00	Praça Pio X,119	Rio de Janeiro	Brazil	0.99	Foreign Sales
6	2009-06-23 00:00:00	C/ San Bernardo 85	Madrid	Spain	0.99	Foreign Sales
7	2009-07-24 00:00:00	796 Dundas Street West	Toronto	Canada	0.99	Foreign Sales
8	2009-08-24 00:00:00	Grétrystraat 63	Brussels	Belgium	0.99	Foreign Sales

Q: What percentage of sales are domestic and foreign?

A: Domestic sales makeup 22% of total sales while foreign sales make up 78%.

```

SELECT
    InvoiceDate,
    BillingAddress,
    BillingCity,
    BillingCountry,
    SUM(Total),
    CASE
        WHEN BillingCountry = 'USA' THEN 'Domestic Sale'
        ELSE 'Foreign Sale'
    END AS SalesType
FROM
    invoices
GROUP BY
    SalesType

```

	InvoiceDate	BillingAddress	BillingCity	BillingCountry	SUM(Total)	SalesType
1	2009-01-11 00:00:00	69 Salem Street	Boston	USA	523.06	Domestic Sale
2	2009-01-01 00:00:00	Theodor-Heuss-Straße 34	Stuttgart	Germany	1805.54	Foreign Sale

Q: What are the top 10 states where the sales come from?

A: CA has the largest amount of sales, followed by TX, UT, IL and WI.

```

SELECT

```

```

        BillingState,
        SUM(Total) AS [StateTotal]
FROM
    invoices
WHERE
    BillingCountry = 'USA'
GROUP BY
    BillingState
ORDER BY
    StateTotal DESC
LIMIT 10

```

	BillingState	StateTotal
1	CA	115.86
2	TX	47.62
3	UT	43.62
4	IL	43.62
5	WI	42.62
6	WA	39.62
7	FL	39.62
8	NY	37.62
9	AZ	37.62
10	NV	37.62

Q: What are the top 10 countries that sales come from and their percentage?

A: USA, Canada, France...

```

SELECT
    BillingCountry,
    SUM(Total) AS [Country Total],
    ROUND(SUM(Total) / (select
        *
        from
            I_TotalSales) * 100, 0) AS [Percentage of Sales]
FROM
    invoices
GROUP BY
    BillingCountry
ORDER BY
    SUM(Total) DESC

```

	BillingCountry	Country Total	Percentage of Sales
1	USA	523.06	22.0
2	Canada	303.96	13.0
3	France	195.1	8.0
4	Brazil	190.1	8.0
5	Germany	156.48	7.0
6	United Kingdom	112.86	5.0
7	Czech Republic	90.24	4.0
8	Portugal	77.24	3.0
9	India	75.26	3.0
10	Chile	46.62	2.0

Q: Who are the top 10 best selling artists?

A:

```

SELECT
    ar.Name,
    SUM(i.Total) AS [Artist Total]
FROM
    invoices AS i
INNER JOIN
    invoice_items AS it
ON
    i.InvoiceId = it.InvoiceLineId
INNER JOIN
    tracks as t
ON
    t.TrackId = it.TrackId
INNER JOIN
    albums AS al
ON
    al.AlbumId = t.AlbumId
INNER JOIN
    artists AS ar
ON
    ar.ArtistId = al.ArtistId
GROUP BY
    ar.Name
ORDER BY
    SUM(i.Total) DESC
LIMIT 10

```

	Name	Artist Total
1	Iron Maiden	199.11
2	Metallica	148.85
3	Led Zeppelin	127.72
4	Faith No More	90.09
5	Deep Purple	89.18
6	Guns N' Roses	66.47
7	R.E.M.	65.34
8	Green Day	62.37
9	Lenny Kravitz	52.59
10	Pearl Jam	47.52

Q: Who are the 3 longest tenured employees?

A: Adams, Edwards, Peacock.

```

SELECT
    FirstName || ' ' || LastName,
    Title,
    substr(HireDate, 1,10),
    strftime('%Y-%m-%d', 'now') - strftime('%Y-%m-%d', HireDate) AS [Tenure in
Years]
FROM
    employees

```

	FirstName ' ' LastName	Title	substr(HireDate,1,10)	Tenure in Years
1	Andrew Adams	General Manager	2002-08-14	21
2	Nancy Edwards	Sales Manager	2002-05-01	21
3	Jane Peacock	Sales Support Agent	2002-04-01	21
4	Margaret Park	Sales Support Agent	2003-05-03	20
5	Steve Johnson	Sales Support Agent	2003-10-17	20
6	Michael Mitchell	IT Manager	2003-10-17	20
7	Robert King	IT Staff	2004-01-02	19
8	Laura Callahan	IT Staff	2004-03-04	19

Q: How many invoices from Domestic Sales were over \$15?

A: There are 3 invoices.

```

SELECT
    InvoiceDate,
    BillingAddress,
    BillingCity,
    BillingCountry,
    Total,
    CASE

```

```

        WHEN BillingCountry = 'USA' THEN 'Domestic Sales'
        ELSE 'Foreign Sales'
    END AS SalesType
FROM
    invoices
WHERE
    SalesType = 'Domestic Sales' AND Total > 15
ORDER BY
    SalesType

```

	InvoiceDate	BillingAddress	BillingCity	BillingCountry	Total	SalesType
1	2010-03-21 00:00:00	162 E Superior Street	Chicago	USA	15.86	Domestic Sales
2	2011-05-29 00:00:00	319 N.Frances Street	Madison	USA	18.86	Domestic Sales
3	2012-08-05 00:00:00	2211 W Berry Street	Fort Worth	USA	23.86	Domestic Sales

Q: Create an inner join between the albums and tracks tables.

```

SELECT
    t.Composer AS 'Artist Name',
    a.Title AS 'Album Title',
    t.Name AS 'Track Name',
    g.Name AS 'Genre'
FROM
    albums AS a
INNER JOIN
    tracks AS t
ON
    a.AlbumId = t.AlbumId
INNER JOIN
    genres AS g
ON
    g.GenreId = t.GenreId

```

	Artist Name	Album Title	Track Name	Genre
1	Angus Young, Malcolm Young, Brian Johnson	For Those About To Rock We Salute You	For Those About To Rock (We Salute You)	Rock
2	NULL	Balls to the Wall	Balls to the Wall	Rock
3	F.Baltes, S.Kaufman, U.Dirksneider & W.Hoffman	Restless and Wild	Fast As a Shark	Rock
4	F.Baltes, R.A.Smith-Diesel, S.Kaufman, U.Dirksneider & W...	Restless and Wild	Restless and Wild	Rock
5	Deaffy & R.A.Smith-Diesel	Restless and Wild	Princess of the Dawn	Rock
6	Angus Young, Malcolm Young, Brian Johnson	For Those About To Rock We Salute You	Put The Finger On You	Rock
7	Angus Young, Malcolm Young, Brian Johnson	For Those About To Rock We Salute You	Let's Get It Up	Rock
8	Angus Young, Malcolm Young, Brian Johnson	For Those About To Rock We Salute You	Inject The Venom	Rock

Q: Create a single-line mailing list for all US customers.

```

SELECT
    UPPER(FirstName) || ' ' || UPPER(LastName) || ' ' || Address || ' ' ||
    SUBSTR(PostalCode, 1, 5) AS [Mailing Address]
FROM
    customers
WHERE
    Country = 'USA'

```

	Mailing Address
1	FRANK HARRIS 1600 Amphitheatre Parkway 94043
2	JACK SMITH 1 Microsoft Way 98052
3	MICHELLE BROOKS 627 Broadway 10012
4	TIM GOYER 1 Infinite Loop 95014
5	DAN MILLER 541 Del Medio Avenue 94040
6	KATHY CHASE 801 W 4th Street 89503
7	HEATHER LEACOCK 120 S Orange Ave 32801
8	JOHN GORDON 69 Salem Street 2113

Q: What are the average annual sales generated by customers from the USA?

A: 5.75

```

SELECT
    BillingCountry,
    ROUND(AVG(Total), 2) AS 'Avg Sales from USA'
FROM
    invoices
WHERE
    BillingCountry = 'USA'

```

	BillingCountry	Avg Sales from USA
1	USA	5.75

Q: What are the company's all-time total sales?

A: 2328.6

```

SELECT
    SUM(Total) AS 'All-Time Sales'
FROM
    invoices

```


All-Time Sales	
1	2328.6

Q: Who are the top ten best customers from a revenue standpoint?

A: Holy, Cunningham, Rojas, Kovacs, O'Reilly, Barnett, Ralston, Zimmermann, Gruber, Stevens

```

SELECT
    c.FirstName,
    c.LastName,
    SUM(i.Total) AS [Revenue Total]
FROM
    customers AS c
INNER JOIN
    invoices AS i
ON
    c.CustomerId = i.CustomerId
GROUP BY
    c.CustomerId
ORDER BY
    SUM(i.Total) DESC
LIMIT 10

```

	FirstName	LastName	Revenue Total
1	Helena	Holy	49.62
2	Richard	Cunningham	47.62
3	Luis	Rojas	46.62
4	Ladislav	Kovács	45.62
5	Hugh	O'Reilly	45.62
6	Julia	Barnett	43.62
7	Frank	Ralston	43.62
8	Fynn	Zimmermann	43.62
9	Astrid	Gruber	42.62
10	Victor	Stevens	42.62

Q: How many invoices exceed the average invoice amount generated in 2010? Who are the customers? How many are from USA?

A: 179 invoices. 40 from USA.

```

SELECT

```

```

        c.FirstName,
        c.LastName,
        c.Country,
        i.InvoiceDate,
        i.Total
FROM
        invoices as i
INNER JOIN
        customers as c
ON
        c.CustomerId = i.CustomerId
WHERE
        i.Total >
        (select
                avg(Total)
        from
                invoices
        where
                InvoiceDate between '2010-01-01' and '2010-12-31')
        AND i.BillingCountry = 'USA'
ORDER BY
        Total DESC

```

	FirstName	LastName	Country	InvoiceDate	Total	Number of Invoices
1	Luis	Gonçalves	Brazil	2010-09-15 00:00:00	5.94	179

	FirstName	LastName	Country	InvoiceDate	Total	Number of Invoices
1	John	Gordon	USA	2009-01-11 00:00:00	13.86	40

Q: Create a view of the global average.

```

CREATE VIEW V_GlobalAverage AS
select
        avg(total)
from
        invoices AS [Global Average]

```

Table: V_GlobalAverage	
AVG(Total)	
Filter	
1	5.65194174757282

Q: Add a new customer and invoice to the database.

```
INSERT INTO
customers
VALUES ('60', 'New', 'Customer', ' ', '123 Day Street', 'New York', 'NY', 'USA', '11201',
      '(347) 525-8688', ' ', 'nc@gmail.com', '1');
```

	CustomerId	FirstName	LastName	Company	Address	City	State	Country	PostalCode	Phone	Fax	Email	SupportRepId
1	60	New	Customer		123 Day Street	New York	NY	USA	11201	(347) 525-8688		nc@gmail.com	1

Q: Delete the new customer row that was added. Check which row before deleting (e.g. CustomerId).

```
DELETE FROM
      customers
WHERE CustomerId = 60
```