21.05.2021

SELECT ALL COLUMNS FROM TRACKS TABLE

select \* from tracks;

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

SELECT ONLY FOLLOWING COLUMNS FROM TRACKS TABLE: Name,Composer,UnitPrice

select Name, composer, UnitPrice from tracks;

select Name as , Composer as duzenleyici, UnitPrice as BirimFiyat from tracks;

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

HOW MANY RECORDS ARE THERE IN TRACKS TABLE?

select count(\*) from tracks

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

HOW MANY RECORDS ARE THERE IN ARTISTS TABLE?

select count(\*) from artists

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

HOW MANY DIFFERENT/DISTINCT PRICES ARE THERE IN TRACKS TABLE

SELECT distinct(UnitPrice) as DiffPrice FROM tracks

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

WHAT IS THE TITLE OF THE ALBUM WITH ALBUMID=3

select Title from albums where AlbumId=3

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

What is the ArtistID of Metallica?

select \* from artists where Name like 'Me%ica';

\*

select \* from artists where Name='Metallica';

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

How many albums does Metallica have? List them all

select Title from albums where ArtistId=50;

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

Albums has different tracks in it. How many tracks does Metallica's "Master Of Puppets" album has? List all columns.

(We have found that "Master Of Puppets" album has AlbumId=152)

select count(\*) from tracks where AlbumId=152 ----> How Many

select \* from tracks where AlbumId=152 -----> all columns

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

List all the tracks IDs and Names in Metallica's following albums

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

Order the results of tracks in "Master Of Puppets" album A-Z according to column "Name"

select \* from tracks where AlbumId=152 order by name DESC

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

Bring the TrackId and Name of tracks in "Master Of Puppets" album with TrackID between 1854 and 1858

select TrackId, name from tracks where AlbumId=152 and TrackId BETWEEN 1854 and 1858

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

Bring the record with Minimum-Size in Bytes from tracks in "Master Of Puppets" album

select TrackId, Name, min(Bytes) from tracks where AlbumId=152

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

Bring the record with Maximum-Size in Bytes from tracks in "Master Of Puppets" album

select TrackId, Name, max(Bytes) as 'Mximum Bytes' from tracks where AlbumId=152

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

Bring all records from tracks table and present every AlbumID and the max size-bytes track on it.

(Track tablosunda bulunan her bir Album içindeki en büyük boyutu yanında sergileyin)

select AlbumId, max(Bytes) from tracks group by AlbumId;

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

Bring all records from tracks table and present every AlbumID and the min size-bytes track on it.

select AlbumId, Name, min(Bytes) from tracks group by AlbumId

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

What is the sum of all tracks cost?

select sum(UnitPrice) as TotalCost from tracks;

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

What is the avg price of all tracks cost?

select round(avg(UnitPrice) ,3) as OrtalamaFiyat from tracks;

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

What is the sum of each albums cost?

select AlbumId, Name, sum(UnitPrice) as TotalCost from tracks group by AlbumId;

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

What is the avarage size of tracks in each album?

select AlbumId, round(avg(Bytes),3) as 'Average Size' from tracks group by AlbumId;

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

How many tracks have each album?

select AlbumId, Name, count(\*) from tracks group by AlbumId;

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

What is the AlbumID of the album with most track in it

select AlbumId, Name, max(totaltrack) from (

select AlbumId, Name, count(\*)

as totaltrack from tracks

group by AlbumId)

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

At the beginning of the lesson, we have used the queries below:

SELECT \* FROM artists WHERE NAME = 'Metallica' (We have found that Metallica has ArtistID=50)

SELECT \* FROM albums WHERE ArtistId = 50 (We have found the 10 albums of Metallica with ArtistID=50)

AlbumId Title ArtistId

35 Garage Inc. (Disc 1) 50

148 Black Album 50

149 Garage Inc. (Disc 2) 50

150 Kill 'Em All 50

151 Load 50

152 Master Of Puppets 50

153 ReLoad 50

154 Ride The Lightning 50

155 St. Anger 50

156 ...And Justice For All 50

Let's find all the tracks of Metallica

This gives the solution but it is not a good way:

SELECT \* FROM tracks where AlbumId IN (

'35',

'148',

'149',

'150',

'151',

'152',

'153',

'154',

'155',

'156'

)

We need use joins. First let find the albums of Metallica with JOINS

SELECT \*

FROM albums al

INNER JOIN artists ar on

al.ArtistId=ar.ArtistId

WHERE al.ArtistId=50

This brings us the following. We have used ArtistID as common key between tables.

AlbumId Title ArtistId ArtistId Name

35 Garage Inc. (Disc 1) 50 50 Metallica

148 Black Album 50 50 Metallica

149 Garage Inc. (Disc 2) 50 50 Metallica

150 Kill 'Em All 50 50 Metallica

151 Load 50 50 Metallica

152 Master Of Puppets 50 50 Metallica

153 ReLoad 50 50 Metallica

154 Ride The Lightning 50 50 Metallica

155 St. Anger 50 50 Metallica

156 ...And Justice For All 50 50 Metallica

Now we need to get the AlbumID from this query and use as a parameter. So just SELECT \* ---> SELECT AlbumID

SELECT AlbumID

FROM albums al

INNER JOIN artists ar on

al.ArtistId=ar.ArtistId

WHERE al.ArtistId=50

This brings us the following, just column ArtistID

AlbumId

35

148

149

150

151

152

153

154

155

156

Now lets use the last one as subquery and bring all the tracks that belongs to Metallica:

SELECT \*

FROM tracks

WHERE AlbumId IN

(SELECT AlbumID

FROM albums al

INNER JOIN artists ar on

al.ArtistId=ar.ArtistId

WHERE al.ArtistId=50)

Result: 112 rows. Just as same as we have found above.

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*

How many tracks has Metallica sold to each country?

First, we know the each track id of Metallica, we can use them as a subquery to invoice\_items table

SELECT \*

FROM invoice\_items

WHERE TrackId IN

(SELECT TrackId

FROM tracks

WHERE AlbumId IN

(SELECT AlbumID

FROM albums al

INNER JOIN artists ar on

al.ArtistId=ar.ArtistId

WHERE al.ArtistId=50))

Result: 91 records

Now we can find these 91 records and country of them by INNER JOIN to invoices table

SELECT \*

FROM invoice\_items InvItems

INNER JOIN invoices Inv ON InvItems.InvoiceId=Inv.InvoiceId

WHERE TrackId IN

(SELECT TrackId

FROM tracks

WHERE AlbumId IN

(SELECT AlbumID

FROM albums al

INNER JOIN artists ar on

al.ArtistId=ar.ArtistId

WHERE al.ArtistId=50))

Result: Still 91 rows with a lot of info but we need Country-TotalSales data

We need to use DISTINCT BillingCountry to get every country only once and GROUP BY on BillingCountry

SELECT DISTINCT BillingCountry, SUM(Quantity) as Quantity

FROM invoice\_items InvItems

INNER JOIN invoices Inv ON InvItems.InvoiceId=Inv.InvoiceId

WHERE TrackId IN

(SELECT TrackId

FROM tracks

WHERE AlbumId IN

(SELECT AlbumID

FROM albums al

INNER JOIN artists ar on

al.ArtistId=ar.ArtistId

WHERE al.ArtistId=50))

GROUP BY BillingCountry

Result:

BillingCountry Quantity

Argentina 6

Belgium 1

Brazil 6

Canada 15

Denmark 2

France 10

Germany 9

Italy 1

Netherlands 2

Portugal 1

Spain 2

USA 27

United Kingdom 9

-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*-\*