Music Tutorial

The Music database

This tutorial introduces the notion of a join. The music has two tables: `album` and `track`.

```
album(asin, title, artist, price, release, label, rank)
track(album, dsk, posn, song)
```

More details about about the database (http://sqlzoo.net/w/index.php/Album)

How to do joins.

The phrase `FROM album JOIN track ON album.asin=track.album` represents the join of the tables `album` and `track`. This `JOIN` has one row for every track. In addition to the track fields (`album`, `disk`, `posn` and `song`) it includes the details of the corresponding `album` (`title`, `artist` ...).

1.

Find the `title` and `artist` who recorded the song `'Alison'`.

```
SELECT album.title, album.artist

  FROM album JOIN track
        ON (album.asin=track.album)

WHERE song = 'Alison'
```

Submit SQL   Restore default

Correct answer

title	artist
The Very Best Of Elvis Costello And The Attraction	Elvis Costello

2.

Which `artist` recorded the song `'Exodus'`?

```
SELECT artist

  FROM album Join track
        ON (album.asin =track.album)

WHERE song = 'Exodus'
```

Submit SQL   Restore default

Correct answer

artist
Bob Marley

3.

Show the song for each `track` on the `album` `'Blur'`

```
SELECT track.song
   FROM album JOIN track ON (album.asin = track.album)
WHERE album.title = 'Blur'
```

Submit SQL   Restore default

~~Beetlebum~~
Song 2
Country Sad Ballad Man
M.O.R.
On Your Own
Theme From Retro
You're So Great
Death Of A Party
Chinese Bombs
I'm Just A Killer For Your Love
Look Inside America
Strange News From Another Star
Movin' On
Essex Dogs

We can use the aggregate functions and `GROUP BY` expressions on the joined table.

4.

For each `album` show the `title` and the total number of `track`.

```
SELECT title, COUNT(*) AS NumeroTracce
  FROM album JOIN track ON (asin=album)
 GROUP BY title
```

Submit SQL   Restore default

Correct answer

title	NumeroTracce
"Music from the Motion Picture ""Purple Rain"""	9
(What's The Story) Morning Glory?	12
...Baby One More Time [ENHANCED CD]	11

16 Most Requested Songs	16
50 by Bobby Short	50
50 Worldwide Gold HitsVolume 1, Parts 1 & 2	39
A Swingin' Affair! [ORIGINAL RECORDING REMASTERED]	16
Abbey Road	17
Achtung Baby	12

5.

For each album show the title and the total number of tracks containing the word 'Heart' (albums with no such tracks need not be shown).

hint

Use song LIKE '%Heart%' to find the songs that include the word Heart

```
SELECT album.title, COUNT(*) AS NumeroTracce
   FROM album JOIN track ON (album.asin = track.album)
  WHERE track.song LIKE '%heart%'
GROUP BY album.title
```

Submit SQL   Restore default

Correct answer

title	NumeroTracce
...Baby One More Time [ENHANCED CD]	2
50 Worldwide Gold HitsVolume 1, Parts 1 & 2	2
BasherThe Best of Nick Lowe	2
Believe	1
Best Of	1
Bing! His Legendary Years, 1931 to 1957 [BOX SET]	5
Blood on the Tracks	1
Eurythmics - Greatest Hits	1
Forty Years-Artistry of Tony B	3

6.

A "title track" is where the song is the same as the title. Find the title tracks.

```
SELECT track.song
   FROM album JOIN track ON (album.asin = track.album)
  WHERE track.song = album.title
```

Submit SQL   Restore default

Correct answer

song
Mellon Collie and the Infinite Sadness
Come on Over
I Left My Heart in San Francisco

Highway 61 Revisited
Born to Run
Bat Out Of Hell
London Calling
Thriller
Born in the U.S.A.

7.

An "eponymous" album is one where the title is the same as the artist (for example the album `'Blur'` by the band `'Blur'`). Show the eponymous albums.

hint

You only need to access one table in this example - so don't use the `JOIN`.

```
SELECT title
   FROM album
   WHERE title = artist
```

Submit SQL   Restore default

Correct answer

title
Blur
Toni Braxton
Metallica
The Doors

8.

Find the songs that appear on more than 2 albums. Include a count of the number of times each shows up.

hint

The `HAVING` clause can be used outside of the `GROUP BY`.

```
  SELECT track.song, COUNT(DISTINCT album.title) AS numerovolte
    FROM album JOIN track ON (album.asin = track.album)
GROUP BY track.song
  HAVING COUNT(*) > 2
```

Submit SQL   Restore default

I Won't Say I Will [Incomplete Take]	1
I've Got You Under My Skin	3
Love for Sale	3
My One and Only (What Am I Gonna Do?) [Incomplete Take]	1
Night And Day	4

Of Thee I Sing [Incomplete Take]	1
Once Upon A Time	3
One	3
Smile	5
Too Much	3
Unforgettable	2
[Silence]	1
[Untitled Track]	2

Show what the answer should be...

9.

A "good value" album is one where the price per track is less than 50 pence. Find the good value album - show the title, the price and the number of tracks.

```
SELECT album.title, album.price, COUNT(*) AS numerotracce
  FROM album JOIN track ON (album.asin = track.album)
GROUP BY album.title, album.price
  HAVING album.price / COUNT(*) < 0.5
```

Submit SQL   Restore default

Correct answer

title	price	numerotracce
BasherThe Best of Nick Lowe	11.98	25
Darlings of Wapping Wharf Launderette	14.99	50
First Issue-Dinah Washington S	22.98	46
Forty Years-Artistry of Tony B	35.99	87
The Capitol Years	34.99	75
The Greatest Hits	22.99	54
Under the Table & Dreaming	13.49	34

10.

Wagner's Ring cycle has an imposing 173 tracks, Bing Crosby clocks up 101 tracks.

List albums so that the album with the most tracks is first. Show the title and the number of tracks

```
SELECT album.title, COUNT(*) as NumeroTracce
  FROM album JOIN track ON (album.asin = track.album)
GROUP BY album.title
ORDER BY COUNT(*) DESC
```

Submit SQL   Restore default

Correct answer

title	NumeroTracce

Wagner - Der Ring des Nibelungen (Ring Cycle) / Si	173
Bing! His Legendary Years, 1931 to 1957 [BOX SET]	101
The Mel TormCollection [BOX SET]	92
Forty Years-Artistry of Tony B	87
The Capitol Years	75
The Greatest Hits	54
The Beatles (The White Album)	53
Darlings of Wapping Wharf Launderette	50
50 by Bobby Short	50

Movie Database tutorial

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