MODELOS Y BASES DE DATOS

CONSULTAS SQL BÁSICO

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LABORATORIO 1/6

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MBDA-1

**A**.

PK UK FK

musician(**m\_no**, m\_name, born, died, born\_in, living\_in)

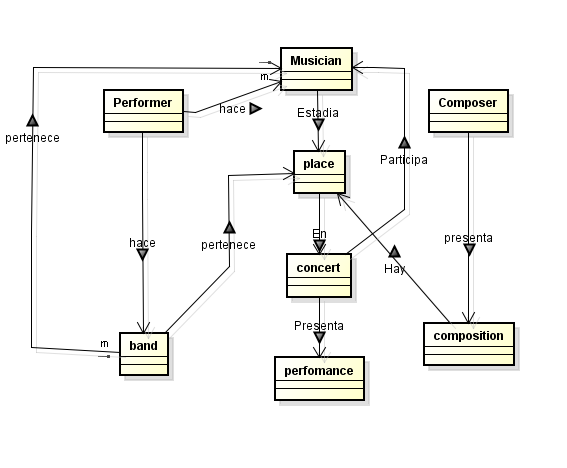
performer(**perf\_no**, perf\_is, instrument, perf\_type) place(place\_no, place\_town, place\_country) composer(**comp\_no**, comp\_is, comp\_type)

plays\_in(***player***, **band\_id**) concert(concert\_no, concert\_venue, concert\_in, has\_composed(cmpr\_no, cmpn\_no)

con\_date, concert\_orgniser)

band(**band\_no**, band\_name, band\_home, band\_type performance(pfrmnc\_no, gave, performed, composition(c\_no, comp\_date, c\_title, c\_in)

b\_date, band\_contact) conducted\_by, performed\_in),



**B. Revisando el contenido**

**1. ¿Cuáles bandas existen? ¿De qué tipo?**

SELECT band\_name, band\_type FROM band

**2. ¿Cuántos músicos participan? ¿De qué nacionalidades?**

SELECT m\_no,m\_name,place\_country FROM musician , place

WHERE     musician.born\_in=place.place\_no

**3. ¿Cuántos conciertos ha ofrecido?¿En qué paises?**

SELECT concert\_no,place\_country,place\_town FROM concert , place

WHERE     concert.concert\_in=place.place\_no

**4. ¿Cuáles músicos son interpretes? ¿Cuántos tocan más de un instrumento?**

\* SELECT m\_name FROM musician,performer

WHERE     musician.m\_no=performer.perf\_is

           \* SELECT perf\_is, count(\*) FROM performer

           GROUP BY perf\_is

           HAVING COUNT(\*)>1

**5. nombre y banda a la que pertenece el interprete**

SELECT m\_name, band\_name FROM band, performer, plays\_in, musician

WHERE band.band\_no=plays\_in.band\_id AND plays\_in.player=performer.perf\_no AND performer.perf\_is=musician.m\_noD

**C. Contexto**

**¿Cuál creen que es la misión de la organización?**

La misión es dar a conocer las composiciones y participaciones de las bandas, facilitando a los usuarios el historial de conciertos y detalles sobre bandas que hacen o hicieron parte de géneros musicales como Clásica, Rock y Jazz.

**¿Qué ofrece a sus clientes?**

Ofrecen un historial completo como detalles de forma virtual acerca de bandas y músicos que se han enfocado a diferentes géneros musicales, dando a conocer de donde perteneces, los conciertos y sus composiciones

**D.**

REPRESENTANTE

ARTISTA

PUBLICO

**PARTE DOS**

1. **Give the organiser's name of the concert in the Assembly Rooms after the first of Feb, 1997.**

**CALCULO**

{m:musician, c:concert | c. concert\_venue = 'Assembly Rooms' ^ con\_date > 01-021997 ^ concert\_orgniser = m\_no : m.name }

**ALGEBRA**

π m\_name (σ concert\_venue = 'Assembly Rooms' AND con\_date > 01-02-1997 AND concert\_orgniser (concert, musician) )

**SQL**

SELECT m\_name AS organiser FROM musician,concert

WHERE concert\_venue= 'Assembly Rooms' AND con\_date>01/02/97 AND concert\_orgniser = m\_no

1. **Find all the performers who played guitar or violin and were born in England.**

**CALCULO**

{m:musician, p:performer, p l: place | p.perf\_is = m.m\_no ^ (p.instrument = ‘violin’ v p.instrument = ‘guitar’) ^ m.born\_in = pl.place\_no ^ pl.place\_country = 'England' : m.m\_name

**ALGEBRA**

π m\_name (σ perf\_is = m\_no AND (instrument = 'guitar' OR instrument = 'violin') AND born\_in = place\_no AND place\_country = 'England'

**SQL**

SELECT m\_name FROM musician,performer,place

WHERE place\_no = born\_in AND place\_country='England' AND perf\_is = m\_no AND (instrument='violin' instrument = 'guitar')

1. **List the names of musicians who have conducted concerts in USA together with the towns and dates of these concerts.**

**CALCULO**

{c:concert, m:musician, p:place | p.place\_no = c.concert\_in ^ p.place\_country = ‘USA’ ^ m.m\_no = c.concert\_orgniser : m.m\_name, p.place\_town, c.con\_date}

**ALGEBRA**

π m\_name, place\_town, con\_date, con\_date (σ concert\_in = place\_no AND place\_country = 'USA' AND m\_no = concert\_orgniser)

**SQL**

SELECT DISTINCT m\_name, con\_date, place\_town FROM musician,concert ,place, performance

WHERE place\_country='USA' AND concert\_in = place\_no AND m\_no = concert\_orgniser

1. **How many concerts have featured at least one composition by Andy Jones? List concert date, venue and the composition's title.**

**CALCULO**

{c:composition, m:musician, cm:composer, hc: has\_composed, p:perfomance, cn:concert | m.m\_name = 'Andy Jones' ^ m.m\_no = cm.comp\_is ^ cm.comp\_no = hs.cmpr\_no ^ hs.cmpn\_no = c.c\_no ^ c.c\_no = p.performed ^ p.performed\_in = cn.concert\_no: cn.con\_date, cn.concert\_venue, c.c\_title }

**ALGEBRA**

π con\_date, concert\_venue, c\_title ((σ m\_name = ‘Andy Jones’ AND m\_no = comp\_is AND comp\_no = cmpr\_no AND cmpn\_no = c\_no AND c\_no = performed AND performed\_in = concert\_no) (composition, musician, composer, has\_composed, concert, performance

**SQL**

SELECT DISTINCT con\_date, concert\_venue , c\_title FROM place, musician, concert, composition, has\_composed, composer, performance WHERE cmpr\_no = comp\_no AND c\_no = cmpn\_no AND m\_name = 'Andy Jones' AND concert\_no = performed\_in AND performed = c\_no AND comp\_is = m\_no

1. **list the different instruments played by the musicians and avg number of musicians who play the instrument.**

(No logramos realizar la consulta en Calculo y Algebra)

SELECT instrument,COUNT(instrument),

COUNT(instrument) / (SELECT COUNT(DISTINCT(perf\_is)) FROM

musician,performer WHERE m\_no=perf\_is)

FROM musician,performer

WHERE m\_no = perf\_is

GROUP BY instrument

1. **List the names, dates of birth and the instrument played of living musicians who play a instrument which Theo also plays.**

SELECT m\_name,born,instrument FROM performer,musician

WHERE m\_no=perf\_is and died is null and instrument in('banjo','violin','drums')

1. **List the name and the number of players for the band whose number of players is greater than the average number of players in each band.**

SELECT band\_name,COUNT(band\_name) AS N FROM band JOIN plays\_in ON band\_id = band\_no GROUP BY (band\_name) HAVING N > (SELECT AVG(N) FROM (SELECT band\_name,COUNT(band\_name) AS N FROM band JOIN plays\_in ON band\_id = band\_no GROUP BY (band\_name))AS x)

1. **List the names of musicians who both conduct and compose and live in Britain**

**CALCULO**

{c:composer, m:musician, p:place, pr:performance | m.m\_no = c.comp\_is ^ p.conducted\_by = m.m\_no ^ m.living\_in = p.place\_no ^ p.place\_country = ‘England’ : m\_name}

**SQL**

SELECT DISTINCT m\_name FROM composer,musician,place,performance

WHERE m\_no=comp\_is AND conducted\_by=m\_no AND place\_no=living\_in

AND (place\_country='England' OR place\_country='Scotland')

1. **Show the least commonly played instrument and the number of musicians who play it**

**CALCULO**

{e:{p.performer|:n.instrument,(#|:n.perf\_no)} | (#n.performer |: n.perf\_no) <= {p:performer |: (#|: p.perf\_no)} e.instrument, (#|:e.instrument)

**SQL**

SELECT \* FROM (SELECT instrument, COUNT(instrument) AS M from performer GROUP BY instrument)AS x WHERE M = (SELECT MIN(N) FROM (SELECT instrument, COUNT(instrument) AS N from performer GROUP BY instrument) AS x )

1. **List the bands that have played music composed by Sue Little; Give the titles of the composition in each case.**

**CALCULO**

{c:composition, hs:has\_composed, cm:composer, m:musician, p:performance, b:band | cm.comp\_is = m.m\_no ^ m.m\_name = ‘Sue Litlle’ ^ c.comp\_no = hs.cmpr\_no AND hs.cmpn\_no = c.c\_no ^ c.c\_no = p.performed}

**SQL**

SELECT band\_name,c\_title FROM band,plays\_in,performer,musician,composer,has\_composed,composition

WHERE band\_no=band\_id AND player=perf\_no AND perf\_is=m\_no AND m\_no=comp\_is

AND comp\_no=cmpr\_no AND cmpn\_no=c\_no AND m\_name='Sue Little'

**ARTE TRES**

COMO representante

QUIERO conocer las bandas del momento

PARA PODER decidir si la contrato

COMO usuario

QUIERO SABER las presentaciones de mi banda favorita

PARA PODER conocer su historia

PUBLICO

REPRESENTANTE

**RETROSPECTIVA**

1. **¿Cuál fue el tiempo total invertido en el laboratorio por cada uno de ustedes?**

**(Horas/Hombre)**

* 1. Javier Esteban López Peña: 12 horas
  2. Ricardo Amaya Rivera: 12 horas

1. **¿Cuál es el estado actual del laboratorio? ¿Por qué?**
   1. Nos hicieron falta las consultas difíciles, debido a la dificultad de estas y al dejarlas de ultimas no se lograron realizar. Ahora el laboratorio se encuentra terminado con poca parte inconclusa por dificultad
2. **¿Cuál consideran fue el mayor logro? ¿Por qué?**
   1. El mayor logro fue realizar las consultas de la parte dos, pues eran la parte de dificultad de este laboratorio y al terminarla aprendimos bastante al realizando las consultas de SQL

**4. ¿Cuál consideran que fue el mayor problema técnico? ¿Qué hicieron para**

**resolverlo?**

La organización con horarios y el tiempo para trabajar virtualmente

**5. ¿Qué hicieron bien como equipo? ¿Qué se comprometen a hacer para mejorar los**

**resultados?**