Datenbanken: Übungsblatt 5

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Aufgabe 1

Bitte um Anmerkungen hinsichtlich Formatierung der Anfragen!

1.
```sql
SELECT
    a.name
FROM
    ARTIST a, COUNTRY c
WHERE
    c.name='Germany'
    AND begin_year > 1950
    AND begin_year < 1970
    -- Exclude the bands
    AND a.type = 'Group'
    AND c.id = a.origin
```

Successfully run. Total query runtime: 40 msec. 55 rows affected.

2.
```sql
SELECT DISTINCT
    c.city
FROM
    ARTIST a, Concert c
WHERE
    a.id = c.artist
    AND a.name = 'Rammstein'
    AND c.name = 'Winter 2001 Tour'
```

city
Auckland
Melbourne
Osaka
Perth
Southport
Sydney
Tokyo
Wayville

3.
```sql
SELECT
    a0.name, (a.end_year-a.begin_year) AS Dauer
FROM
    ARTIST_RELATION a
    INNER JOIN ARTIST a1 ON a.artist1 = a1.id
        INNER JOIN ARTIST a0 ON a.artist0 = a0.id
WHERE
    a.type = 'married'
```

```
      AND a1.name = 'Morgan, Lorrie'
      OR a0.name = 'Morgan, Lorrie'
```

name	dauer
Whitley, Keith	3
Randall, Jon	3
Kershaw, Sammy	6

4.
```
SELECT
      r0.name, r0.year
FROM
      RELEASE r0
      LEFT OUTER JOIN RELEASE r1
          ON r0.format = r1.format AND r0.year > r1.year
      WHERE
          r1.year IS NULL
          AND r0.year IS NOT NULL
          AND r0.format = 'Cassette'
```

name	year
Sgt. Pepper's Lonely Hearts Club Band	1967

5.
```
SELECT
      a1.name, a1.begin_year AS Geburtsjahr
FROM
      ARTIST_RELATION a
      INNER JOIN ARTIST a1 ON a.artist1 = a1.id
          INNER JOIN ARTIST a0 ON a.artist0 = a0.id
WHERE
      a.type = 'parent'
      AND a0.name = 'Smith, Will'
ORDER BY
      a1.begin_year ASC
```

name	geburtsjahr
Smith, Jaden	1998
Smith, Willow	2000

Aufgabe 2

1.
```
SELECT DISTINCT
      t.name
FROM
      TRACK t
      INNER JOIN RELEASE r ON t.tracklist = r.tracklist
WHERE
      t.name ILIKE '%what is%'
      AND r.format = 'CD'
      AND r.year = 2011
```

name
What Is It Worth
What Is Left To Say
What is Left to Say (club edit)
What Is Light? What Is Laughter? (Skrillex remix)
What is LOVE
What Is Love
(What Is) LOVE?
WHAT iS LOVE
What Is Love? (extended mix)
What is the Beautiful?
What Is This
What Is This Lovely Fragrance?
What Is This Thing Called

2.
```sql
SELECT
    a1.name, char_length(a1.name)
FROM
    ARTIST a1
    LEFT OUTER JOIN
        artist a2
    ON
        char_length(a2.name) > char_length(a1.name)
WHERE
    a2.name is NULL
    AND a1.type = 'Group'
```

name	char_length
All Shall Be Well (And All Shall Be Well and All Manner of Things Shall Be Well)	80

3.
```sql
SELECT
    substring(a.name from '\,\s(.*)') AS Vorname
FROM
    ARTIST a
WHERE
    a.begin_year = 1998
    AND a.type = 'Person'
    AND substring(a.name from '\,\s(.*)') is not NULL
```

name
Keke
Karin
Rina
Hollie
Riho
Kanon
Meimi
China Anne
Mia-Sophie
Jaden
Ronan

Aufgabe 3

1.
```sql
SELECT
    a.name
FROM
    ARTIST a
WHERE
    a.begin_year = 1990
    AND a.type = 'Person'
    AND exists(
        SELECT *
        FROM ARTIST b
        WHERE a.name = b.name AND b.type = 'Group'
    )
```

name
Alice
Redd
Sofie
Delilah
Luce
Ray
Coco
Stratus
Juli

2.
```sql
SELECT DISTINCT
    s.name
FROM
    SONGS s JOIN CONCERT c ON s.setlist = c.setlist
WHERE
    c.artist = (SELECT a.id FROM ARTIST a WHERE a.name = 'AC/DC')
    AND NOT EXISTS(
        SELECT *
        FROM
            TRACK t JOIN RELEASE r ON r.tracklist = t.tracklist
            JOIN ARTIST_CREDIT cred on cred.tracklist = t.tracklist
```

```
        WHERE
            cred.artist = (SELECT a.id FROM ARTIST a WHERE a.name = 'AC/DC')
            AND s.name = t.name
    )
```

name
Bonny
Heartbreak Hotel
Honky Tonk Women
INTRO- Beavis and Buthead
Jailhouse Rock
Jumpin' Jack Flash
Lucille
Messin' With the Kid
That's All Right
Tutti Frutti

Aufgabe 4

1.
```
SELECT
    count(c.country) as Konzert_anzahl, cou.name
FROM
    CONCERT c JOIN COUNTRY cou ON cou.id = c.country
GROUP BY
    cou.name
ORDER BY
    Konzert_anzahl DESC
```

Successfully run. Total query runtime: 60 msec. 116 rows affected.

2.
```
SELECT
    c.name, count(a.name) AS anzahl_kuenstler
FROM
    CONCERT c JOIN ARTIST a ON a.id = c.artist
GROUP BY
    c.eventdate, c.name, a.name
ORDER BY
    anzahl_kuenstler DESC
```

Successfully run. Total query runtime: 438 msec. 190003 rows affected.

3.
```
SELECT
    release.label, count(release.format)
FROM
    release
GROUP BY
    release.label, release.format
HAVING
    release.format = 'CD'
    AND count(release.format) > 1500
ORDER BY count DESC
```

label	count
Columbia Records	3683
Polydor	2440
EMI Records	2293
Mercury	2160
Epic	1945
Virgin	1827
Rhino	1802
Capitol Records	1574
Warner Bros. Records	1567

4.
```sql
SELECT
    a1.name, count(a1.name)
FROM
    artist_relation a
    JOIN artist a0 ON a.artist0 = a0.id
        JOIN artist a1 ON a.artist1 = a1.id
WHERE
    a.type = 'member of band'
GROUP BY
    a1.name, a1.type
HAVING
    a1.type = 'Group'
    AND count(a1.name) > 20
ORDER BY
    count DESC;
```

label	count
Enfoirés, Les	274
Hello! Project	75
Onyanko Club	46
SDN48	42
Black Sabbath	31
Morning Musume.	31
Pigface	29
Iron Butterfly	27
Yes	25
Santana	21

5.
```sql
SELECT a.name, sum(t.length) AS playtime
FROM
    TRACK t INNER JOIN ARTIST_CREDIT cred ON t.tracklist = cred.tracklist
    INNER JOIN ARTIST a ON cred.artist = a.id
GROUP BY a.id
HAVING sum(t.length) > 604800
ORDER BY playtime DESC

Successfully run.  Total query runtime:  18 secs 765 msec.  1983 rows affected.
```