

# L1

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## 1 NOTE

Accidentally did the 2023 Fall assignments instead of the 2023 Spring assignments.

## 2 Questions

### 2.1 Q1 - Sample

### 2.2 Q2 - Find all the 12" Vinyl releases of the Beatles in the United Kingdoms up until the year they broke up.

#### 2.2.1 Query

```
SELECT
    distinct(r.name) AS album_name,
    ri.date_year AS release_year
FROM
    release r
JOIN
    artist_credit ac ON r.artist_credit = ac.id
JOIN
    artist a ON ac.id = a.id
JOIN
    medium m ON r.id = m.release
JOIN
    medium_format mf ON m.format = mf.id
JOIN
    release_info ri ON r.id = ri.release
JOIN
    area ar ON ri.area = ar.id
WHERE
    a.name = 'The Beatles'
    AND mf.name = '12" Vinyl'
    AND ar.name = 'United Kingdom'
    AND ri.date_year <= 1970
ORDER BY
    ri.date_year ASC;
```

### 2.2.2 Output

```
~/Projects/DaSH-Lab-Assignment-2024/Project-Assignments/Database-Query-Engines · (main)
) cat q2_beatles_uk_releases.sqlite.sql | sqlite3 musicbrainz-cmdb2023.db (DaSH-Lab-Dev)
Please Please Me|1963
With The Beatles|1963
A Hard Day's Night|1964
Please Please Me|1964
```

## 2.3 Q3 - Find the ten newest release that has the medium format Cassette.

### 2.3.1 Query

```
SELECT
    r.name AS release_name,
    ac.name AS artist_name,
    ri.date_year AS release_year
FROM
    release r
JOIN
    artist_credit ac ON r.artist_credit = ac.id
JOIN
    release_info ri ON r.id = ri.release
JOIN
    medium me ON r.id = me.release
JOIN
    medium_format mf ON me.format = mf.id
WHERE
    mf.name LIKE 'Cassette'
ORDER BY
    ri.date_year DESC,
    ri.date_month DESC,
    ri.date_day DESC,
    r.name ASC,
    ac.name ASC
LIMIT 10;
```

### 2.3.2 Output

```
~/Projects/DaSH-Lab-Assignment-2024/Project-Assignments/Database-Query-Engines · (main)
) cat q3_new_wine_in_old_bottles.sqlite.sql | sqlite3 musicbrainz-cmdb2023.db (DaSH-Lab-Dev)
Lesions of a Different Kind|Undeath|2020
Heaven & Hell|Ava Max|2020
Termination Shock|Traveler|2020
Women in Music, Pt. III|HAIM|2020
```

## 2.4 Q4 - Find works with the longest comment for each work type.

### 2.4.1 Query

```
SELECT
    distinct(wt.name) AS WORK_TYPE,
    w.name AS WORK_NAME,
    LENGTH(w.comment) AS COMMENT_LENGTH,
    w.comment as 'COMMENT'
FROM
    work w
JOIN
    work_type wt ON w.type = wt.id
JOIN
    (
        SELECT
            type,
            MAX(LENGTH(comment)) AS max_comment_length
        FROM
            work
        WHERE
            LENGTH(comment) > 0
        GROUP BY
            type
    ) max_comments ON w.type = max_comments.type
    AND LENGTH(w.comment) = max_comments.max_comment_length
ORDER BY
    wt.name ASC,
    w.name ASC;
```

### 2.4.2 Output

```
~/Projects/DaSH-Lab-Assignment-2024/Project-Assignments/Database-Query-Engines - (main)
> cat q4_devil_in_the_details.sqlite.sql | sqlite3 musicbrainz-cmdb2023.db (DaSH-Lab-Dev)
Aria|Phi-Phi: La gamine charmante|92|arrangement by Jean Poirot and Dominique Tirmont for the show "Il était une fois l'opérette"
Audio drama|The Adventures of Tom Bombadil|104|Brian Sibley drama for BBC Radio. Based not on the poem, but on material from The Fellows
hip of the Ring
Ballet|Les Mariés de la tour Eiffel|85|Ballet in One Act by members of the Groupe des Six from the spectacle by Jean Cocteau
Cantata|Jauchzet dem Herrn, alle Welt TWV 7:20|89|One of the 5 versions by Telemann: Cantata for Bass, Trumpet, Oboe, strings and contin
uo.
Concerto|Concerto in C major, RV 558, "con molti stromenti"|108|2 violins in tromba marina, 2 recorders, 2 trumpets, 2 mandolines, 2 cha
lumeaux, 2 theorboes, cello, strings
Incidental music|Rabelais|57|musique de scène pour le spectacle de Jean-Louis Barrault
Madrigal|As Fair as Morn, as Fresh as May|49|The Second Set of Madrigals for 3-6 voices, no. 5
Mass|Officium Defunctorum (1605)|104|With chants researched and edited from 16th- and 17th-century Spanish sources by Luis Lozano Virumb
rales
```

## 2.5 Q5 - Find the artist with top releases for each month.

### 2.5.1 Query

```
SELECT
    a.name AS artist_name,
    ri.date_month,
    COUNT(r.id) AS release_count
FROM
    artist a
JOIN
    artist_credit ac ON a.id = ac.id
JOIN
    release r ON ac.id = r.artist_credit
JOIN
    release_info ri ON r.id = ri.release
WHERE
    a.name LIKE 'Elvis%'
    AND a.type = (SELECT id FROM artist_type WHERE name = 'Person')
    AND ri.date_month IS NOT NULL
GROUP BY
    a.id, a.name, ri.date_month
ORDER BY
    release_count DESC,
    a.name ASC,
    ri.date_month ASC;
```

### 2.5.2 Output



```
~/Projects/DaSH-Lab-Assignment-2024/Project-Assignments/Database-Query-Engines · (main)
) cat q5_elvis_best_month.sqlite.sql | sqlite3 musicbrainz-cmudb2023.db (DaSH-Lab-Dev)
Elvis Presley|11|53
Elvis Presley|10|51
Elvis Presley|7|50
Elvis Presley|8|40
Elvis Presley|9|39
```

## 2.6 Q6 - List the number of groups that were formed in the United States in each decades from 1900 to 2023.

### 2.6.1 Query

```
SELECT
    CONCAT((begin_date_year / 10) * 10, 's') AS decade,
    COUNT(*) AS group_count
```

```

FROM
    artist a
JOIN
    area ar ON a.area = ar.id
WHERE
    ar.name = 'United States'
    AND a.type = (SELECT id FROM artist_type WHERE name = 'Group')
    AND begin_date_year BETWEEN 1900 AND 2023
GROUP BY
    (begin_date_year / 10) * 10
ORDER BY
    (begin_date_year / 10) * 10 ASC;

```

## 2.6.2 Output

```

~/Projects/DaSH-Lab-Assignment-2024/Project-Assignments/Database-Query-Engines - (main)
) cat q6_us_artist_groups_per_decade.sqlite.sql | sqlite3 musicbrainz-cmdb2023.db (DaSH-Lab-Dev)
1900s|6
1910s|15
1920s|63
1930s|69
1940s|102
1950s|356

```

## 2.7 Q7 - List all the artists who have collaborated with Pittsburgh Symphony Orchestra.

### 2.7.1 Query

```

SELECT DISTINCT a.name
FROM artist_credit_name acn
JOIN artist a ON acn.artist = a.id
WHERE acn.artist_credit IN (
    SELECT ac.id
    FROM artist_credit ac
    JOIN artist_credit_name acn2 ON ac.id = acn2.artist_credit
    JOIN artist a2 ON acn2.artist = a2.id
    WHERE a2.name = 'Pittsburgh Symphony Orchestra'
)
AND a.name != 'Pittsburgh Symphony Orchestra'
ORDER BY a.name ASC;

```

## 2.7.2 Output

```
~/Projects/DaSH-Lab-Assignment-2024/Project-Assignments/Database-Query-Engines - (main)
> cat a7_pso_friends.sqlite.sql | sqlite3 musicbrainz-caudb2023.db (DaSH-Lab-Dev)
André Previn
Anthony Newman
Anton Bruckner
Antonio de Almeida
Antonín Dvořák
```