

- ☐ Find the titles of all movies directed by Steven Spielberg.

Ans=> `SELECT title FROM Movie
WHERE director = 'Steven Spielberg'`

- ☐ Find all years that have a movie that received a rating of 4 or 5, and sort them in increasing order.

Ans => `SELECT DISTINCT year
FROM Movie JOIN Rating USING(mID)
WHERE stars = 4 OR stars = 5;`

- ☐ Find the titles of all movies that have no ratings.

Ans => `SELECT DISTINCT title
FROM Movie
WHERE title NOT IN (SELECT title FROM Movie NATURAL JOIN Rating)`

- ☐ Some reviewers didn't provide a date with their rating. Find the names of all reviewers who have ratings with a NULL value for the date

Ans => `SELECT name
FROM Reviewer LEFT JOIN Rating USING(rID)
WHERE ratingDate IS NULL;`

- ☐ Write a query to return the ratings data in a more readable format: reviewer name, movie title, stars, and ratingDate. Also, sort the data, first by reviewer name, then by movie title, and lastly by number of stars.

Ans => `SELECT name, title, stars, ratingDate
FROM Movie JOIN Rating USING(mID) JOIN Reviewer USING(rID)
ORDER BY name, title, stars;`

- ☐ For all cases where the same reviewer rated the same movie twice and gave it a higher rating the second time, return the reviewer's name and the title of the movie.

Ans => `SELECT name, title
FROM Movie M, Rating V, Reviewer R, Rating V2
WHERE R.rID = V.rID
AND V.mID = M.mID
AND R.rID = V2.rID
AND V.stars < V2.stars
AND V.ratingDate < V2.ratingDate
AND V2.mID = M.mID`

- ☐ For each movie that has at least one rating, find the highest number of stars that movie received. Return the movie title and number of stars. Sort by movie title.

Ans => `SELECT title, MAX(stars)
FROM Movie JOIN Rating USING(mID)
GROUP BY mID
ORDER BY title`

- ☐ For each movie, return the title and the 'rating spread', that is, the difference between highest and lowest ratings given to that movie. Sort by rating spread from highest to lowest, then by movie title.

```
Ans => SELECT title, MAX(stars) - MIN(Stars)
FROM Movie JOIN Rating USING(mID)
GROUP BY mID
ORDER BY MAX(stars) - MIN(Stars) DESC, title
```

- ☐ Find the difference between the average rating of movies released before 1980 and the average rating of movies released after 1980. (Make sure to calculate the average rating for each movie, then the average of those averages for movies before 1980 and movies after. Don't just calculate the overall average rating before and after 1980.)

```
Ans => SELECT AVG(vals.avg) - AVG(vals2.avg)
FROM (
    SELECT AVG(stars) AS avg
    FROM Movie
    JOIN Rating USING(mId)
    WHERE year < 1980
    GROUP BY mId
) AS vals, (
    SELECT AVG(stars) AS avg
    FROM Movie
    JOIN Rating USING(mId)
    WHERE year > 1980
    GROUP BY mId
) AS vals2;
```