**Manashree’s Queries**

1. What is the average rating of comedy genre movies?

**Query**

SELECT AVG(m.rating) AS Average\_Rating FROM Movie m

JOIN Movie\_Genre mg ON m.movie\_id=mg.movie\_id

JOIN Genre g ON g.genre\_id = mg.genre\_id and g.genre\_id=5;

**Relational Algebra**

π AVG (rating) → average\_rating

γ AVG (rating)

(ρ m movie ⋈ m . movie\_id = mg . movie\_id

ρ mg movie\_genre ⋈ g . genre\_id = mg . genre\_id AND g . genre\_id = 5

ρ g genre)

2. What are the top 10 hit movies by Ajay Devgn?

**Query**

SELECT m.name, m.rating, m.movie\_id from movie m

INNER JOIN movie\_stars ma on ma.movie\_id = m.movie\_id and ma.star\_id=(SELECT s.star\_id from stars s where s.name='Ajay Devgn')

ORDER BY m.rating DESC

Limit 10;

**Relational Algebra**

τ m . rating ↓

π m . name, m . rating, m . movie\_id

(ρ m movie ⋈ ma . movie\_id = m . movie\_id

ρ ma movie\_stars ⋈ ma . star\_id = 112

ρ s stars)

3. What is the total number of theaters in Ahmedabad?

**Query**

SELECT COUNT(theater\_id) AS NoOfTheaters FROM Theaters t where t.city\_id=(Select c.city\_id from city c where c.name='Ahmedabad') ;

**Relational Algebra**

π COUNT (theater\_id) → nooftheaters

γ COUNT (theater\_id)

σ t . city\_id = π c . city\_id

σ c . name = "Ahmedabad"

ρ c city

ρ t theaters

4. Name the movies with minimum runtime.

**Query**

SELECT N.NAME FROM MOVIE N WHERE N.RUNTIME=(SELECT MIN(M.RUNTIME) FROM MOVIE M)

**Relational Algebra**

π n . name

σ n . runtime = π MIN (runtime)

γ MIN (runtime)

ρ m movie

ρ n movie

5. List the movie with the least number of tweets between 2022-11-1 between 2022-11-12.

**Query**

Select m.name, count(t.movie\_id) as count from movie m inner join twitter\_tweets t on t.movie\_id=m.movie\_id

group by m.name

order by count

limit 1;

**Relational Algebra**

τ COUNT (movie\_id)

γ name, COUNT (movie\_id)

(ρ m movie ⋈ t . movie\_id = m . movie\_id

ρ t twitter\_tweets)

6. List actors of movie with highest positive reviews fetched from tweets between 2022-11-1 between 2022-11-12.

**Query**

Select s.name from stars s

inner join movie\_stars ms on s.star\_id=ms.star\_id and

ms.movie\_id=(Select m.movie\_id from movie m inner join twitter\_tweets t on t.movie\_id=m.movie\_id

group by m.name

order by sum(t.sentiment)

limit 1);

**Relational Algebra**

π s . name

(ρ s stars ⋈ s . star\_id = ms . star\_id AND ms . movie\_id = τ SUM (sentiment)

π m . movie\_id

γ name,

(ρ m movie ⋈ t . movie\_id = m . movie\_id

ρ t twitter\_tweets)

ρ ms movie\_stars)

**Anshul’s Queries**

1. Top 5 actors with maximum number of movie releases in the year 2016?

**Query**

SELECT count(stars.star\_id) as top\_actors ,stars.name, movie.released\_year FROM stars

INNER JOIN movie\_stars ON movie\_stars.star\_id = stars.star\_id

INNER JOIN movie ON movie.movie\_id = movie\_stars.movie\_id and movie.released\_year = 2016

GROUP BY stars.star\_id

ORDER BY top\_actors DESC

LIMIT 5;

**Relational Algebra**

τ top\_actors ↓

π COUNT (star\_id) → top\_actors, stars . name, movie . released\_year

γ star\_id, COUNT (star\_id) (stars ⋈ movie\_stars . star\_id = stars . star\_id movie\_stars ⋈ movie . movie\_id = movie\_stars . movie\_id AND movie . released\_year = 2016 movie)

2. Total number of screens in theaters in the city of Mumbai?

**Query**

Select c.name, sum(t.screens) from theaters t inner join city c on t.city\_id=c.city\_id and c.name='Mumbai'

**Relational Algebra**

π c . name, SUM (screens)

γ SUM (screens)

(ρ t theaters ⋈ t . city\_id = c . city\_id AND c . name = "Mumbai"

ρ c city)

3. List the actors whose movies were released between 2018 and 2021.

**Query**

SELECT s.name, m.name, m.released\_year

FROM movie m inner join movie\_stars ms on m.movie\_id=ms.movie\_id and m.released\_year BETWEEN 2018 AND 2021

inner join stars s on s.star\_id=ms.star\_id

**Relational Algebra**

π s . name, m . name, m . released\_year

(ρ m movie ⋈ m . movie\_id = ms . movie\_id AND (2018 <= m . released\_year AND m . released\_year <= 2021)

ρ ms movie\_stars ⋈ s . star\_id = ms . star\_id

ρ s stars)

4. List the movie with highest number of retweets between "2022-11-01" and "2022-11-12"

**Questions Soham -**

**Q4.** Best rated movie between 2021 to 2022.

**Query -**

SELECT name, max(rating)

FROM movie

WHERE year BETWEEN “2021” AND “2022”

ORDER BY name ASC;

**Q5.** Which theater had the highest sales?

**Query -**

SELECT theatre\_name.theatre

FROM theatre INNER JOIN screens ON theatre.theatre\_ID = screens.theatre\_ID

WHERE theatre\_ID IN

(SELECT theatre\_ID.screens, MAX(ticket\_price.shows\*tickets\_sold.shows)

FROM screens INNER JOIN shows ON screens.screen\_ID = shows.screen\_ID)

**Q6.** Year with least number of movies

**Query -**

SELECT year, COUNT(MIN(movie\_ID))

FROM movies

GROUP BY year