1. What is the average rating of comedy genre movies in 2022?

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)

1. 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)

1. 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') ;

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

1. Name the movies with minimum runtime in 2019.

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

π n . name

σ n . runtime = π MIN (runtime)

γ MIN (runtime)

ρ m movie

ρ n movie

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

SELECT m.name FROM movie m

WHERE m.movie\_id=(SELECT tc.movie\_id from movie\_tweet\_count tc

WHERE tc.tweet\_count=(SELECT max(mt.tweet\_count) from movie\_tweet\_count mt));

π m . name

σ m . movie\_id = π tc . movie\_id

σ tc . tweet\_count = π MAX (tweet\_count)

γ MAX (tweet\_count)

ρ mt movie\_tweet\_count

ρ tc movie\_tweet\_count

ρ m movie

1. Recommend movie based on positive reviews

SELECT m.name FROM movie m

WHERE m.movie\_id=(SELECT tc.movie\_id from movie\_tweet\_count tc

WHERE tc.review\_percentage=(SELECT max(mt.review\_percentage) from movie\_tweet\_count mt));

π m . name

σ m . movie\_id = π tc . movie\_id

σ tc . review\_percentage = π MAX (review\_percentage)

γ MAX (review\_percentage)

ρ mt movie\_tweet\_count

ρ tc movie\_tweet\_count

ρ m movie