3-A Advanced SQL

Part A

1 **Aggregation Functions**

2 COUNT / GROUP BY

3 SUM / MAX / MIN

4 AVG / HAVING / ROUND

5 Subqueries

Aggregation function?

1 Aggregation Functions

2 **COUNT / GROUP BY**

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5 Subqueries

COUNT

```
SELECT COUNT(*)
FROM IMDB.movies
WHERE duration > 240;
```

GROUP BY

```
SELECT title_year, COUNT(*) as cnt
FROM IMDB.movies
GROUP BY title_year
ORDER BY cnt DESC;
```

```
SELECT genres, COUNT(*)
FROM IMDB.movies
WHERE imdb_score >= 9
GROUP BY genres;
```

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SUM

```
SELECT genres, SUM(gross) as sum
FROM IMDB.movies
GROUP BY genres
ORDER BY sum DESC;
```

MAX / MIN

```
SELECT genres, MAX(gross) AS
max_revenue
FROM IMDB.movies
GROUP BY genres
ORDER BY max_revenue DESC;
```

```
SELECT genres, MIN(imdb_score) AS
min_score
FROM IMDB.movies
GROUP BY genera
ORDER BY min_score DESC;
```

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AVG

```
SELECT genres, AVG(imdb_score) AS
avg_score
FROM IMDB.movies
GROUP BY genres
ORDER BY avg_score DESC;
```

HAVING

```
SELECT genres, AVG(imdb_score) as
avg_score
FROM IMDB.movies
GROUP BY genres
HAVING count(*) > 50
ORDER BY avg_score DESC;
```

ROUND

```
SELECT director_name,
ROUND(AVG(imdb_score), 1) as
avg_score
FROM IMDB.movies
GROUP BY director_name
HAVING count(*) > 50
ORDER BY avg_score desc;
```

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5 **Subqueries**

Subqueries

```
SELECT column_name
FROM table_A
WHERE foreign_key_in_table_A IN
(
SELECT id
FROM table_B
WHERE...
);
```

```
SELECT COUNT(*) FROM
`IMDB.movies`
WHERE director_id IN
 (
SELECT director_id FROM
`IMDB.directors`
   WHERE director_facebook_likes >
10000);
```

Agenda

- **3A**: **Restitution of databases**
- **6A**: Exploratory visualisation performed
- **7B**: ML analyses and interpretations
- **8A - 8B**: Finishes and layouts

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Any questions?