

# Combining Aggregate Functions with WHERE

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## Exercise

### Combining aggregate functions with WHERE

When combining aggregate functions with `WHERE`, you get a powerful tool that allows you to get more granular with your insights, for example, to get the total budget of movies made from the year 2010 onwards.

This combination is useful when you only want to summarize a subset of your data. In your film-industry role, as an example, you may like to summarize each certification category to compare how they each perform or if one certification has a higher average budget than another.

Let's see what insights you can gain about the finances in the dataset.

Instructions 1/4 25 XP

- 1 Use `SUM()` to calculate the total `gross` for all films made in the year 2000 or later, and use the alias `total_gross`.
- 2 Calculate the average amount grossed by all films whose titles start with the letter 'A' and alias with `avg_gross_A`.
- 3 Calculate the lowest gross film in 1994 and use the alias `lowest_gross`.
- 4 Calculate the highest gross film between 2000 and 2012, inclusive, and use the alias `highest_gross`.

Take Hint (7 XP)

```
1 -- Calculate the sum of gross from the year 2000 or later
2 --
```

query result: films

No query executed yet...

Showing 0 out of 0 rows

## Question

1. Use `SUM()` to calculate the total gross for all films made in the year 2000 or later, and use the alias `total_gross`.
2. Calculate the average amount grossed by all films whose titles start with the letter 'A' and alias with `avg_gross_A`.
3. Calculate the lowest gross film in 1994 and use the alias `lowest_gross`.
4. Calculate the highest gross film between 2000 and 2012, inclusive, and use the alias `highest_gross`.

## Answer

-- Step 1: Calculate the total gross for films from 2000 or later

```
SELECT SUM(gross) AS total_gross
FROM films
WHERE release_year >= 2000;
```

-- Step 2: Calculate the average gross for films starting with 'A'

```
SELECT AVG(gross) AS avg_gross_A
FROM films
WHERE title LIKE 'A%';
```

-- Step 3: Find the lowest gross film in 1994

```
SELECT MIN(gross) AS lowest_gross
```

```
FROM films  
WHERE release_year = 1994;
```

```
-- Step 4: Find the highest gross film between 2000 and 2012  
SELECT MAX(gross) AS highest_gross  
FROM films  
WHERE release_year BETWEEN 2000 AND 2012;
```

### Code Explanation

1. SELECT SUM(gross) AS total\_gross: Calculates the total sum of the 'gross' column for films made in the year 2000 or later.
2. WHERE release\_year >= 2000: Filters the rows to include only films released in the year 2000 or later.
3. SELECT AVG(gross) AS avg\_gross\_A: Calculates the average of the 'gross' column for films whose titles start with the letter 'A'.
4. WHERE title LIKE 'A%': Filters the rows to include only films where the title starts with 'A'.
5. SELECT MIN(gross) AS lowest\_gross: Finds the minimum value in the 'gross' column for films released in 1994.
6. WHERE release\_year = 1994: Filters the rows to include only films released in 1994.
7. SELECT MAX(gross) AS highest\_gross: Finds the maximum value in the 'gross' column for films released between 2000 and 2012.
8. WHERE release\_year BETWEEN 2000 AND 2012: Filters the rows to include only films released between 2000 and 2012, inclusive.