

Combining Aggregate Functions with WHERE

The screenshot shows a web browser window with multiple tabs. The active tab is 'campus.datacamp.com/courses/intermediate-sql/aggregate-functions-3?ex=5'. The page content includes an exercise titled 'Combining aggregate functions with WHERE' with instructions and a SQL query editor. The instructions are as follows:

- 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`.

The SQL query editor on the right shows the following code:

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

The query result section shows 'No query executed yet...'. The bottom of the browser window shows a taskbar with various icons and a system clock indicating 16:57 on 27/11/2024.

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.