

## Adding and Subtracting Date and Time Values - Exercise (Updated)

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← Course Outline →

Daily XP 900

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Exercise

### Adding and subtracting date and time values

In this exercise, you will calculate the actual number of days rented as well as the true expected\_return\_date by using the rental\_duration column from the film table along with the familiar rental\_date from the rental table.

This will require that you dust off the skills you learned from prior courses on how to join two or more tables together. To select columns from both the film and rental tables in a single query, we'll need to use the inventory table to join these two tables together since there is no explicit relationship between them. Let's give it a try!

Instructions 2/2

50 XP

✓

Subtract the rental\_date from the return\_date to calculate the number of days\_rented.

2

Now use the AGE() function to calculate the days\_rented.

🔑 Take Hint (-15 XP)

query.sql

Light mode

```
1 SELECT f.title, f.rental_duration,
2      -- Calculate the number of days rented
3      ---(____, ____ ) AS days_rented
4 FROM film AS f
5      INNER JOIN inventory AS i ON f.film_id = i.film_id
6      INNER JOIN rental AS r ON i.inventory_id = r.inventory_id
7 ORDER BY f.title;
```

↺ Run Code Submit Answer

query result

film rental inventory

title	rental_duration	days_rented	days_rented_using_age
ACE GOLDFINGER	3	6 days, 19:30:00	6 days, 19:30:00
ACE GOLDFINGER	3	null	null
ACE GOLDFINGER	3	8 days, 0:08:00	8 days, 0:08:00
ACE GOLDFINGER	3	1 day, 2:09:00	1 day, 2:09:00
ACE GOLDFINGER	3	6 days, 21:32:00	6 days, 21:32:00
ACE GOLDFINGER	3	8 days, 0:02:00	8 days, 0:02:00
ACE GOLDFINGER	3	3 days, 1:12:00	3 days, 1:12:00
ADAPTATION HOLES	7	3 days, 0:58:00	3 days, 0:58:00
ADAPTATION HOLES	7	2 days, 20:23:00	2 days, 20:23:00

Showing 100 out of 15871 rows

Question:

1. Subtract the rental\_date from the return\_date to calculate the number of days rented.
2. Use the AGE() function to calculate the days\_rented.

### Answer:

```
-- Calculate the number of days rented
SELECT f.title, f.rental_duration,
       r.return_date - r.rental_date AS days_rented,
       AGE(r.return_date, r.rental_date) AS days_rented_using_age
FROM film AS f
INNER JOIN inventory AS i ON f.film_id = i.film_id
INNER JOIN rental AS r ON i.inventory_id = r.inventory_id
ORDER BY f.title;
```

### Explanation:

1. SELECT f.title, f.rental\_duration: Retrieves the film title and its rental duration.
2. r.return\_date - r.rental\_date AS days\_rented: Calculates the difference between the return\_date and rental\_date to determine the number of days rented.
3. AGE(r.return\_date, r.rental\_date) AS days\_rented\_using\_age: Uses the AGE() function to compute the interval between the return\_date and rental\_date, providing a detailed interval result.
4. INNER JOIN inventory AS i ON f.film\_id = i.film\_id: Joins the film and inventory tables using the film\_id column.
5. INNER JOIN rental AS r ON i.inventory\_id = r.inventory\_id: Joins the inventory and rental tables using the inventory\_id column.
6. ORDER BY f.title: Sorts the results alphabetically by the film title.

### Query Results:

The query results display the following columns:

1. title: The title of the film.
2. rental\_duration: The duration of the rental in days.
3. days\_rented: The calculated number of days rented, obtained by subtracting rental\_date from return\_date.
4. days\_rented\_using\_age: A similar calculation using the AGE() function, providing a more detailed interval format.

Example from the output:

- The film 'ACE GOLDFINGER' has a rental\_duration of 3 days. Some rows show a days\_rented of 6 days, 19:30:00, while others may have NULL values if the return\_date is not available.