ld	Title	Director	Year	Length_minutes
1	Toy Story	John Lasseter	1995	81
2	A Bug's Life	John Lasseter	1998	95
3	Toy Story 2	John Lasseter	1999	93
4	Monsters, Inc.	Pete Docter	2001	92
5	Finding Nemo	Andrew Stanton	2003	107
6	The Incredibles	Brad Bird	2004	116
7	Cars	John Lasseter	2006	117
8	Ratatouille	Brad Bird	2007	115
9	WALL-E	Andrew Stanton	2008	104
10	Up	Pete Docter	2009	101

SELECT * FROM movies;

Exercise 1 — Tasks

- 1. Find the title of each film ✓
- 2. Find the director of each film ✓
- 3. Find the title and director of each film
- 4. Find the title and year of each film ✓
- 5. Find all the information about each film \

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

KESE

Title	Year
Toy Story	1995
A Bug's Life	1998
Toy Story 2	1999
Monsters, Inc.	2001
Finding Nemo	2003

Exercise 2 — Tasks

- 1. Find the movie with a row id of 6 ✓
- 2. Find the movies released in the year s between 2000 and 2010 ✓
- 3. Find the movies **not** released in the **year** s between 2000 and 2010 ✓
- 4. Find the first 5 Pixar movies and their release year √

SELECT title, year FROM movies
WHERE year >= 1995 AND year <= 2003;

Stuck? Read this task's Solution.
Solve all tasks to continue to the next lesson.

Continue >



Title

Monsters University

Monsters, Inc.

Ratatouille

The Incredibles

Toy Story

Exercise 4 — Tasks

1. List all directors of Pixar movies (alphabetically), without duplicates ✓

2. List the last four Pixar movies released (ordered from most recent to least) ✓

3. List the **first** five Pixar movies sorted alphabetically ✓

4. List the **next** five Pixar movies sorted alphabetically ✓

SELECT DISTINCT title FROM movies ORDER BY title ASC LIMIT 5 OFFSET 5;

Stuck? Read this task's Solution. Solve all tasks to continue to the next lesson.

Continue >

Table: North_american_cities

City	Population
Chicago	2718782
Houston	2195914

SELECT city, population FROM north_american_cities
WHERE country = "United States" AND population <= 2718782 AND population >=
 2195914
ORDER BY population DESC
LIMIT 2;

Review 1 — Tasks

- 1. List all the Canadian cities and their populations ✓
- 2. Order all the cities in the United States by their latitude from north to south ✓
- 3. List all the cities west of Chicago, ordered from west to east ✓
- **4.** List the two largest cities in Mexico (by population) ✓
- List the third and fourth largest cities (by population) in the United States and their population √

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

RESET

Query Results			
Cars 2	191452396	368400000	•
Toy Story 2	245852179	239163000	
The Incredibles	261441092	370001000	
WALL-E	223808164	297503696	П
Toy Story 3	415004880	648167031	
Toy Story	191796233	170162503	
Cars	244082982	217900167	
Up	293004164	438338580	
Monsters, Inc.	289916256	272900000	
A Bug's Life	162798565	200600000	
Brave	237283207	301700000	-

Exercise 6 — Tasks

- 1. Find the domestic and international sales for each movie √
- 2. Show the sales numbers for each movie that did better internationally rather than domestically
- 3. List all the movies by their ratings in descending order

SELECT title, Domestic_sales, International_sales
FROM movies
INNER JOIN Boxoffice
ON movies.Id = Boxoffice.Movie_id

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Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Finish above Tasks

RESET

Title	Domestic_sales	International_sales	^
Finding Nemo	380843261	555900000	
Monsters University	268492764	475066843	
Ratatouille	206445654	417277164	
Cars 2	191452396	368400000	
The Incredibles	261441092	370001000	
WALL-E	223808164	297503696	
Toy Story 3	415004880	648167031	
Up	293004164	438338580	
A Bug's Life	162798565	200600000	
Brave	237283207	301700000	~

SELECT title, Domestic_sales, International_sales

FROM movies

INNER JOIN Boxoffice

ON movies.Id = Boxoffice.Movie_id

WHERE Boxoffice.International_sales > Boxoffice.Domestic_sales

Exercise 6 — Tasks

- 1. Find the domestic and international sales for each movie ✓
- 2. Show the sales numbers for each movie that did better internationally rather than domestically ✓
- 3. List all the movies by their ratings in descending order

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Finish above Tasks

Title	Rating	Î
WALL-E	8.5	
Toy Story 3	8.4	
Toy Story	8.3	
Up	8.3	
Finding Nemo	8.2	
Monsters, Inc.	8.1	
Ratatouille	8	
The Incredibles	8	
Toy Story 2	7.9	
Monsters University	7.4	+

Exercise 6 — Tasks

1. Find the domestic and international sales for each movie ✓

2. Show the sales numbers for each movie that did better internationally rather than domestically ✓

3. List all the movies by their ratings in descending order ✓

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

SELECT title, Rating
FROM movies
INNER JOIN Boxoffice
ON movies.Id = Boxoffice.Movie_id
ORDER BY Rating DESC

Query Results Building Exercise 7 — Tasks 1e 1. Find the list of all buildings that have 2w employees ✓ 2. Find the list of all buildings and their capacity 3. List all buildings and the distinct employee roles in each building (including empty buildings) SELECT DISTINCT Employees.Building FROM employees Stuck? Read this task's Solution. LEFT JOIN Buildings Solve all tasks to continue to the next lesson. ON employees.Building = Buildings.Building_name WHERE employees.Building IS NOT NULL

Building_name	Capacity
1e	24
1w	32
2e	16
2w	20

Exercise 7 — Tasks

- 1. Find the list of all buildings that have employees ✓
- 2. Find the list of all buildings and their capacity
- 3. List all buildings and the distinct employee roles in each building (including empty buildings)

SELECT *
FROM Buildings

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Finish above Tasks

Building_name	Role
1e	Engineer
1e	Manager
1w	
2e	
2w	Artist
2w	Manager

Exercise 7 — Tasks

- 1. Find the list of all buildings that have employees ✓
- 2. Find the list of all buildings and their capacity
- 3. List all buildings and the distinct employee roles in each building (including empty buildings) ✓

SELECT DISTINCT Buildings.building_name, Employees.role FROM Buildings

LEFT JOIN Employees

ON Buildings.Building_name = Employees.Building;

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

Name	Role	Building	^
Yancy I.	Engineer		
Oliver P.	Artist		

Exercise 8 — Tasks

- 1. Find the name and role of all employees who have not been assigned to a building ✓
- 2. Find the names of the buildings that hold no employees

SELECT Name, Role, Building FROM Employees WHERE Building IS NULL

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Finish above Tasks

Building_name Role 1w 2e

Exercise 8 — Tasks

- Find the name and role of all employees who have not been assigned to a building √
- 2. Find the names of the buildings that hold no employees ✓

SELECT Buildings.Building_name, Employees.Role
FROM Buildings
LEFT JOIN Employees
ON Employees.Building = Buildings.Building_name
WHERE Role IS NULL

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

RESET

Title	(Boxoffice.Domestic_sales + Boxoffice.International_sales) / 1000000	_		
Toy Story	361.958736			
A Bug's Life	363.398565			
Toy Story 2	485.015179			
Monsters, Inc.	562.816256			
Finding Nemo	936.743261			
The Incredibles	631.442092			
Cars	461.983149			
Ratatouille	623.722818			
WALL-E	521.31186			
Up	731.342744	•		
<pre>SELECT Movies.Title, (Boxoffice.Domestic_sales + Boxoffice .International_sales) / 1000000 FROM Movies LEFT JOIN Boxoffice ON Movies.Id = Boxoffice.Movie_id; RESET</pre>				

Exercise 9 — Tasks

- List all movies and their combined sales in millions of dollars √
- 2. List all movies and their ratings in percent
- 3. List all movies that were released on even number years

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Finish above Tasks

Title	Ratings_percent	
Toy Story	83	
A Bug's Life	72	
Toy Story 2	79	
Monsters, Inc.	81	
Finding Nemo	82	
The Incredibles	80	
Cars	72	
Ratatouille	80	
WALL-E	85	
Up	83	•

SELECT Movies.Title, Boxoffice.Rating * 10 AS ratings_percent
FROM Movies
LEFT JOIN Boxoffice
ON Movies.Id = Boxoffice.Movie_id;

Exercise 9 — Tasks

- 1. List all movies and their combined sales in millions of dollars ✓
- 2. List all movies and their ratings in percent \checkmark
- 3. List all movies that were released on even number years

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Finish above Tasks

RESET

Title	Year	4
A Bug's Life	1998	
The Incredibles	2004	
Cars	2006	
WALL-E	2008	
Toy Story 3	2010	
Brave	2012	

Exercise 9 — Tasks

1. List all movies and their combined sales in millions of dollars ✓

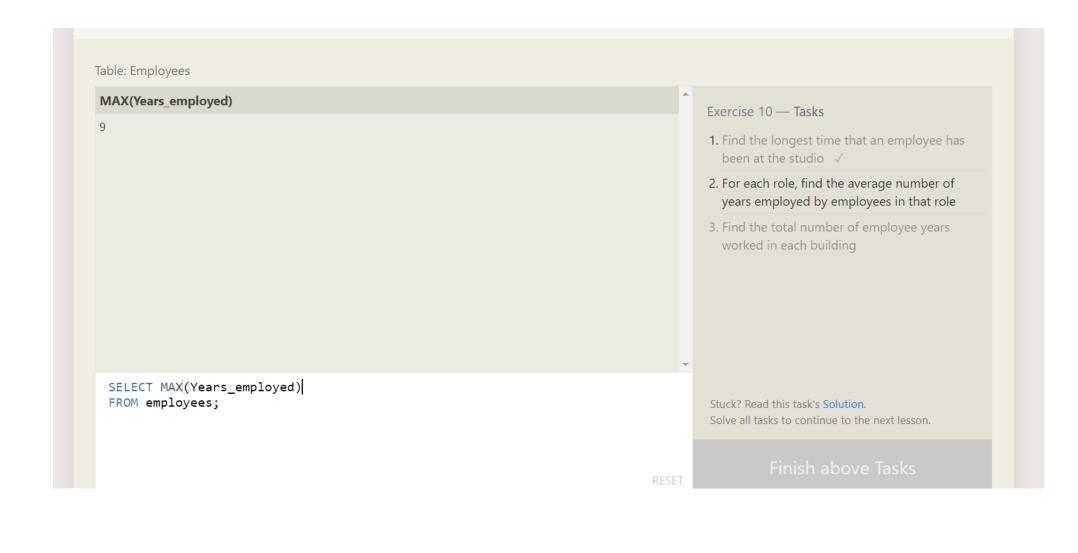
2. List all movies and their ratings in percent \checkmark

3. List all movies that were released on even number years ✓

SELECT Title, Year FROM Movies WHERE Year % 2 = 0

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >



Role	AVG(Years_employed)	Î
Artist	6	
Engineer	3.4	
Manager	6	

Exercise 10 — Tasks

- 1. Find the longest time that an employee has been at the studio ✓
- 2. For each role, find the average number of years employed by employees in that role ✓
- 3. Find the total number of employee years worked in each building

SELECT role, AVG(Years_employed)
FROM employees
GROUP BY role;

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Finish above Tasks

SUM(Years_employed)	Building
29	1e
36	2w

Exercise 10 — Tasks

- 1. Find the longest time that an employee has been at the studio ✓
- 2. For each role, find the average number of years employed by employees in that role ✓
- 3. Find the total number of employee years worked in each building ✓

SELECT SUM(Years_employed), Building FROM employees GROUP BY Building;

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

RESE.

Role	COUNT(*)	Exercise 11 — Tasks
Artist 5		 Find the number of Artists in the studio (without a HAVING clause) √
		2. Find the number of Employees of each role the studio
		3. Find the total number of years employed b Engineers
SELECT role, COUNTROM employees GROUP BY Role LIMIT 1;	T(*)	Stuck? Read this task's Solution . Solve all tasks to continue to the next lesson.
•		Finish above Tasks

Role	COUNT (*)	^
Artist	5	
Engineer	5	
Manager	3	

Exercise 11 — Tasks

- 1. Find the number of Artists in the studio (without a **HAVING** clause) ✓
- 2. Find the number of Employees of each role in the studio ✓
- 3. Find the total number of years employed by all Engineers

SELECT Role, COUNT (*)
FROM employees
GROUP BY Role;

Stuck? Read this task's Solution.
Solve all tasks to continue to the next lesson.

Finish above Tasks

RECE

Role	SUM(Years_employed)	
Engineer	17	

Exercise 11 — Tasks

- 1. Find the number of Artists in the studio (without a **HAVING** clause) ✓
- 2. Find the number of Employees of each role in the studio ✓
- 3. Find the total number of years employed by all Engineers ✓

SELECT Role, SUM(Years_employed)
FROM employees
WHERE Role = 'Engineer'
GROUP BY Role;

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

Director	COUNT(Title)	^
Andrew Stanton	2	
Brad Bird	2	
Brenda Chapman	1	
Dan Scanlon	1	
John Lasseter	5	
Lee Unkrich	1	
Pete Docter	2	

Exercise 12 — Tasks

1. Find the number of movies each director has directed ✓

2. Find the total domestic and international sales that can be attributed to each director

SELECT Director, COUNT(Title)
FROM movies
GROUP BY Director;

Stuck? Read this task's Solution.
Solve all tasks to continue to the next lesson.

Finish above Tasks

RESET

Director	Total_sales
Andrew Stanton	1458055121
Brad Bird	1255164910
Brenda Chapman	538983207
Dan Scanlon	743559607
John Lasseter	2232208025
Lee Unkrich	1063171911
Pete Docter	1294159000

Exercise 12 — Tasks

- 1. Find the number of movies each director has directed ✓
- 2. Find the total domestic and international sales that can be attributed to each director ✓

SELECT Movies.Director,SUM(Boxoffice.Domestic_sales + Boxoffice
 .International_sales) AS total_sales
FROM movies
LEFT JOIN Boxoffice
ON Movies.Id = Boxoffice.Movie_id
GROUP BY Director;

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

RESET

Id	Title	Director	Year	Length_minutes
1	Toy Story	John Lasseter	1995	81
2	A Bug's Life	John Lasseter	1998	95
3	Toy Story 2	John Lasseter	1999	93
4	Toy Story 4	John Lasseter	2005	90

Exercise 13 — Tasks

- 1. Add the studio's new production, Toy Story 4 to the list of movies (you can use any director)
- 2. Toy Story 4 has been released to critical acclaim! It had a rating of 8.7, and made 340 million domestically and 270 million internationally. Add the record to the BoxOffice table.

INSERT INTO Movies VALUES (4, 'Toy Story 4', 'John Lasseter', 2005, 90);

Stuck? Read this task's Solution. Solve all tasks to continue to the next lesson.

Movie_id	Rating	Domestic_sales	International_sales
3	7.9	245852179	239163000
1	8.3	191796233	170162503
2	7.2	162798565	200600000
4	8.7	340	270

Exercise 13 — Tasks

- Add the studio's new production, Toy Story 4
 to the list of movies (you can use any director)

INSERT INTO Boxoffice
VALUES (4, 8.7, 340, 270);

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

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Id	Title	Director	Year	Length_minutes
1	Toy Story	John Lasseter	1995	81
2	A Bug's Life	John Lasseter	1998	95
3	Toy Story 2	John Lasseter	1899	93
4	Monsters, Inc.	Pete Docter	2001	92
5	Finding Nemo	Andrew Stanton	2003	107
6	The Incredibles	Brad Bird	2004	116
7	Cars	John Lasseter	2006	117
8	Ratatouille	Brad Bird	2007	115
9	WALL-E	Andrew Stanton	2008	104
10	Up	Pete Docter	2009	101

Exercise 14 — Tasks

- **1.** The director for A Bug's Life is incorrect, it was actually directed by **John Lasseter** ✓
- 2. The year that Toy Story 2 was released is incorrect, it was actually released in **1999**
- 3. Both the title and director for Toy Story 8 is incorrect! The title should be "Toy Story 3" and it was directed by **Lee Unkrich**

UPDATE Movies
SET Director = 'John Lasseter'
WHERE Id = 2;

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Finish above Tasks

ld	Title	Director	Year	Length_minutes
1	Toy Story	John Lasseter	1995	81
2	A Bug's Life	John Lasseter	1998	95
3	Toy Story 2	John Lasseter	1999	93
4	Monsters, Inc.	Pete Docter	2001	92
5	Finding Nemo	Andrew Stanton	2003	107
6	The Incredibles	Brad Bird	2004	116
7	Cars	John Lasseter	2006	117
8	Ratatouille	Brad Bird	2007	115
9	WALL-E	Andrew Stanton	2008	104
10	Up	Pete Docter	2009	101

Exercise 14 — Tasks

- 1. The director for A Bug's Life is incorrect, it was actually directed by **John Lasseter** ✓
- 2. The year that Toy Story 2 was released is incorrect, it was actually released in 1999 ✓
- 3. Both the title and director for Toy Story 8 is incorrect! The title should be "Toy Story 3" and it was directed by **Lee Unkrich**

UPDATE Movies SET Year = 1999 WHERE Id = 3;

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Finish above Tasks

4	Monsters, Inc.	Pete Docter	2001	92	•
5	Finding Nemo	Andrew Stanton	2003	107	
6	The Incredibles	Brad Bird	2004	116	
7	Cars	John Lasseter	2006	117	
8	Ratatouille	Brad Bird	2007	115	
9	WALL-E	Andrew Stanton	2008	104	
10	Up	Pete Docter	2009	101	
11	Toy Story 3	Lee Unkrich	2010	103	
12	Cars 2	John Lasseter	2011	120	
13	Brave	Brenda Chapman	2012	102	
14	Monsters University	Dan Scanlon	2013	110	~

```
UPDATE Movies
SET Title = 'Toy Story 3', Director = 'Lee Unkrich'
WHERE Id = 11;
```

Exercise 14 — Tasks

- 1. The director for A Bug's Life is incorrect, it was actually directed by **John Lasseter** ✓
- 2. The year that Toy Story 2 was released is incorrect, it was actually released in 1999 ✓
- 3. Both the title and director for Toy Story 8 is incorrect! The title should be "Toy Story 3" and it was directed by Lee Unkrich ✓

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

ld	Title	Director	Year	Length_minutes
7	Cars	John Lasseter	2006	117
8	Ratatouille	Brad Bird	2007	115
9	WALL-E	Andrew Stanton	2008	104
10	Up	Pete Docter	2009	101
11	Toy Story 3	Lee Unkrich	2010	103
12	Cars 2	John Lasseter	2011	120
13	Brave	Brenda Chapman	2012	102
14	Monsters University	Dan Scanlon	2013	110

Exercise 15 — Tasks

- 1. This database is getting too big, lets remove all movies that were released **before** 2005.
- 2. Andrew Stanton has also left the studio, so please remove all movies directed by him.

DELETE FROM movies WHERE Year < 2005;

Stuck? Read this task's Solution. Solve all tasks to continue to the next lesson.

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Id	Title	Director	Year	Length_minutes
7	Cars	John Lasseter	2006	117
8	Ratatouille	Brad Bird	2007	115
10	Up	Pete Docter	2009	101
11	Toy Story 3	Lee Unkrich	2010	103
12	Cars 2	John Lasseter	2011	120
13	Brave	Brenda Chapman	2012	102
14	Monsters University	Dan Scanlon	2013	110

Exercise 15 — Tasks

1. This database is getting too big, lets remove all movies that were released **before** 2005.

 \checkmark

2. Andrew Stanton has also left the studio, so please remove all movies directed by him. ✓

DELETE FROM movies
WHERE Director = 'Andrew Stanton';

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

Table: Database Exercise 16 — Tasks 1. Create a new table named **Database** with Missing table... the following columns: - Name A string (text) describing the name of the database - Version A number (floating point) of the latest version of this database Download_count An integer count of the number of times this database was downloaded This table has no constraints. ✓ CREATE TABLE Database (id INTEGER PRIMARY KEY, Stuck? Read this task's Solution. Name TEXT, Solve all tasks to continue to the next lesson. Version number, Download_count number) Continue >

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Id	Title	Director	Year	Length_minutes	Aspect_ratio
1	Toy Story	John Lasseter	1995	81	FLOAT
2	A Bug's Life	John Lasseter	1998	95	FLOAT
3	Toy Story 2	John Lasseter	1999	93	FLOAT
4	Monsters, Inc.	Pete Docter	2001	92	FLOAT
5	Finding Nemo	Andrew Stanton	2003	107	FLOAT
6	The Incredibles	Brad Bird	2004	116	FLOAT
7	Cars	John Lasseter	2006	117	FLOAT
8	Ratatouille	Brad Bird	2007	115	FLOAT
9	WALL-E	Andrew Stanton	2008	104	FLOAT
10	Up	Pete Docter	2009	101	FLOAT

Exercise 17 — Tasks

- Add a column named Aspect_ratio with a FLOAT data type to store the aspect-ratio each movie was released in. √
- 2. Add another column named **Language** with a **TEXT** data type to store the language that the movie was released in. Ensure that the default for this language is **English**.

ALTER TABLE Movies
ADD column Aspect_ratio
DEFAULT FLOAT;

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Finish above Tasks

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4	Monsters, Inc.	Pete Docter	2001	92	FLOAT	English	•
5	Finding Nemo	Andrew Stanton	2003	107	FLOAT	English	
6	The Incredibles	Brad Bird	2004	116	FLOAT	English	
7	Cars	John Lasseter	2006	117	FLOAT	English	
8	Ratatouille	Brad Bird	2007	115	FLOAT	English	
9	WALL-E	Andrew Stanton	2008	104	FLOAT	English	
10	Up	Pete Docter	2009	101	FLOAT	English	
11	Toy Story 3	Lee Unkrich	2010	103	FLOAT	English	
12	Cars 2	John Lasseter	2011	120	FLOAT	English	
13	Brave	Brenda Chapman	2012	102	FLOAT	English	
14	Monsters University	Dan Scanlon	2013	110	FLOAT	English	~

ALTER TABLE Movies ADD column Language TEXT DEFAULT 'English'

Exercise 17 — Tasks

- Add a column named Aspect_ratio with a FLOAT data type to store the aspect-ratio each movie was released in. √
- 2. Add another column named **Language** with a **TEXT** data type to store the language that the movie was released in. Ensure that the default for this language is **English**. ✓

Stuck? Read this task's **Solution**.
Solve all tasks to continue to the next lesson.

Continue >

ld	Title	Director	Year	Length_minutes			Exercise 18 — Tasks
							 We've sadly reached the end of our lessons, lets clean up by removing the Movies table
						*	2. And drop the BoxOffice table as well
DROF	P TABLE IF	EXISTS Movies;					Stuck? Read this task's Solution. Solve all tasks to continue to the next lesson.
					RUN QUERY	RESET	

