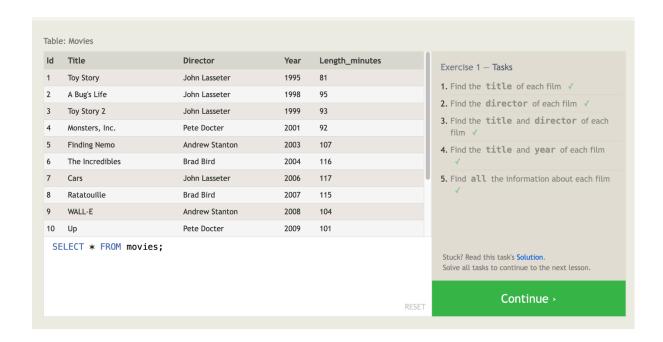
#### Lesson 1.

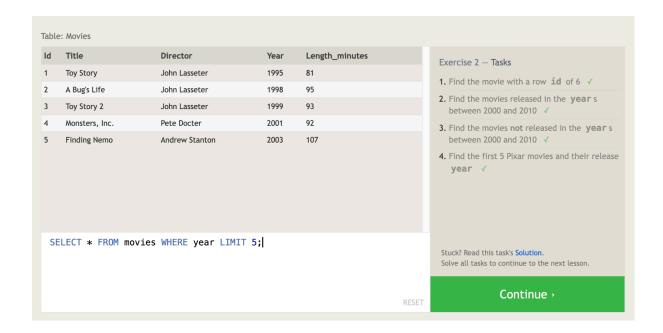
## SELECT queries 101

- 1.SELECT title FROM movies
- 2.SELECT director FROM movies
- 3.SELECT title, director FROM movies
- 4,SELECT title,year FROM movies
- 5.SELECT \* FROM movies



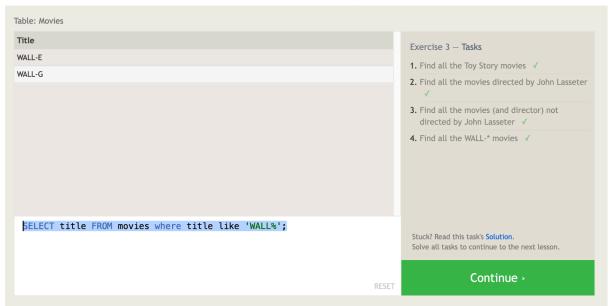
## Lesson 2. Queries with constraints (Pt. 1)

- 1.SELECT \* FROM movies WHERE id = 6;
- 2.SELECT title FROM movies where year between 2000 AND 2010;
- 3.SELECT title FROM movies where year between 2000 AND 2010;
- 4.SELECT \* FROM movies WHERE year LIMIT 5;



Lesson 3. Queries with constraints (Pt. 2)

- 1.SELECT title FROM movies WHERE title LIKE "Toy Story%";
- 2.SELECT title FROM movies where director like 'John Lasseter';
- 3.SELECT title, director FROM movies where director not like 'John Lasseter';
- 4.SELECT title FROM movies where title like 'WALL%';



# Lesson 4. Filtering and sorting Query results

- 1.SELECT DISTINCT director from Movies order by director
- 2.SELECT distinct title FROM movies order by year desc limit 4;
- 3.SELECT distinct title FROM movies order by title limit 5;
- 4.SELECT distinct title FROM movies order by title limit 5 offset 5;



## Lesson 5.Simple SELECT Queries

- 1.SELECT city,population FROM north\_american\_cities where country='Canada' 2.SELECT city FROM north\_american\_cities where country ='United States' order by latitude desc
- 3.SELECT \*FROM North\_american\_cities WHERE Longitude < -87.69 ORDER BY Longitude ASC;
- 4.SELECT city FROM north\_american\_cities where country='Mexico' order by population desc limit 2;
- 5.SELECT city FROM north\_american\_cities where country='United States' order by population desc limit 2 offset 2;



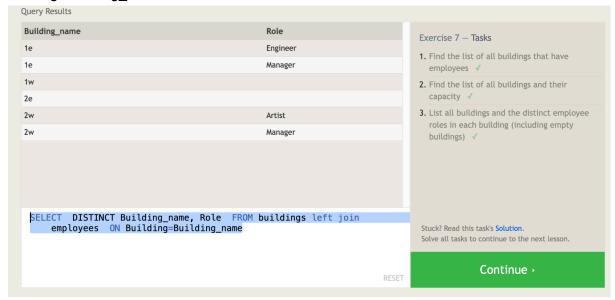
Lesson 6.Multi-table queries with JOINs

- 1.SELECT title,international\_sales,domestic\_sales FROM movies join boxoffice on id=Movie\_id;
- 2.SELECT title,International\_sales, Domestic\_sales FROM movies join boxoffice on id=Movie id where international sales > domestic sales ;
- 3.SELECT title FROM movies join boxoffice on id=Movie\_id order by Rating desc ;



### Lesson 7.OUTER JOINs

- 1.SELECT distinct Building FROM employees where years\_employed is not null;
- 2.SELECT building\_name,capacity FROM buildings
- 3.SELECT DISTINCT Building\_name, Role FROM buildings left join employees ON Building=Building\_name



#### Lesson 8.A short note on NULLs

- 1.SELECT Name, Role FROM employees where building is null;
- 2.SELECT \* FROM Buildings LEFT JOIN Employees ON Building\_name=Building WHERE Building IS NULL;



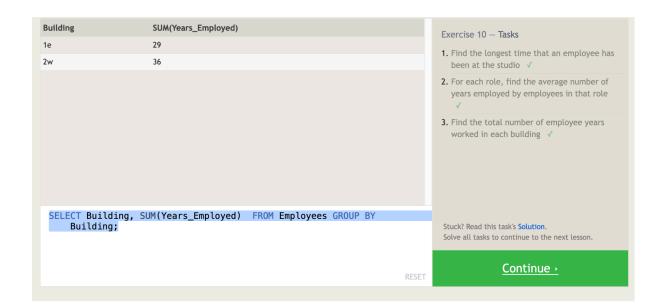
## Lesson 9. Queries with expressions;

- 1.SELECT Title, (Domestic\_sales + International\_sales)/1000000 AS Total\_Sales\_Millions FROM Movies LEFT JOIN Boxoffice ON Id=Movie\_Id;
- 2.SELECT Title, Rating\*10 as Percent FROM Movies LEFT JOIN Boxoffice ON Id=Movie\_Id; 3.SELECT Title, Year FROM Movies LEFT JOIN Boxoffice ON Id=Movie\_Id WHERE Year % 2 = 0;



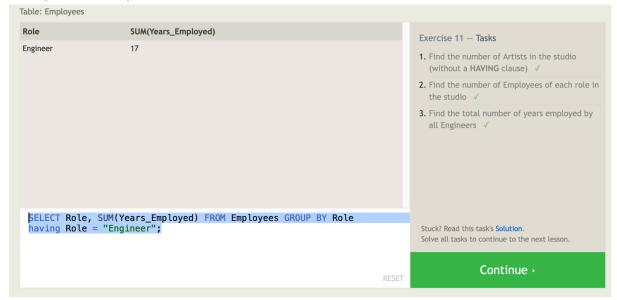
Lesson 10.Queries with aggregates (Pt. 1)

- 1.SELECT MAX(Years\_employed)FROM Employees
- 2.SELECT Role, AVG(Years Employed) FROM Employees GROUP BY Role;
- 3.SELECT Building, SUM(Years\_Employed) FROM Employees GROUP BY Building;



Lesson 11. Queries with aggregates (Pt. 2)

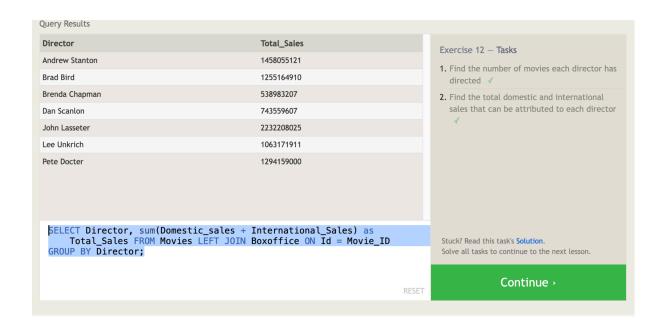
- 1.SELECT Role, COUNT(\*) AS Number\_of\_Artists FROM Employees WHERE Role = "Artist";
- 2.SELECT Role, COUNT(\*) FROM Employees GROUP BY Role;
- 3.SELECT Role, SUM(Years\_Employed) FROM Employees GROUP BY Role having Role = "Engineer";



Lesson 12:Order of execution of a Query

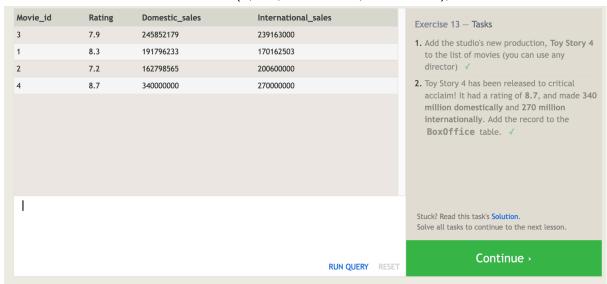
1.SELECT \*, COUNT(Title)FROM Movies GROUP BY Director;

2.SELECT Director, sum(Domestic\_sales + International\_Sales) as Total\_Sales FROM Movies LEFT JOIN Boxoffice ON Id = Movie\_ID GROUP BY Director;



## Lesson 13:Inserting rows

- 1.INSERT INTO Movies(id,title,director,year,length\_minutes) VALUES (4, 'Toy Story 4', 'John Lasseter', 2017, 123);
- 2.INSERT INTO Boxoffice VALUES (4, 8.7, 340000000, 270000000);



# Lesson 14:Updating rows

- 1.UPDATE Movies SET Director = "John Lasseter" WHERE Id = 2;
- 2.UPDATE Movies SET Year = "1999" WHERE Id = 3;
- 3.UPDATE Movies SET Title = "Toy Story 3", Director = "Lee Unkrich" WHERE Id = 11;

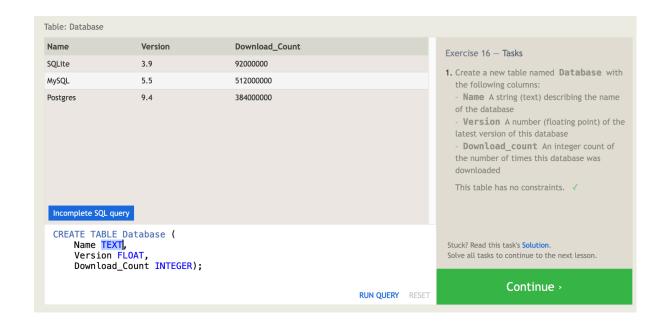
ı	Title	Director	Year	Length_minutes		Exercise 14 — Tasks
	Toy Story	Lee Unkrich	1995	81		
	A Bug's Life	John Lasseter	1998	95		<ol> <li>The director for A Bug's Life is incorrect, it was actually directed by John Lasseter √</li> </ol>
	Toy Story 2	Lee Unkrich	1999	93		2. The year that Toy Story 2 was released is
	Monsters, Inc.	Pete Docter	2001	92		incorrect, it was actually released in 1999
	Finding Nemo	Andrew Stanton	2003	107		· · · · · · · · · · · · · · · · · · ·
	The Incredibles	Brad Bird	2004	116		<ol><li>Both the title and director for Toy Story 8 incorrect! The title should be "Toy Story 3"</li></ol>
	Cars	John Lasseter	2006	117		and it was directed by Lee Unkrich ✓
	Ratatouille	Brad Bird	2007	115		
	WALL-E	Andrew Stanton	2008	104		
)	Up	Pete Docter	2009	101		
	DATE Movies SET Title	= "Toy Story 3", [	Director	= "Lee Unkrid	:h"	
νH	ERE Id = 11;					Stuck? Read this task's <b>Solution</b> .  Solve all tasks to continue to the next lesson.
						Continue >
				RUN QUI	RY RESET	continue >

# Lesson 15: Deleting rows

- 1.DELETE FROM Movies WHERE Year < 2005;
- 2.DELETE FROM Movies WHERE director='Andrew Stanton';

abte	e: Movies				
d	Title	Director	Year	Length_minutes	Exercise 15 — Tasks
7	Cars	John Lasseter	2006	117	This database is getting too big, lets remove
3	Ratatouille	Brad Bird	2007	115	all movies that were released <b>before</b> 2005.
10	Up	Pete Docter	2009	101	✓
11	Toy Story 3	Lee Unkrich	2010	103	2. Andrew Stanton has also left the studio, so
12	Cars 2	John Lasseter	2011	120	please remove all movies directed by him. √
13	Brave	Brenda Chapman	2012	102	
14	Monsters University	Dan Scanlon	2013	110	
					Stuck? Read this task's <b>Solution</b> . Solve all tasks to continue to the next lesson.
				run query Re	Continue >

Lesson 16:Creating tables
1.CREATE TABLE Database (
 Name TEXT,
 Version FLOAT,
 Download\_Count INTEGER);



## Lesson 17:Altering tables

1.ALTER TABLE Movies ADD COLUMN Aspect\_ratio FLOAT DEFAULT 3; 2.ALTER TABLE Movies ADD COLUMN Language TEXT DEFAULT "English";



Lesson 18:Dropping tables 1.drop table Movies 2.drop table boxoffice

Query	Results						
ld	Title	Director	Year	Length_minutes			Exercise 18 — Tasks  1. 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 ✓
					RUN QUERY	RESET	Stuck? Read this task's Solution. Solve all tasks to continue to the next lesson.  Continue >