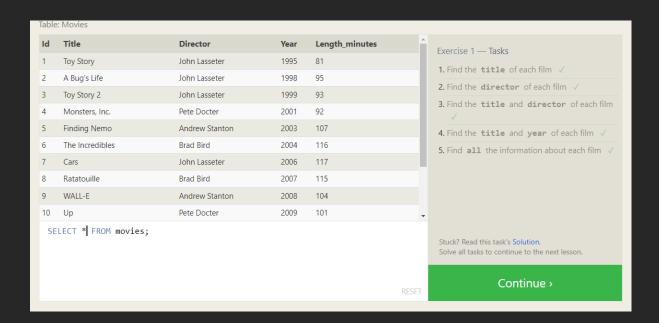
Road-Map: Day-33: Database: MySql – Day-1: Tasks

SQL Lesson 1: SELECT queries 101

Answers:

- 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;



SQL 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 NOT BETWEEN 2000 AND 2010;
- 4. SELECT Title FROM Movies LIMIT 5

Table: Movies		
Title	^	Exercise 2 — Tasks
Toy Story		1. Find the movie with a row id of 6 ✓
A Bug's Life		
Toy Story 2		2. Find the movies released in the year s between 2000 and 2010 ✓
Monsters, Inc.		3. Find the movies not released in the year s
Finding Nemo		between 2000 and 2010 ✓
	*	4. Find the first 5 Pixar movies and their release year √
SELECT Title FROM Movies LIMIT 5;		Stuck? Read this task's Solution . Solve all tasks to continue to the next lesson.
RESE	ΞT	Continue >

SQL Lesson 3: Queries with constraints (Pt. 2):

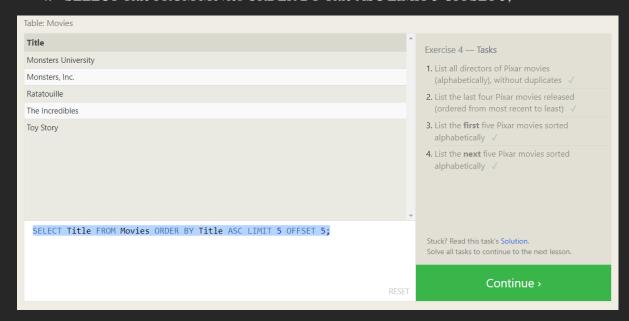
- 1. SELECT Title FROM Movies WHERE Title LIKE "%Toy%";
- 2. SELECT Title FROM Movies WHERE Director = "John Lasseter";
- 3. SELECT Title FROM Movies WHERE Director != "John Lasseter";
- 4. SELECT Title FROM Movies WHERE Title LIKE "%WALL%";



SQL Lesson 4: Filtering and sorting Query results:

Answers:

- 1. SELECT DISTINCT Director FROM Movies ORDER BY Director;
- 2. SELECT Title FROM Movies ORDER BY Year DESC LIMIT 4;
- 3. SELECT Title FROM Movies ORDER BY Title ASC LIMIT 5;
- 4. SELECT Title FROM Movies ORDER BY Title ASC LIMIT 5 OFFSET 5;



SQL Review: 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 City FROM north_american_cities WHERE Longitude < -87.629798 ORDER BY Longitude;
- 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;



SQL Lesson 6: Multi-table queries with JOINs:

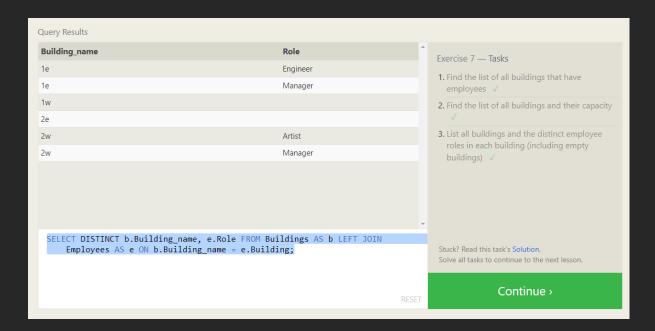
- 1. SELECT Title, Domestic_sales, International_sales FROM Movies INNER JOIN Boxoffice ON Movies.id = Boxoffice.Movie_id;
- 2. SELECT m.Title, bo.Domestic_sales, bo.International_sales FROM Movies AS m INNER JOIN Boxoffice AS bo ON m.id = bo.Movie_id WHERE bo.International_sales > bo.Domestic_sales;
- 3. SELECT m.Title, bo.Rating FROM Movies AS m INNER JOIN Boxoffice AS bo ON m.id = bo.Movie_id ORDER BY bo.Rating DESC;



SQL Lesson 7: OUTER JOIN's:

Answers:

- 1. SELECT DISTINCT building FROM employees;
- 2. SELECT Building_name, Capacity FROM Buildings;
- 3. SELECT DISTINCT b.Building_name, e.Role FROM Buildings AS b LEFT JOIN Employees AS e ON b.Building_name = e.Building;



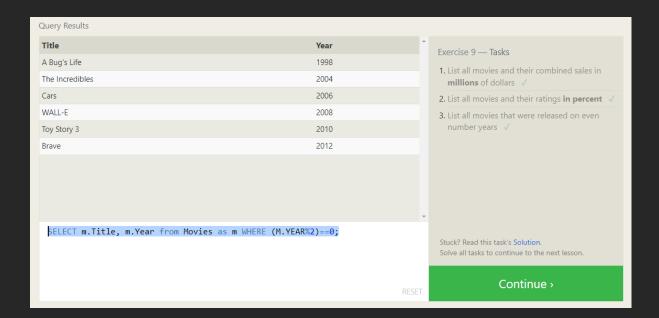
SQL Lesson 8: A short note on NULLs :

- 1. SELECT e.Name, e.Role FROM employees AS e LEFT JOIN Buildings AS b ON e.Building = B.Building_name WHERE B.Building_name IS NULL;
- 2. SELECT DISTINCT b.Building_name FROM Buildings AS b LEFT JOIN Employees AS e ON b.Building_name = e.Building WHERE Role IS NULL

Query Results		
Building_name	٨	Exercise 8 — Tasks
1w		Find the name and role of all employees who
2e		have not been assigned to a building \checkmark
	*	2. Find the names of the buildings that hold no employees ✓
SELECT DISTINCT b.Building_name FROM Buildings AS b LEFT JOIN Employees AS e ON b.Building_name = e.Building WHERE Role IS NULL;		Stuck? Read this task's Solution.
,		Solve all tasks to continue to the next lesson.
RESE	Т	Continue >

SQL Lesson 9: Queries with expressions:

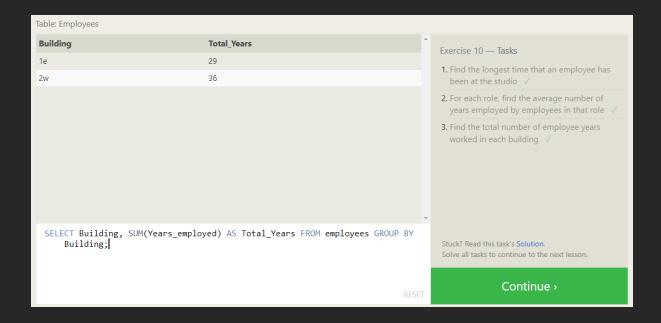
- SELECT DISTINCT m.Title, (b.Domestic_sales+b.International_sales)/1000000 AS
 Millions from Movies as m JOIN Boxoffice AS b ON m.Id = b.Movie_id ORDER BY
 Millions DESC;
- 2. SELECT m.Title, (b.Rating)*10 AS Rating from Movies as m JOIN Boxoffice AS b ON m.Id = b.Movie_id ORDER BY b.Rating DESC;
- 3. SELECT m.Title, m.Year from Movies as m WHERE (M.YEAR%2)==0;



SQL Lesson 10: Queries with aggregates (Pt. 1):

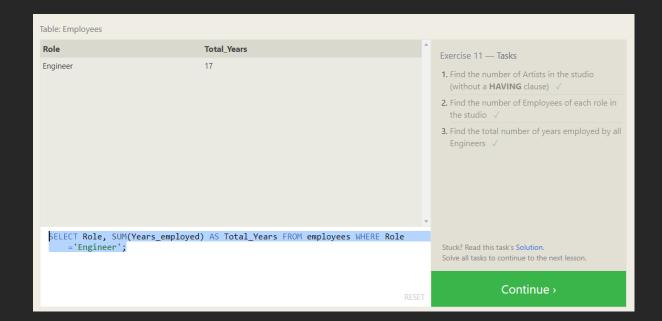
Answers:

- 1. SELECT Name, MAX(Years_employed) FROM Employees;
- 2. SELECT Role, AVG(Years_employed) as Average_years_employed FROM Employees GROUP BY Role;
- 3. SELECT Building, SUM(Years_employed) AS Total_Years FROM employees GROUP BY Building;



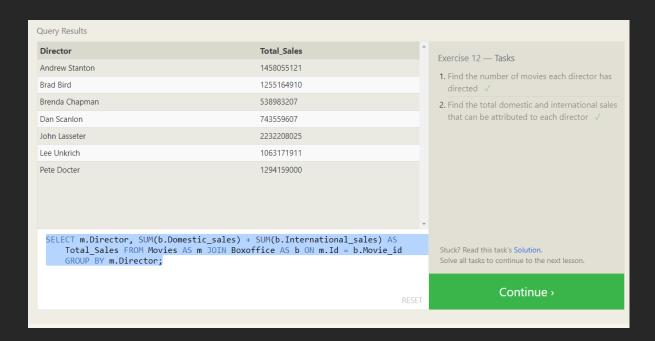
SQL Lesson 11: Queries with aggregates (Pt. 2):

- 1. SELECT Role, COUNT(Role) AS Artist_Count From employees WHERE Role = 'Artist';
- 2. SELECT Role, COUNT(Role) AS Total_Employees FROM Employees GROUP BY Role;
- 3. SELECT Role, SUM(Years_employed) AS Total_Years FROM employees WHERE Role='Engineer';



SQL Lesson 12: Order of execution of a Query:

- 1. SELECT Director, COUNT(Director) AS Total_Movies FROM movies GROUP BY Director:
- 2. SELECT m.Director, SUM(b.Domestic_sales) + SUM(b.International_sales) AS Total_Sales FROM Movies AS m JOIN Boxoffice AS b ON m.Id = b.Movie_id GROUP BY m.Director;



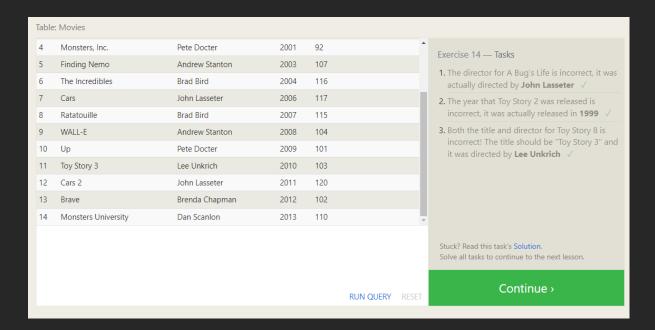
SQL Lesson 13: Inserting rows

- 1. INSERT INTO Movies VALUES(15, 'Toy Story 4', 'John Lasseter', 2002, 90);
- 2. INSERT INTO BoxOffice VALUES(15, 8.7, 340000000, 270000000);

2 7.2 162798565 200600000 15 8.7 34000000 270000000 2. Toy Story 4 has been released to critical acclaim! It had a rating of 8.7, and macmillion domestically and 270 million	Query Results						
3 7.9 245852179 239163000 1 8.3 191796233 170162503 2 7.2 162798565 200600000 15 8.7 34000000 270000000 2. Toy Story 4 has been released to critica acclaim! It had a rating of 8.7, and made million domestically and 270 million internationally. Add the record to the BoxOffice table. ✓	Movie_id	Rating	Domestic_sales	International_sa	les	^	Evercise 13 — Tasks
1 8.3 191796233 170162503 2 7.2 162798565 200600000 15 8.7 34000000 270000000 2. Toy Story 4 has been released to critica acclaim! It had a rating of 8.7, and made million domestically and 270 million internationally. Add the record to the BoxOffice table. ✓ Stuck? Read this task's Solution.	3	7.9 7	245852179	239163000			
15 8.7 340000000 2700000000 2. Toy Story 4 has been released to critica acclaim! It had a rating of 8.7, and made million domestically and 270 million internationally. Add the record to the BoxOffice table. ✓	1	8.3	191796233	170162503			to the list of movies (you can use any director)
acclaim! It had a rating of 8.7, and mad million domestically and 270 million internationally. Add the record to the BoxOffice table. ✓ Stuck? Read this task's Solution.	2	7.2	162798565	200600000			✓
million domestically and 270 million internationally. Add the record to the BoxOffice table. Stuck? Read this task's Solution.	15	8.7	340000000	270000000			2. Toy Story 4 has been released to critical
						*	million domestically and 270 million internationally. Add the record to the
RUN QUERY RESET Continue >					RUN QUERY F	RESET	Continue >

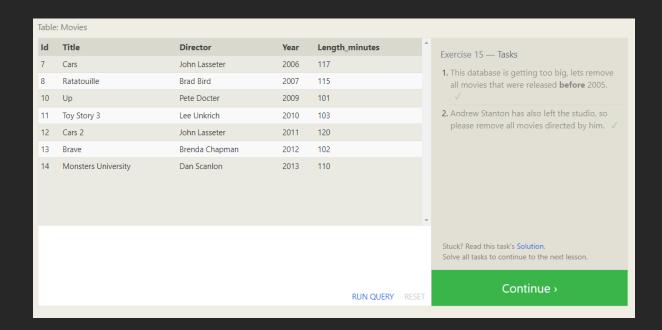
SQL Lesson 14: Updating rows:

- 1. UPDATE movies SET director = "John Lasseter" WHERE Title = "A Bug's Life";
- 2. UPDATE movies SET Year = 1999 WHERE Title = "Toy Story 2";
- 3. UPDATE movies SET Title = "Toy Story 3", Director = "Lee Unkrich" WHERE ID = 11;



SQL Lesson 15: Deleting rows

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



SQL Lesson 16: Creating tables:

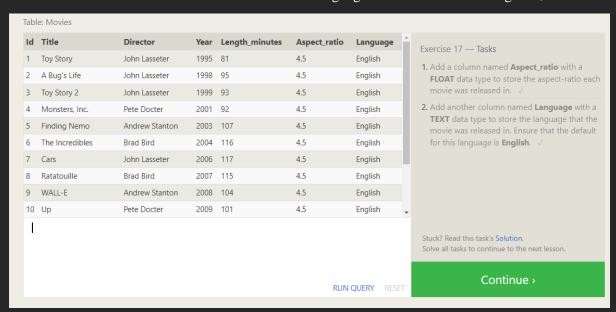
Answers:

1. CREATE TABLE Database (Name varchar(20), Version float ,Download_count int);

Table: Database						
Name	Version	Download_count		^	Exercise 16 — Tasks	
SQLite	3.9	92000000			Create a new table named Database with	
MySQL	5.5	512000000			the following columns:	
Postgres	9.4	38400000		~	- 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. ✓	
					Stuck? Read this task's Solution. Solve all tasks to continue to the next lesson.	
			RUN QUERY RE	SET	Continue ›	

SQL Lesson 17: Altering tables:

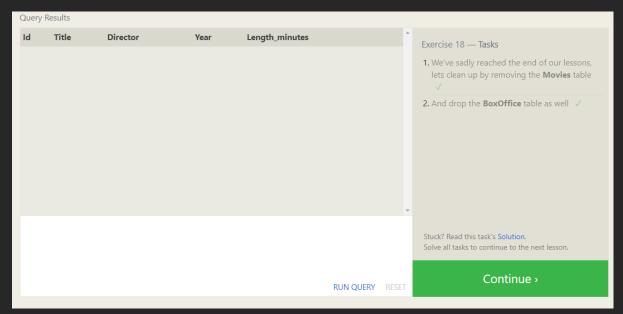
- 1. ALTER TABLE Movies ADD COLUMN Aspect_ratio FLOAT DEFAULT 4.5;
- 2. ALTER TABLE Movies ADD COLUMN Language TEXT DEFAULT "English";



SQL Lesson 18: Dropping tables:

Answers:

- 1. DROP TABLE Movies;
- 2. DROP TABLE BoxOffice;





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SQL Lesson X: To infinity and beyond!



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