

GUVI – DAY 33

MySQL Task

1. Exercise 1, *Select Queries 101*

Table: Movies

| | | | | |
|----|-----------------|----------------|------|-----|
| 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 |
| 11 | Toy Story 3 | Lee Unkrich | 2010 | 103 |
| 12 | Cars 2 | John Lasseter | 2011 | 120 |
| 13 | Brave | Brenda Chapman | 2012 | 102 |

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 >

```
SELECT * FROM movies;
```

RESET

2. Exercise 2, *Queries with constraints, pt. 1*

Table: Movies

| | | | | |
|----|-----------------|----------------|------|-----|
| 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 |
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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 >

```
SELECT * FROM movies;
```

RESET

3. Exercise 3, *Queries with constraints pt. 2*

Table: Movies

| Id | Title | Director | Year | Length_minutes |
|----|--------|----------------|------|----------------|
| 9 | WALL-E | Andrew Stanton | 2008 | 104 |
| 87 | WALL-G | Brenda Chapman | 2042 | 97 |

Exercise 3 — Tasks

1. Find all the Toy Story movies ✓
2. Find all the movies directed by John Lasseter ✓
3. Find all the movies (and director) not directed by John Lasseter ✓
4. Find all the WALL-* movies ✓

Stuck? Read this task's [Solution](#).
Solve all tasks to continue to the next lesson.

Continue >

```
SELECT * FROM movies where title like "WALL-";
```

RESET

4. Exercise 4, *Filtering and sorting Query results*

Table: Movies

| Id | Title | Director | Year | Length_minutes |
|----|---------------------|---------------|------|----------------|
| 5 | Monsters University | Dan Scanlon | 2013 | 110 |
| 4 | Monsters, Inc. | Pete Docter | 2001 | 92 |
| 14 | Ratatouille | Brad Bird | 2007 | 115 |
| 12 | The Incredibles | Brad Bird | 2004 | 116 |
| 9 | Toy Story | John Lasseter | 1995 | 81 |

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 ✓

Stuck? Read this task's [Solution](#).
Solve all tasks to continue to the next lesson.

Continue >

```
SELECT * from movies order by title limit 5 offset 5;
```

RESET

5. Exercise 5, *Simple SELECT Queries*

Table: North_american_cities

| City | Population |
|---------|------------|
| Chicago | 2718782 |
| Houston | 2195914 |

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) ✓
5. 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 >

```
select city, population from north_american_cities where country = "United States" order by population desc limit 2 offset 2;
```

RESET

6. Exercise 6, *Multi-table queries with JOINS*

Query Results

| Title |
|---------------------|
| WALL-E |
| Toy Story 3 |
| Toy Story |
| Up |
| Finding Nemo |
| Monsters, Inc. |
| Ratatouille |
| The Incredibles |
| Toy Story 2 |
| Monsters University |

```
SELECT title FROM movies m join Boxoffice b on m.Id = b.movie_id order by b.rating desc;
```

RESET

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 >

7. Exercise 7, *OUTER JOINS*

Query Results

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

```
select distinct building_name, role from buildings left join employees on building_name = employees.building;
```

RESET

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) ✓

Stuck? Read this task's [Solution](#).
Solve all tasks to continue to the next lesson.

Continue >

8. Exercise 8, *A short note on NULLs*

Query Results

| Building_name |
|---------------|
| 1w |
| 2e |

```
select distinct building_name from buildings b left join employees e on e.building = b.building_name where building is null
```

RESET

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 ✓

Stuck? Read this task's [Solution](#).
Solve all tasks to continue to the next lesson.

Continue >

9. Exercise 9, Queries with expressions

Query Results

| Id | Title | Director | Year | Length_minutes |
|----|-----------------|----------------|------|----------------|
| 2 | A Bug's Life | John Lasseter | 1998 | 95 |
| 6 | The Incredibles | Brad Bird | 2004 | 116 |
| 7 | Cars | John Lasseter | 2006 | 117 |
| 9 | WALL-E | Andrew Stanton | 2008 | 104 |
| 11 | Toy Story 3 | Lee Unkrich | 2010 | 103 |
| 13 | Brave | Brenda Chapman | 2012 | 102 |

Exercise 9 — Tasks

1. 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.

Continue >

```
select * from movies where year%2 == 0
```

RESET

10. Exercise 10, Queries with aggregates pt. 1

Table: Employees

| Building | Sum(Years_employed) |
|----------|---------------------|
| 1e | 29 |
| 2w | 36 |

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 ✓

Stuck? Read this task's [Solution](#).
Solve all tasks to continue to the next lesson.

Continue >

```
select building, sum(years_employed) from employees group by building
```

RESET

11. Exercise 11, Queries with aggregates pt. 2

Table: Employees

| 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 ✓

Stuck? Read this task's [Solution](#).
Solve all tasks to continue to the next lesson.

Continue >

```
select role, sum(years_employed) from employees where role = "Engineer" group by role;
```

RESET

12. Exercise 12, Order of execution of a Query

Query Results

| Director | Total_Sales |
|----------------|-------------|
| Andrew Stanton | 521311860 |
| Brad Bird | 623722818 |
| Brenda Chapman | 538983207 |
| Dan Scanlon | 743559607 |
| John Lasseter | 559852396 |
| Lee Unkrich | 1063171911 |
| Pete Docter | 731342744 |

```
SELECT director, b.domestic_sales +  
b.international_sales as Total_Sales FROM movies m left join Boxoffice b on  
b.movie_id = m.id group by m.director;
```

RESET

Exercise 12 — Tasks

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

Stuck? Read this task's [Solution](#).
Solve all tasks to continue to the next lesson.

Continue >

13. Exercise 13, Inserting rows

Query Results

| Movie_id | Rating | Domestic_sales | International_sales |
|----------|--------|----------------|---------------------|
| 3 | 7.9 | 245852179 | 239163000 |
| 1 | 8.3 | 191796233 | 170162503 |
| 2 | 7.2 | 162798565 | 200600000 |
| 15 | 8.7 | 340000000 | 270000000 |

```
|
```

RUN QUERY RESET

Exercise 13 — Tasks

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

Stuck? Read this task's [Solution](#).
Solve all tasks to continue to the next lesson.

Continue >

14. Exercise 14, Updating rows

Table: Movies

| | | | | |
|----------------|-----------------|----------------|------|-----|
| 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 |
| Row(s) updated | iversity | Dan Scanlon | 2013 | 110 |

```
update movies set title = "Toy Story 3", director = "Lee Unkrich" where  
title = "Toy Story 8";
```

RUN QUERY RESET

Exercise 14 — Tasks

- The director for A Bug's Life is incorrect, it was actually directed by **John Lasseter** ✓
- The year that Toy Story 2 was released is incorrect, it was actually released in **1999** ✓
- 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 >

15. Exercise 15, *Deleting rows*

Table: Movies

| 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 Scanlan | 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. ✓

Stuck? Read this task's [Solution](#).
Solve all tasks to continue to the next lesson.

Continue >

16. Exercise 16, *Creating tables*

Table: Database

Missing table...

Exercise 16 — Tasks

1. Create a new table named **Database** with 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 downloadedThis table has no constraints. ✓

Stuck? Read this task's [Solution](#).
Solve all tasks to continue to the next lesson.

Continue >

17. Exercise 17, *Altering tables*

Table: Movies

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

Exercise 17 — Tasks

1. 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 >

18. Exercise 18, *Dropping tables*

Query Results

| Id | Title | Director | Year | Length_minutes |
|----|-------|----------|------|----------------|
|----|-------|----------|------|----------------|

RUN QUERY RESET

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 ✓

Stuck? Read this task's [Solution](#).

Solve all tasks to continue to the next lesson.

Continue >