

Exercise 1: Select queries

Table: Movies

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	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;`

RESET

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.

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Exercise 2: Queries with constraints (pt. 1)

Table: Movies

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	Monsters, Inc.	Pete Docter	2001	92
5	Finding Nemo	Andrew Stanton	2003	107

`SELECT * FROM movies where id<=5;`

RESET

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** ✓

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

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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

- Find all the Toy Story movies ✓
- Find all the movies directed by John Lasseter ✓
- Find all the movies (and director) not directed by John Lasseter ✓
- 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

Exercise 4: Filtering and sorting Query results

Table: Movies

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

Exercise 4 — Tasks

- List all directors of Pixar movies (alphabetically), without duplicates ✓
- List the last four Pixar movies released (ordered from most recent to least) ✓
- List the first five Pixar movies sorted alphabetically ✓
- 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 asc limit 5 offset 5;
```

RESET

Exercise 5: Simple Select Queries

Table: North_american_cities

City	Country	Population
Chicago	United States	2718782
Houston	United States	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.

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SELECT city, country, population
FROM north_american_cities
WHERE country = 'United States'
ORDER BY population desc limit 2 offset 2;

RESET

Exercise 6: Multi Table queries with JOINS

Table: Movies (Read-Only)

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	Monsters, Inc.	Pete Docter	2001	92
5	Finding Nemo	Andrew Stanton	2003	107
6	The Incredibles	Brad Bird	2004	116

Table: Boxoffice (Read-Only)

Movie_id	Rating	Domestic_sales	International_sales
5	8.2	380843261	555900000
14	7.4	268492764	475066843
8	8	206445654	417277164
12	6.4	191452396	368400000
3	7.9	245852179	239163000
6	8	261441092	370001000

Query Results

Id	Title	Rating
9	WALL-E	8.5
11	Toy Story 3	8.4
1	Toy Story	8.3
10	Up	8.3
5	Finding Nemo	8.2
4	Monsters, Inc.	8.1
8	Ratatouille	8
6	The Incredibles	8
3	Toy Story 2	7.9
14	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.

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JOIN
ON
ORDER BY

boxoffice
movies.id = boxoffice.movie_id
boxoffice.rating DESC;

RESET

Exercise 7: Outer JOINS:

Table: Buildings (Read-Only)

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

Table: Employees (Read-Only)

Role	Name	Building	Years_employed
Engineer	Becky A.	1e	4
Engineer	Dan B.	1e	2
Engineer	Sharon F.	1e	6
Engineer	Dan M.	1e	4
Engineer	Malcom S.	1e	1
Artist	Tylar S.	2w	2

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 = 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 ›

Exercise 8: A short note on NULLs:

Table: Buildings (Read-Only)

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

Table: Employees (Read-Only)

Role	Name	Building	Years_employed
Engineer	Becky A.	1e	4
Engineer	Dan B.	1e	2
Engineer	Sharon F.	1e	6
Engineer	Dan M.	1e	4
Engineer	Malcom S.	1e	1
Artist	Tylar S.	2w	2

Query Results

Building_name
1w
2e

```
SELECT b.building_name
FROM buildings b
LEFT JOIN employees e
ON b.building_name = e.building
WHERE e.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.

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