SQL Lesson 1: SELECT queries 101

To retrieve data from a SQL database, we need to write **SELECT** statements, which are often colloquially refered to as *queries*. A query in itself is just a statement which declares what data we are looking for, where to find it in the database, and optionally, how to transform it before it is returned. It has a specific syntax though, which is what we are going to learn in the following exercises.

As we mentioned in the introduction, you can think of a table in SQL as a type of an entity (ie. Dogs), and each row in that table as a specific *instance* of that type (ie. A pug, a beagle, a different colored pug, etc). This means that the columns would then represent the common properties shared by all instances of that entity (ie. Color of fur, length of tail, etc).

And given a table of data, the most basic query we could write would be one that selects for a couple columns (properties) of the table with all the rows (instances).

Select query for a specific columns

```
SELECT column, another_column, …
FROM mytable;
```

The result of this query will be a two-dimensional set of rows and columns, effectively a copy of the table, but only with the columns that we requested.

If we want to retrieve absolutely all the columns of data from a table, we can then use the asterisk (`*`) shorthand in place of listing all the column names individually.

Select query for all columns

```
SELECT *
FROM mytable;
```

This query, in particular, is really useful because it's a simple way to inspect a table by dumping all the data at once.

Exercise

We will be using a database with data about some of Pixar's classic movies for most of our exercises. This first exercise will only involve the **Movies** table, and the default query below currently shows all the properties of each movie. To continue onto the next lesson, alter the query to find the exact information we need for each task.

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.

Finish above Tasks

Next – SQL Lesson 2: Queries with constraints (Pt. 1)
Previous – Introduction to SQL

Email | Twitter

Additional Courses

Interactive Regular Expressions Lessons