SQL CHEAT SHEET

What is MySQL?

MySQL is an open-source relational database management system (RDBMS) known for its fast performance and reliability. Developed by Oracle Corporation, it's widely used for web applications and online publishing.

> Sample Data

The dataset contains details of the world's highest valued media franchises by gross revenue. Each row contains one franchise, and the table is named franchises.

Franchise	inception_year	total_revenue_busd	original_medium	Owner	n_movies
Star Wars	1977	46.7	movie	The Walt Disney Company	12
Mickey Mouse and Friends	1928	52.2	cartoon	The Walt Disney Company	
Anpanman	1973	38.4	book	Froebel-kan	33
Winnie the Pooh	1924	48.5	book	The Walt Disney Company	6
Pokémon	1996	88	video game	The Pokémon Company	24
Disney Princess	2000	45.4	movie	The Walt Disney Company	

> Querying tables

Get all the columns from a table using `SELECT *`

```
SELECT *
  FROM franchises
```

Get a column from a table by name using `SELECT col`

```
SELECT franchise
  FROM franchises
```

Get multiple columns from a table by name using `SELECT col1, col2`

```
SELECT franchise, inception_year
  FROM franchises
```

Override column names with `SELECT col AS new_name`

```
SELECT franchise, inception_year AS creation_year
  FROM franchises
```

Arrange the rows in ascending order of values in a column with `ORDER BY col`

```
SELECT franchise, inception_year
  FROM franchises
  ORDER BY inception_year
```

Arrange the rows in descending order of values in a column with `ORDER BY col DESC`

```
SELECT franchise, total_revenue_busd
  FROM franchises
  ORDER BY total_revenue_busd DESC
```

Limit the number of rows returned with `LIMIT n`

```
SELECT *
  FROM franchises
  LIMIT 2
```

Get unique values with `SELECT DISTINCT`

```
SELECT DISTINCT owner
  FROM franchises
```

> Filtering Data

Filtering on numeric columns

Get rows where a number is greater than a value with `WHERE col > n`

```
SELECT franchise, inception_year
  FROM franchises
  WHERE inception_year > 1928
```

Get rows where a number is greater than or equal to a value with `WHERE col >= n`

```
SELECT franchise, inception_year
  FROM franchises
  WHERE inception_year >= 1928
```

Get rows where a number is less than a value with `WHERE col < n`

```
SELECT franchise, inception_year
  FROM franchises
  WHERE inception_year <= 1977
```

Get rows where a number is equal to a value with `WHERE col = n`

```
SELECT franchise, inception_year
  FROM franchises
  WHERE inception_year = 1996
```

Get rows where a number is not equal to a value with `WHERE col <> n` or `WHERE col != n`

```
SELECT franchise, inception_year
  FROM franchises
  WHERE inception_year <> 1996
```

Get rows where a number is between two values (inclusive) with `WHERE col BETWEEN m AND n`

```
SELECT franchise, inception_year
  FROM franchises
  WHERE inception_year BETWEEN 1928 AND 1977
```

Filtering on text columns

Get rows where text is equal to a value with `WHERE col = 'x'`

```
SELECT franchise, original_medium
  FROM franchises
  WHERE original_medium = 'book'
```

Get rows where text is one of several values with `WHERE col IN ('x', 'y')`

```
SELECT franchise, original_medium
  FROM franchises
  WHERE original_medium IN ('movie', 'video game')
```

Get rows where text contains specific letters with `WHERE col LIKE '%abc%'`
`(% represents any characters)`

```
SELECT franchise, original_medium
  FROM franchises
  WHERE original_medium LIKE '%oo%'
```

Filtering on multiple columns

Get the rows where one condition and another condition holds with `WHERE condn1 AND condn2`

```
SELECT franchise, inception_year, total_revenue_busd
  FROM franchises
  WHERE inception_year < 1950 AND total_revenue_busd > 50
```

Get the rows where one condition or another condition holds with `WHERE condn1 OR condn2`

```
SELECT franchise, inception_year, total_revenue_busd
  FROM franchises
  WHERE inception_year < 1950 OR total_revenue_busd > 50
```

Filtering on missing data

Get rows where values are missing with `WHERE col IS NULL`

```
SELECT franchise, n_movies
  FROM franchises
  WHERE n_movies IS NULL
```

Get rows where values are not missing with `WHERE col IS NOT NULL`

```
SELECT franchise, n_movies
  FROM franchises
  WHERE n_movies IS NOT NULL
```

> Aggregating Data

Simple aggregations

Get the total number of rows `SELECT COUNT(*)`

```
SELECT COUNT(*)
  FROM franchises
```

Get the total value of a column with `SELECT SUM(col)`

```
SELECT SUM(total_revenue_busd)
  FROM franchises
```

Get the mean value of a column with `SELECT AVG(col)`

```
SELECT AVG(total_revenue_busd)
  FROM franchises
```

Get the minimum value of a column with `SELECT MIN(col)`

```
SELECT MIN(total_revenue_busd)
  FROM franchises
```

Get the maximum value of a column with `SELECT MAX(col)`

```
SELECT MAX(total_revenue_busd)
  FROM franchises
```

Grouping, filtering, and sorting

Get summaries grouped by values with `GROUP BY col`

```
SELECT owner, COUNT(*)
  FROM franchises
  GROUP BY owner
```

Get summaries grouped by values, in order of summaries with `GROUP BY col ORDER BY smmry DESC`

```
SELECT original_medium, SUM(n_movies) AS total_movies
  FROM franchises
  GROUP BY original_medium
  ORDER BY total_movies DESC
```

Get rows where values in a group meet a criterion with `GROUP BY col HAVING condn`

```
SELECT original_medium, SUM(n_movies) AS total_movies
  FROM franchises
  GROUP BY original_medium
  ORDER BY total_movies DESC
  HAVING total_movies > 10
```

Filter before and after grouping with `WHERE condn_before GROUP BY col HAVING condn_after`

```
SELECT original_medium, SUM(n_movies) AS total_movies
  FROM franchises
  WHERE owner = 'The Walt Disney Company'
  GROUP BY original_medium
  ORDER BY total_movies DESC
  HAVING total_movies > 10
```

> MySQL-Specific Syntax

Not all code works in every dialect of SQL. The following examples work in MySQL, but are not guaranteed to work in other dialects.

Limit the number of rows returned, offset from the top with `LIMIT m, n`

```
SELECT *
  FROM franchises
  LIMIT 2, 3
```

By default, MySQL uses case insensitive matching in `WHERE clauses.`

```
SELECT *
  FROM franchises
  WHERE owner = 'THE WALT DISNEY COMPANY'
```

To get case sensitive matching, use `WHERE BINARY condn`

```
SELECT *
  FROM franchises
  WHERE BINARY owner = 'THE WALT DISNEY COMPANY'
```

Get the current date with `CURDATE()` and the current `datetime` with `NOW()` or `CURTIME()`

```
SELECT CURDATE(), NOW(), CURTIME()
```

List available tables with `show tables`

```
show tables
```