SQL Cheat Sheet

Basic Queries

Select one or more columns of data from a table:

```
SELECT column_name_1, column_name_2
FROM table_name;
```

Select all of the columns in a table:

```
SELECT *
FROM table_name;
```

Get only unique lines in a query:

```
SELECT DISTINCT column_name
FROM table_name;
```

Perform calculations in a query:

```
SELECT column_name_1, AVG(column_name_2)
FROM table_name;
```

Round values returned by a query (where **n** is the number of digits to round to):

```
SELECT column_name_1, ROUND(column_name_2 / 1000.0, n)
FROM table_name;
```

Filtering

Select only the data meeting certain criteria:

```
SELECT *
FROM table_name
WHERE column_name = "Hello World";
```

Combine conditions:

```
SELECT *
FROM table_name
WHERE (column_name_1 >= 1000) AND (column_name_2 = "A" OR column_name_2 = "B");
```

Simplify lists of conditions with `IN` :

```
SELECT *
FROM table_name
WHERE column_name IN ("A", "B", "C", "D");
```

Sorting

Sort results using `ASC` for ascending order or `DESC` for descending order:

```
SELECT *
FROM table_name
ORDER BY column_name_1 ASC, column_name_2 DESC;
```

Missing Data

`NULL` can be used in queries to represent missing data (note that this is not the same as 0).

Grouping and Aggregation

Combine data into groups and calculate combined values in groups:

```
SELECT column_name_1, SUM(column_name_2), COUNT(*)
FROM table_name
GROUP BY column_name_1;
```

Joins

Join data from two tables:

```
SELECT *
FROM table_name_1
JOIN table_name_2 ON table_name_1.column_name = table_name_2.column_name;
```

Joining data from multiple tables requires that enough `JOIN...ON` conditions be specified to link all the tables together.

Combining Commands

SQL commands must be combined in the following order:
`SELECT`, `FROM`, `JOIN`, `ON`, `WHERE`, `GROUP BY`, `ORDER BY`.