SQL Cheatsheet

What is SQL?

Structured Query Language or SQL is a standard Database language which is used to create, maintain and retrieve the relational database

Types of SQL Commands

- DDL - Define the schema of database or its objects (like tables and indexes) (Ex - CREATE, ALTER, DROP)
- DML - Manipulate and Select data in the database (Ex – SELECT, INSERT)
- DCL - Rights, permissions and other controls of the database system (Ex – GRANT, REVOKE)

Most Common Datatypes

- int(10)
- varchar(255)
- text
- TIMESTAMP
- ENUM ('Choice1', 'Choice2', …)

Importing and Exporting data from CSV

Importing data from CSV - LOAD DATA LOCAL INFILE <full_file_path> INTO TABLE <tableName> COLUMNS TERMINATED BY ',' OPTIONALLY ENCLOSED BY '" ESCAPED BY '"' LINES TERMINATED BY '\n' IGNORE 1 LINES;

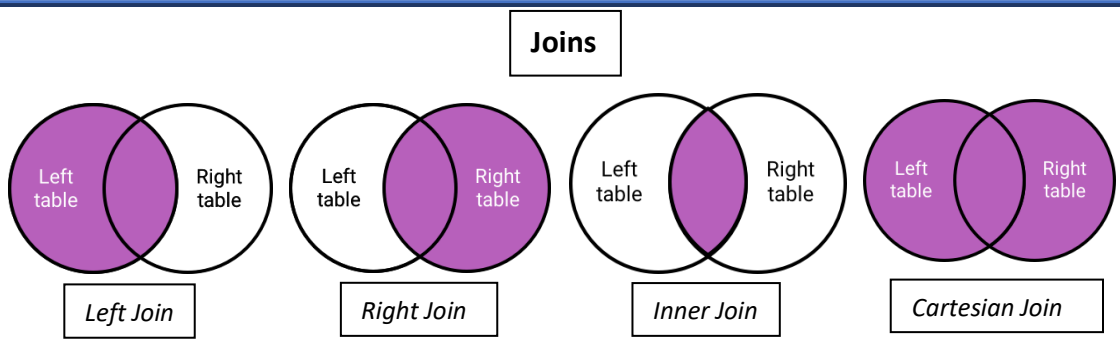
Exporting data to CSV - SELECT * INTO OUTFILE <outputFilePath> FIELDS TERMINATED BY ',' OPTIONALLY ENCLOSED BY '"' LINES TERMINATED BY '\n' FROM <tableName>;

Creating a table Syntax

CREATE TABLE <tableName> (

<fieldname1><fieldtype1> (NULL/NNOT NULL) ,
<fieldname2><fieldtype2>
);

Joins



Inserting data in a table

INSERT INTO<*tableName*> (*column1*, *column2*, *column3*, ...) **VALUES** (*value1*, *value2*, *value3*, ...);

Basic Query Syntax

SELECT f(col1), g(col2),… from table1
---filter the rows
WHERE col2=1 and col5=4
---Aggregate the data
GROUPBY ..
--- Filter the results
HAVING h(col4)>=<…
--- Sort the results
ORDER BY col2

f, g, h are aggregation functions like
COUNT(*), COUNT(DISTINCT), SUM(), STDDEV() etc

Other useful Keywords which work with SELECT
DISTINCT
LIKE
BETWEEN
IN

What is an index?

- Data structure that improves the speed of operations in a table.
- Indexes can be created using one or more columns
- Indexing a column improves search but increases the time for insert and update

Creating an Index

create index <index_name> on <table> (<Column to Index>)