

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;

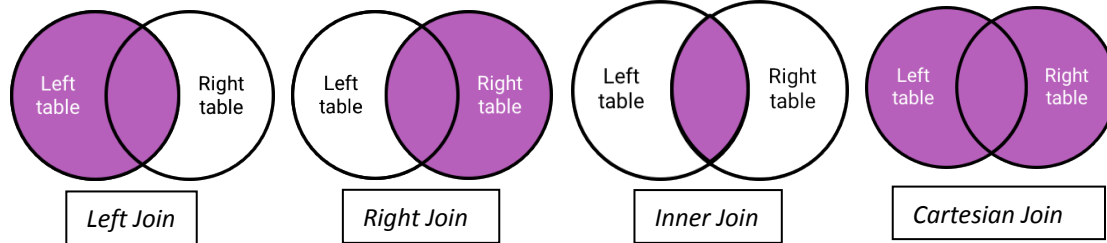
Exporting data to CSV - SELECT *
INTO OUTFILE <outputFilePath>
FIELDS TERMINATED BY ',' OPTIONALLY
ENCLOSED BY ''''
LINES TERMINATED BY '\n' FROM
<tableName>;

Creating a table Syntax

CREATE TABLE <tableName> (

 <fieldname1><fieldtype1>
 (NULL/NOT 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>)