sql notes 1

sql is a standardized language used to access and manipulate data.
SQL is an acronym for Structured English QUEry Language.

SQL accesses and manipulates data in relational databases. Relational Databases are tabular. They are made up of Tables, Columns, and Rows.

Basic Database Concepts:

Primary Key: a column or combination of column (composite key) that uniquely identifies a row within a table. Meaning a primary key value should return one row.

customer_id	customer_name	customer_phone
1	mashie	000-111-2222
2	yoshi	000-111-3333

In this example, the primary key of the table is the column customer_id.

- Would the column customer_name be a good or bad primary key for this table? What about the column customer_phone?

Sometimes the primary key is system generated sequence number, that auto-increments with every added row. This type of key is called a synthetic or surrogate key.

Foreign Keys: a foreign key is a column that refers to the primary key in another table, linking the two tables.

order_id	customer_id	order_total
123	1	20
456	2	50

customer_id is the foreign key of this table, linking the orders table to customer table.

SQL allows you to query data, create new data and modify or delete existing data. SQL commands can be divided into different categories. The main two being:

- Data Manipulation Language (DML) commands allow you to query, insert, update or delete data.
  - SELECT, INSERT, UPDATE, DELETE, MERGE
- Data Definition Language (DDL) commands allow you create new database structures, such as tables or modify existing ones.
  - CREATE, ALTER, DROP, TRUNCATE, RENAME