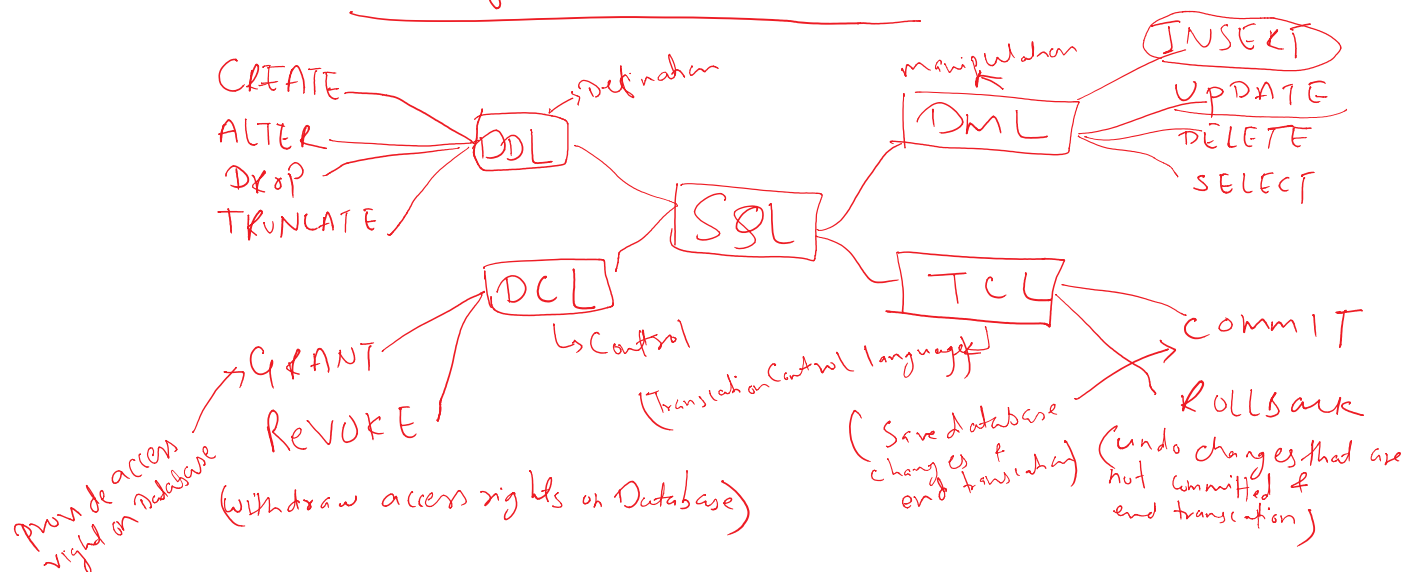


What is SQL? → It is a general programming languages used for management and manipulating data in relational database.

It allows: **CRUD** → **CRUD**
 create update delete

Types of SQL Commands



DDL Commands for Tables

CREATE
 TRUNCATE
 DROP

DDL Commands for Database

CREATE
 DROP

Data Integrity → accuracy + consistency of data stored in a data base.

Various method to ensure data Integrity;

- 1) Constraints → It is a rules, that must be met for data to be CRUD in database tables.
- 2) Transactions: Single unit of work (complete, return back if not complete)
- 3) Normalization: minimize data redundancy

data consistency by organizing data into separate tables.

Creating tables separate is also 'Normalization'.
↳ because it reduce redundant data.

Constraints in MySQL

1. NOT NULL
2. UNIQUE (Combo)
3. Primary Key
4. AUTO INCREMENT
5. CHECK
6. DEFAULT
7. FOREIGN KEY

Referential Actions

1. RESTRICT (above one)
2. CASCADE (update / delete of one table change to another table)
3. SET NULL (If set null, if there is no values)
4. SET DEFAULT (' ')

SQL queries:

CONSTRAINTS tables_col_constraints CONSTRAINTS (cols)

↳ CONSTRAINTS users_email_unique UNIQUE (emails)

ALTER TABLE Command

The 'ALTER TABLE' Statement in SQL is used to modify the structure of an existing tables.

1. ADD columns

2. DELETE columns

3. modify columns

ALTER TABLE customers ADD COLUMN password VARCHAR(255) NOT NULL
AFTER name

ALTER TABLE customers DROP COLUMN password

ALTER TABLE customers MODIFY COLUMN surname INTEGER AUTO_INCREMENT

Editing & DELETING CONSTRAINTS

1. Add

2. Delete

3. Edit X it cannot be edited

ALTER TABLE customers ADD CONSTRAINTS customer_age_check CHECK (age > 13)

ALTER TABLE customers MODIFY CONSTRAINTS customer_age_check CHECK (age > 0)

ALTER TABLE customers DROP CONSTRAINTS customer_age_check

NOT NULL: user_id INTEGER NOT NULL

UNIQUE: email VARCHAR(255) UNIQUE

customer_id → CONSTRAINTS users_email_unique UNIQUE (email)

Primary Key: user_id INTEGER NOT NULL PRIMARY KEY

AUTO INCREMENT: user_id INTEGER AUTO_INCREMENT

CHECK: age INTEGER CHECK (age > 6 AND age < 25)

DEFAULT: travel_date DATE DEFAULT CURRENT_DATE

foreign key: CONSTRAINTS orders_fk FOREIGN KEY (cid) REFERENCES customers (cid)

Cascade: {
ON DELETE CASCADE
ON UPDATE CASCADE
Same

Set NULL: {
ON DELETE CASCADE
ON UPDATE CASCADE
} - - - - - Same - - - - -
ON DELETE SET NULL
ON UPDATE SET NULL

Author : Nabin Adhikari