

## 1. Difference between DDL and DML:

- DDL - is Data Definition Language, used for create database schema and can be used to define some constraints.
    - It basically defines the column
    - Basic command present in DDL are CREATE, DROP, RENAME, ALTER etc.
  - DML - is Data Manipulation Language, is used to add, retrieve or update the data.
    - It add or update the row of the table. These rows are called as tuple.
    - BASIC command present in DML are UPDATE, INSERT, MERGE etc.
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### DDL commands:

```
CREATE DATABASE example
OWNER adilzhapar
TEMPLATE template0
ENCODING UTF-8;
```

2) ALTER DATABASE example RENAME TO new\_example;

```
CREATE TABLE lab_3 (
    id integer CONSTRAINT firstkey PRIMARY KEY,
    inform text CHECK (char_length(inform) > 3),
    insert_date date
);
```

### DML commands:

- 1) INSERT INTO lab\_3 VALUES (01, 'first text', '22.09.2021')
- 2) UPDATE lab\_3  
SET inform = 'became the second text' WHERE id = 1;
- 3) SELECT \* FROM lab\_3;
- 4) DELETE FROM lab\_3 WHERE id = 1;

```

CREATE TABLE customers (
    id integer PRIMARY KEY,
    full_name varchar(50) NOT NULL,
    timestamp timestamp NOT NULL,
    delivery_address text NOT NULL
);

CREATE TABLE orders (
    code integer PRIMARY KEY,
    customer_id integer references customers(id),
    total_sum double precision NOT NULL CHECK ( total_sum > 0 ),
    is_paid boolean NOT NULL
);

```

```

CREATE TABLE products(
    id varchar PRIMARY KEY,
    name varchar UNIQUE NOT NULL,
    description text,
    price double precision NOT NULL CHECK ( price > 0 )
);

CREATE TABLE order_items(
    order_code integer references orders(code),
    product_id varchar references products(id),
    quantity integer CHECK(quantity > 0),
    PRIMARY KEY (order_code, product_id)
);

```

4.

```

INSERT INTO customers
VALUES (1308, 'Any Person', '22.09.2021 11:57', '050059, Almaty');

INSERT INTO orders VALUES (13, 1308, 1500.29, true);

UPDATE orders SET is_paid = false WHERE code = 13;

DELETE FROM customers WHERE id = 1308;
//will not delete because of violation

```

