1) DDL used to define data structure
DMl used to manipulate the data itself
Also DML commands can be cancelled (rolled back)

```
A) CREATE TABLE employee(
    ID serial,
    person_name VARCHAR(200),
    street VARCHAR(200),
    city VARCHAR(200)
);

alter table employee add second_name varchar(200);

drop table employee;



B) INSERT INTO employee (person_name, street, city) values ('Smith',
'Grand','New York'),
                            ('Nora', 'Fountain', 'Boston'),
                            ('Josh', 'Kings Highway', 'Washington'),
                            ('Sara', 'Liberty', 'New York');


Select id from employee;

delete from employee where city = "Boston";

update employee set city = 'Detroit' where person_name = 'Josh';
```

```
2)create table products (id varchar not null unique,
                         name varchar not null unique,
                         description text,
                         price double precision not null check ( price > 0 ),
                         primary key (id));

create table customers (id int not null unique,
                         full_name VARCHAR(50) NOT NULL ,
                         timestamp TIMESTAMP NOT NULL ,
                         delivery_address text NOT NULL ,
                         primary key (id));

create table orders (code INT NOT NULL UNIQUE ,
                     customer_id INT,
                     total_sum DOUBLE PRECISION NOT NULL CHECK ( total_sum > 0
),
                     is_paid boolean NOT NULL ,
                     PRIMARY KEY (code),
                     FOREIGN KEY (customer_id) REFERENCES customers(id));

CREATE TABLE order_items(order_code INT NOT NULL UNIQUE,
                          product_id VARCHAR NOT NULL UNIQUE ,
                          quantity INT NOT NULL CHECK ( quantity > 0 ),
                          PRIMARY KEY (order_code, product_id),
                          FOREIGN KEY (order_code) REFERENCES orders(code),
                          FOREIGN KEY (product_id) REFERENCES products(id));
```

```
3) CREATE TABLE students (id SERIAL NOT NULL UNIQUE ,
                          full_name VARCHAR(50) NOT NULL UNIQUE ,
                          age INT NOT NULL check ( age > 0 ),
                          birth_date DATE NOT NULL ,
                          gender INT NOT NULL ,
                          gpa FLOAT(2),
                          info_about_yourself TEXT,
                          need_dormitory BOOLEAN,
                          additional_info TEXT,
                          primary key (id));

CREATE TABLE instructors (
    id SERIAL NOT NULL UNIQUE ,
    full_name VARCHAR(50) NOT NULL UNIQUE ,
    language VARCHAR(50) NOT NULL ,
    experience text,
    possibility_remote BOOLEAN,
    primary key (id)
);

CREATE TABLE disciplines(
    title varchar(50) not null unique ,
    primary key (title)
);

CREATE TABLE rooms(
    number INT NOT NULL UNIQUE ,
    primary key (number)
);

CREATE TABLE lesson_participants(
    title VARCHAR(50) not null UNIQUE,
    inst_id int not null ,
    studying_studs VARCHAR(50),
    room INT NOT NULL ,
    primary key (title),
    foreign key (inst_id) references instructors(id),
    foreign key (studying_studs) references students(full_name),
    foreign key (title) references disciplines(title),
    foreign key (room) references rooms(number)
);

CREATE TABLE languages(
    name varchar(50),
    primary key (name));

CREATE TABLE lang_knowledge(
    inst_id int,
    lang_name varchar(50),
    foreign key (inst_id) references instructors(id),
    foreign key (lang_name) references languages(name)
);



4)insert into products values ('hands_1', 'CREAM FOR HANDS','MADE IN FRANCE',
29.99),
                              ('hair_1', 'SHAMPOO ZHUMAISYN BA', 'KOZIME
KORINBEITIN BOL, E, TUSINDIN BA?', 34.99)
select * from products;

delete from products where description = 'MADE IN FRANCE';

update products set price = 39.99 where name = 'SHAMPOO ZHUMAISYN BA';
```

```sql
select * from products;


insert into customers values (1, 'GIORNO GIOVANNA', '2011-10-20 12:35:47',
'Naples');
select * from customers;


insert into orders values (1001, 1, 79.99, true);
select * from orders;

insert into order_items VALUES (1001, 'hair_1', 2);
select * from order_items;
```