

1) DDL used to define data structure

DMI used to manipulate the data itself

Also DML commands can be cancelled (rolled back)

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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';
```

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

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```

4)insert into products values ('hands_1', 'CREAM FOR HANDS','MADE IN FRANCE',
29.99),
                                ('hair_1', 'SHAMPOO ZHUMAI SYN 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 ZHUMAI SYN BA';

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;
```