

Lab 3

1) Difference between DDL and DML is that DML is used to access, modify or retrieve the data from the database, whereas DDL is used to specify the database schema database structure.

a)-CREATE(create table/tablespace/...);
-DROP(drop table/database/...);
-ALTER(ALTER TABLE table_name ADD column_name ...).

b)-INSERT(INSERT INTO table_name() VALUES());
-UPDATE(UPDATE table_name SET ... WHERE ...);
-DELETE(DELETE FROM table_name WHERE ...).
-SELECT(SELECT columns... FROM table_name);

2)create table customers(
 id SERIAL PRIMARY KEY,
 full_name VARCHAR(50),
 timestamp_ TIMESTAMP ,
 delivery_address TEXT
);
create table orders(
 code INT PRIMARY KEY,
 customer_id INT REFERENCES customers(id) on update cascade on delete
cascade,
 total_sum DOUBLE PRECISION,
 is_paid BOOLEAN
);
drop table order_items;
create table order_items(
 order_code INT REFERENCES orders(code) on update cascade on delete
cascade,
 product_id VARCHAR REFERENCES products(id) on update cascade on delete
cascade,
 quantity INT,
 UNIQUE(order_code,product_id)
);

create table products(
 id VARCHAR PRIMARY KEY,
 name_ VARCHAR NOT NULL UNIQUE,
 description TEXT,
 price DOUBLE PRECISION
);

3)

```
create table student(  
    full_name      VARCHAR(50) PRIMARY KEY,  
    age            INT,  
    birth_date     DATE,  
    gender         VARCHAR,  
    average_grade  DOUBLE PRECISION,  
    description    TEXT,  
    dormitory_status BOOLEAN,  
    other          TEXT  
);
```

```
create table instructor(  
    full_name      VARCHAR(50) PRIMARY KEY,  
    languages      VARCHAR,  
    work_experience TEXT,  
    remote_lessons BOOLEAN  
);
```

```
create table lesson_participants(  
    lesson_title   VARCHAR,  
    teaching_instructor VARCHAR REFERENCES instructor(full_name),  
    studying_students TEXT,  
    room_number    INT  
);
```

4)

```
INSERT INTO customers (full_name,timestamp,delivery_address)  
VALUES ('Nurs',now(),'Машхур Жусупа 33а');
```

```
UPDATE customers  
SET delivery_address = 'Заслонова 54а'  
WHERE full_name = 'Nurs';
```

```
DELETE FROM customers WHERE full_name = 'Nurs';
```