

### Lab 3

#### 1

a) DDL is Data Definition Language which is used to define data structures. For example: create table, alter table are instructions in SQL.

DML is Data Manipulation Language which is used to manipulate data itself. For example: insert, update, delete are instructions in SQL.

Difference between DDL and DML

DDL	DML
It stands for Data Definition Language	It stands for Data Manipulation Language.
It is used to create database schema and can be used to define some constraints as well	It is used to add, retrieve or update the data.
It basically defines the column (Attributes) of the table.	It add or update the row of the table. These rows are called as tuple.
It doesn't have any further classification.	It is further classified into Procedural and Non-Procedural DML.

b) Basic command present in DDL are CREATE, DROP, RENAME, ALTER etc.

BASIC command present in DML are UPDATE, INSERT, MERGE, SELECT etc.

#### 2.

```

CREAT TABLE customers(
id integer,
full_name varchar(50),
timestamp timestamp with time zone,
delivery_address text,
primary key( id)
)

```

```

CREAT TABLE orders(
code integer ,
customer_id integer,
total_sum double precision,

```

```
is_paid boolean,  
primary key(code),  
foreign key(customers_id ) references customers(id)  
  
);
```

```
CREATE TABLE products(  
id varchar,  
name varchar,  
description text,  
price double precision  
primary key(id)  
);
```

```
CREATE TABLE order_items(  
order_code integer ,  
product_id varchar,  
quantity integer  
primary key(order_code)  
foreign key(product_id) reference products(id)  
foreign key(product)  
);
```

**3.**

```
a) CREATE TABLE Student (  
id varchar,  
full_name varchar(100),  
gender varchar(50),  
age integer,
```

```
birth_date time date,  
social_category text,  
dormitory text,  
address varchar(50)  
result_test integer  
)
```

b)

```
CREATE TABLE instructors(  
Id integer,  
full_name varchar(50),  
speaking_languages text,  
possibility_remote_lesson text );
```

c)

```
CREATE TABLE lesson(  
lesson_title text,  
teaching_instructor text,  
studings_students integer,  
room_number integer);
```

4.

**//insert to customers**

```
insert into customers(id , full_name , timestamp , delivery_address)  
values(1, 'Alikhan Didar', '2008-11-11 13:23:44','Tolebi 59')
```

Id	Full_name	timestamp	delivery_address
1	Alikhan Didar'	2008-11-11 13:23:44'	Tolebi 59'

**//update**

**update** customers

**set** full\_name = 'Baigazy Iliyas', delivery\_address = 'Islam Karimov 70'

where id = 1;

Id	Full_name	timestamp	delivery_address
1	Baigazy Iliyas	2008-11-11 13:23:44'	Islam Karimov 70'

**// delete**

delete from customers where id = 1;

Id	Full_name	timestamp	delivery_address

**//insert to orders**

insert into orders(code , total\_sum , is\_paid)

values(02115, 25788,56 , true);

**//update orders**

Update order

Set total\_sum = 25 555 , is\_paid = false

Where code = 02115;

**//deletion orders**

delete from orders where is\_paid = true;

**//insert to products**

insert into products(id , name, description , price)

values(025, 'BeaColor' , 'pen', 125.25);

**//update products**

update product

```
set price = 150 .0
```

```
where name = 'BeaColor';
```

```
//deletion
```

```
delete from products where name= 'BeaColor';
```

```
//insert to order_items
```

```
insert into order_items(quantity)
```

```
values(2);
```

```
//update order_items
```

```
update product
```

```
set quantity = 5
```

```
where name = 'BeaColor';
```

```
//deletion order_items
```

```
delete from order_items where name ='BeaColor';
```