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.

a.3 DDL commands:

```
CREATE DATABASE altair_db;
CREATE TABLE altair_table(
    id integer PRIMARY KEY
    name VARCHAR,
    surname VARCHAR
)
DROP Table altair_table
```

b.4 DML commands:

```
INSERT INTO altair_table(id,name,surname) VALUES (1, 'aLtair', 'zhanseitov');
INSERT INTO altair_table(id,name,surname) VALUES (2, 'aLtair', 'zhanseitov');
UPDATE altair_table SET name ='aldiyar' WHERE id = 2;
SELECT * from altair_table;
DELETE FROM altair_table where id = 1;
```

2.

```sql
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,
    costumer_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)
)
```

3.

```sql
CREATE TABLE students(
    full_name varchar ,
    age integer NOT NULL ,
    birth_date date,
    gender varchar(7),
    gpa float NOT NULL ,
    info text,
    dormitory boolean,
    add_info text
);
create TABLE instructors(
    full_name varchar ,
    lang text,
    work_exp text,
    remote_lessons boolean
);
CREATE TABLE lesson_participants(
    title varchar(15) NOT NULL ,
    instructor varchar references instructors(full_name),
    students varchar references students(full_name),
    room_number interval CHECK ( room_number>0 )
);
```

4.

```sql
INSERT INTO customers(id,full_name,timestamp,delivery_address)
VALUES(1,'Zhanseitov Altair','28.6.2021','Hisainova 281,Almaty');
UPDATE customers SET full_name='Zhanseitov Aldiyar' WHERE id = 1;
DELETE FROM customers WHERE id = 1;
```