

**Sneaker Online Shop System**

**Software Design Specification**

– Hanoi, April 2023 –

**Record of changeS**

| **Date** | **A\* M, D** | **In charge** | **Change Description** |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

\*A - Added M - Modified D - Deleted

**Table of Contents**

[I. Overview](#_heading=h.gjdgxs)

[1. Code Packages](#_heading=h.30j0zll)

[2. Database Design](#_heading=h.1fob9te)

[a. Database Schema](#_heading=h.3znysh7)

[b. Table Description](#_heading=h.2et92p0)

[II. Code Designs](#_heading=h.tyjcwt)

[1. Login](#_heading=h.3dy6vkm)

[a. Class Diagram](#_heading=h.1t3h5sf)

[b. Class Specifications](#_heading=h.4d34og8)

[c. Sequence Diagram(s)](#_heading=h.2s8eyo1)

[d. Database queries](#_heading=h.17dp8vu)

[2. Sign Up](#_heading=h.3rdcrjn)

[a. Class Diagram](#_heading=h.1t3h5sf)

[b. Class Specifications](#_heading=h.4d34og8)

[c. Sequence Diagram(s)](#_heading=h.2s8eyo1)

[d. Database queries](#_heading=h.17dp8vu)

3. Order

[a. Class Diagram](#_heading=h.1t3h5sf)

[b. Class Specifications](#_heading=h.4d34og8)

[c. Sequence Diagram(s)](#_heading=h.2s8eyo1)

[d. Database queries](#_heading=h.17dp8vu)

4. CRUD

[a. Class Diagram](#_heading=h.1t3h5sf)

[b. Class Specifications](#_heading=h.4d34og8)

[c. Sequence Diagram(s)](#_heading=h.2s8eyo1)

[d. Database queries](#_heading=h.17dp8vu)

5. ProductList

[a. Class Diagram](#_heading=h.1t3h5sf)

[b. Class Specifications](#_heading=h.4d34og8)

[c. Sequence Diagram(s)](#_heading=h.2s8eyo1)

[d. Database queries](#_heading=h.17dp8vu)

6. Filter

[a. Class Diagram](#_heading=h.1t3h5sf)

[b. Class Specifications](#_heading=h.4d34og8)

[c. Sequence Diagram(s)](#_heading=h.2s8eyo1)

[d. Database queries](#_heading=h.17dp8vu)

7. Search

[a. Class Diagram](#_heading=h.1t3h5sf)

[b. Class Specifications](#_heading=h.4d34og8)

[c. Sequence Diagram(s)](#_heading=h.2s8eyo1)

[d. Database queries](#_heading=h.17dp8vu)

8. Admin Dashboard

[a. Class Diagram](#_heading=h.1t3h5sf)

[b. Class Specifications](#_heading=h.4d34og8)

[c. Sequence Diagram(s)](#_heading=h.2s8eyo1)

[d. Database queries](#_heading=h.17dp8vu)

9. View profile

[a. Class Diagram](#_heading=h.1t3h5sf)

[b. Class Specifications](#_heading=h.4d34og8)

[c. Sequence Diagram(s)](#_heading=h.2s8eyo1)

[d. Database queries](#_heading=h.17dp8vu)

10. Product Detail

[a. Class Diagram](#_heading=h.1t3h5sf)

[b. Class Specifications](#_heading=h.4d34og8)

[c. Sequence Diagram(s)](#_heading=h.2s8eyo1)

[d. Database queries](#_heading=h.17dp8vu)

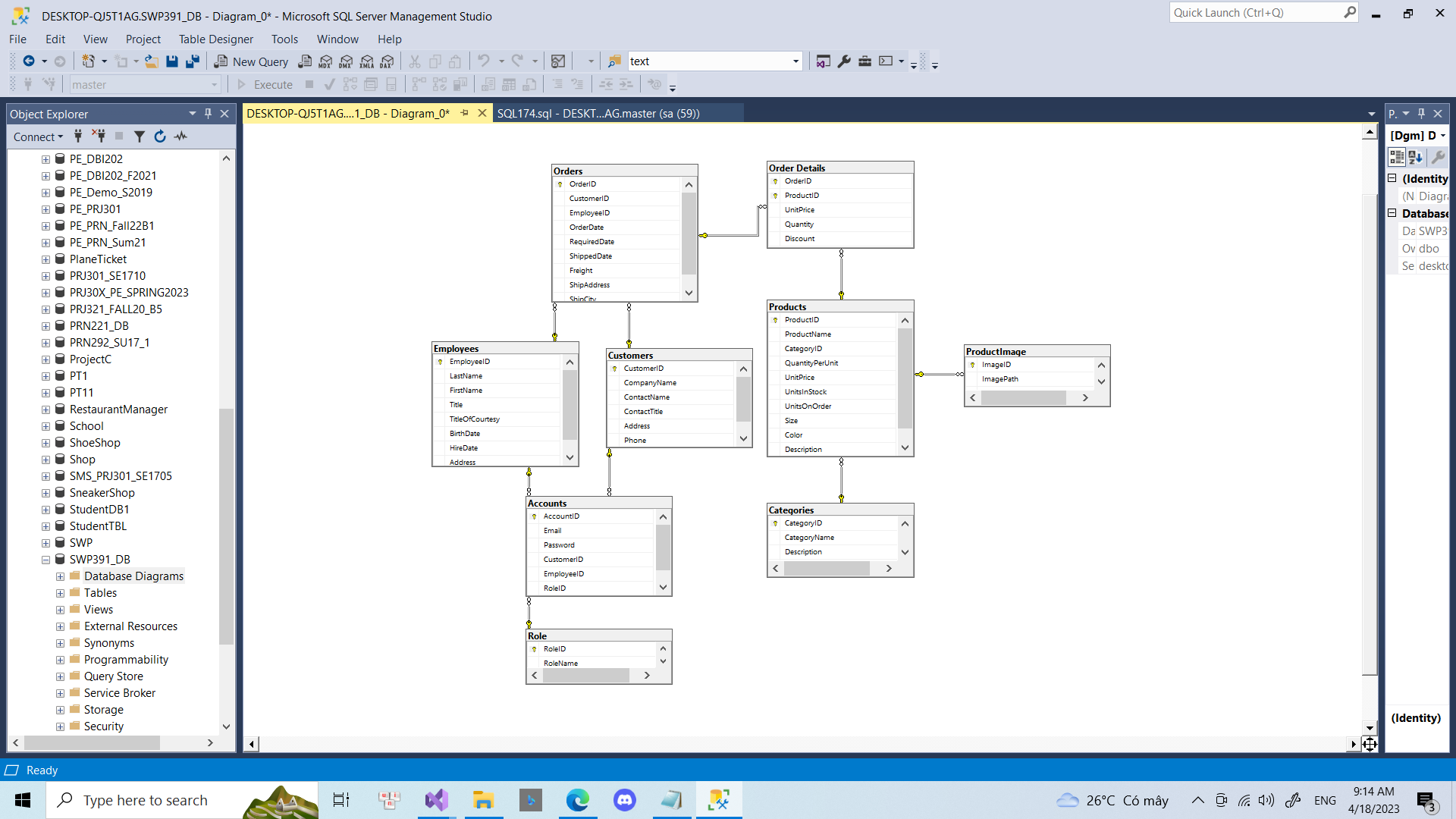
# I. Overview

## 1. Code Packages

***Package descriptions***

## 2. Database Design

### a. Database Schema



### b. Table Description

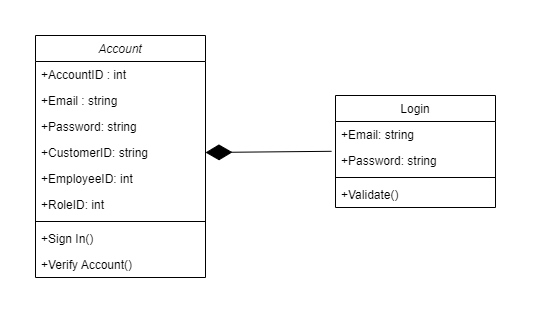
#### 

| **No** | **Table** | **Description** |
| --- | --- | --- |
| *01* | *Accounts* | *Get value of Accounts* |
| *02* | *Customers* | *Get value of Customers* |
| *03* | *Employees* | *Get value of Employees* |
| *04* | *Role* | *Contain role of admin/employee/customer* |
| *05* | *Orders* | *Get value of Order* |
| *06* | *ProductImage* | *Contain url of image of product* |
| *07* | *Products* | *Get value of Products* |
| *08* | *Order Details* | *Contain details value of a order* |
| *09* | *Categories* | *Get value of Categories* |

# II. Code Designs

## 1. Login

### a. Class Diagram



### b. Class Specifications

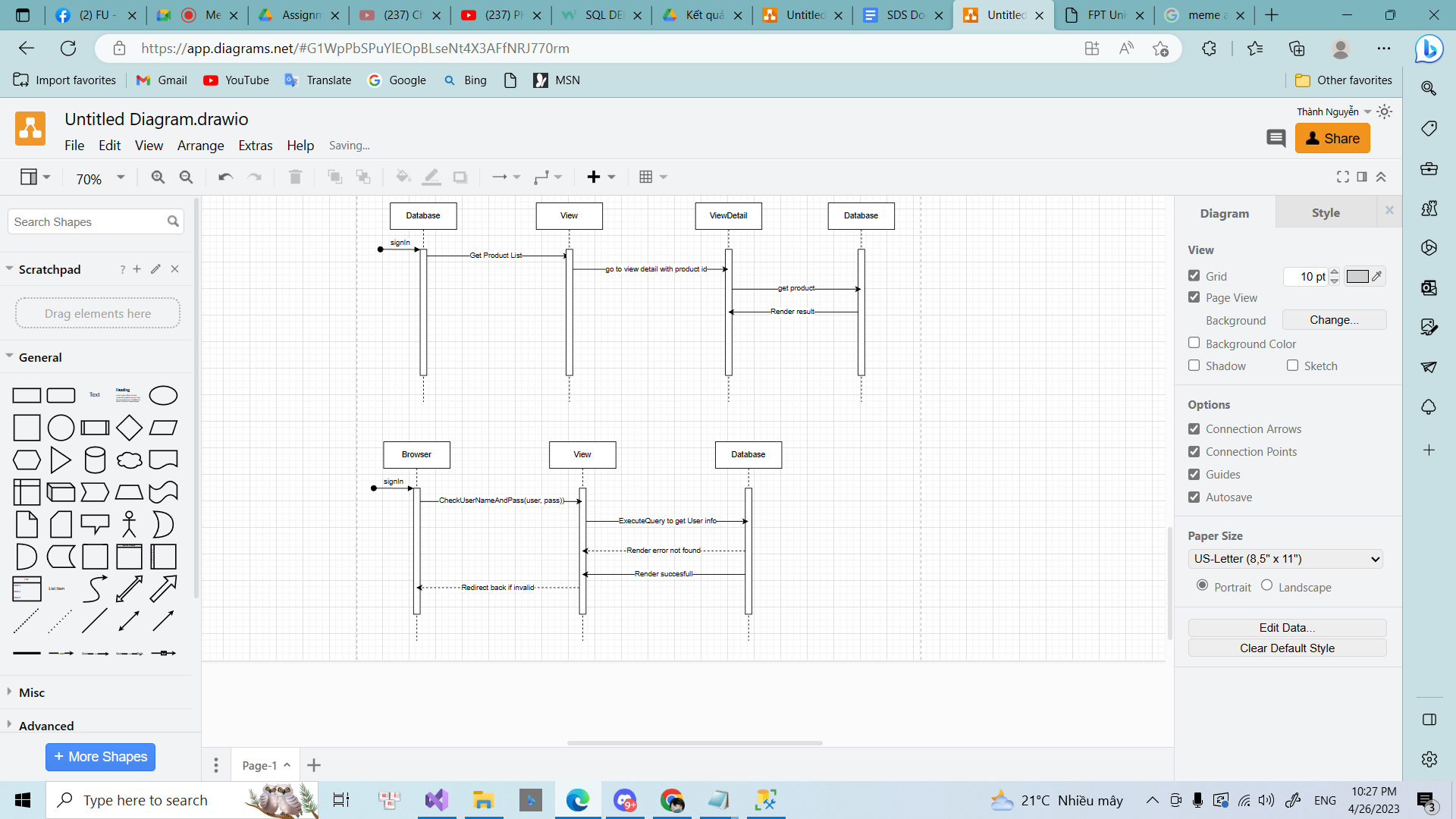
#### Account

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

***DBContext Class***

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getConnection()* | *class attempts to establish a connection to the database by using the given database url.* |

### c. Sequence Diagram(s)



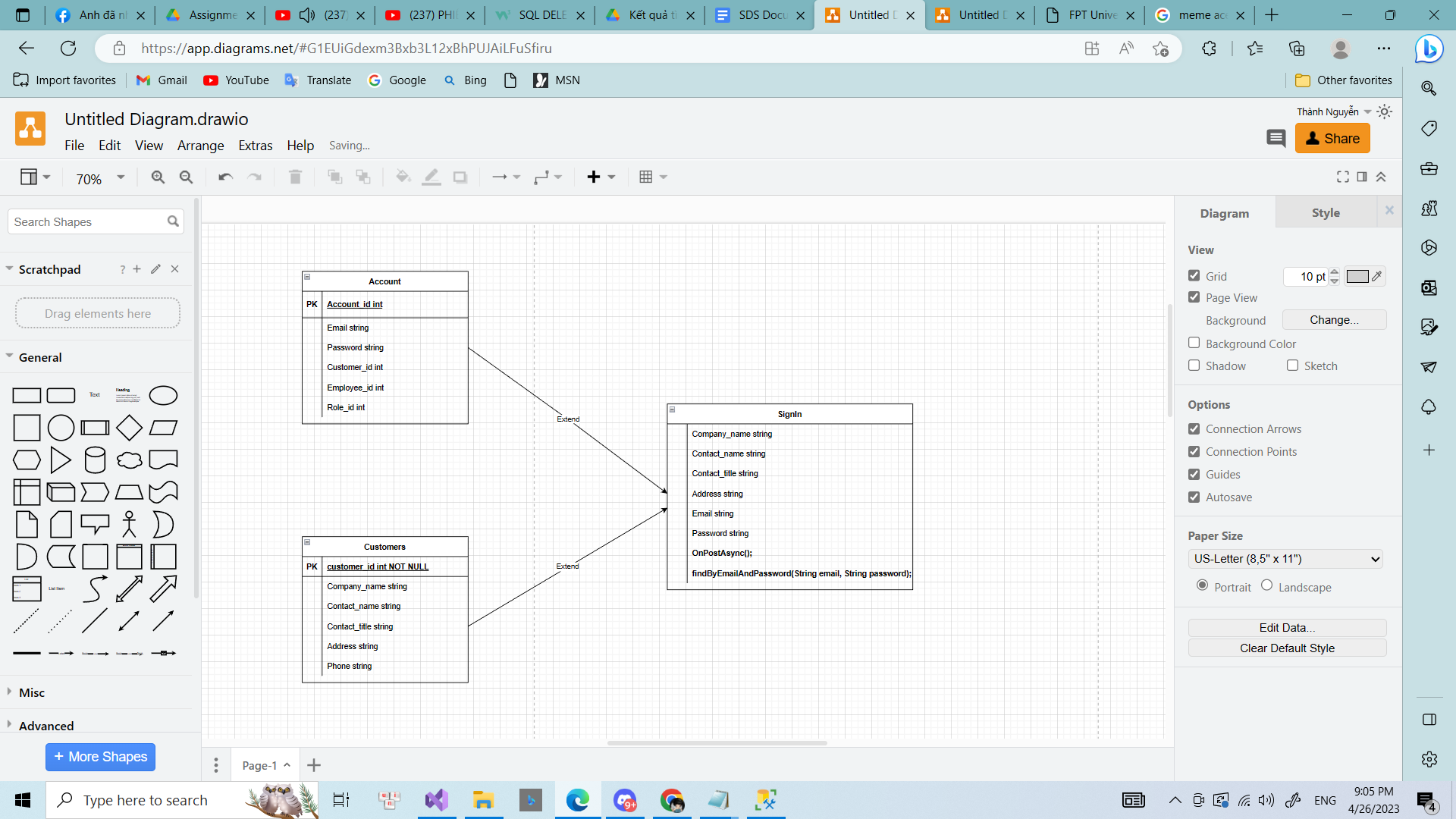
### d. Database Queries

await dBContext.Accounts.Where(

a => a.Email.Equals(account.Email) && a.Password.Equals(account.Password)).SingleOrDefaultAsync()

## 2. Sign up

### a. Class Diagram



### b. Class Specifications

#### Account

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

#### Customer

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

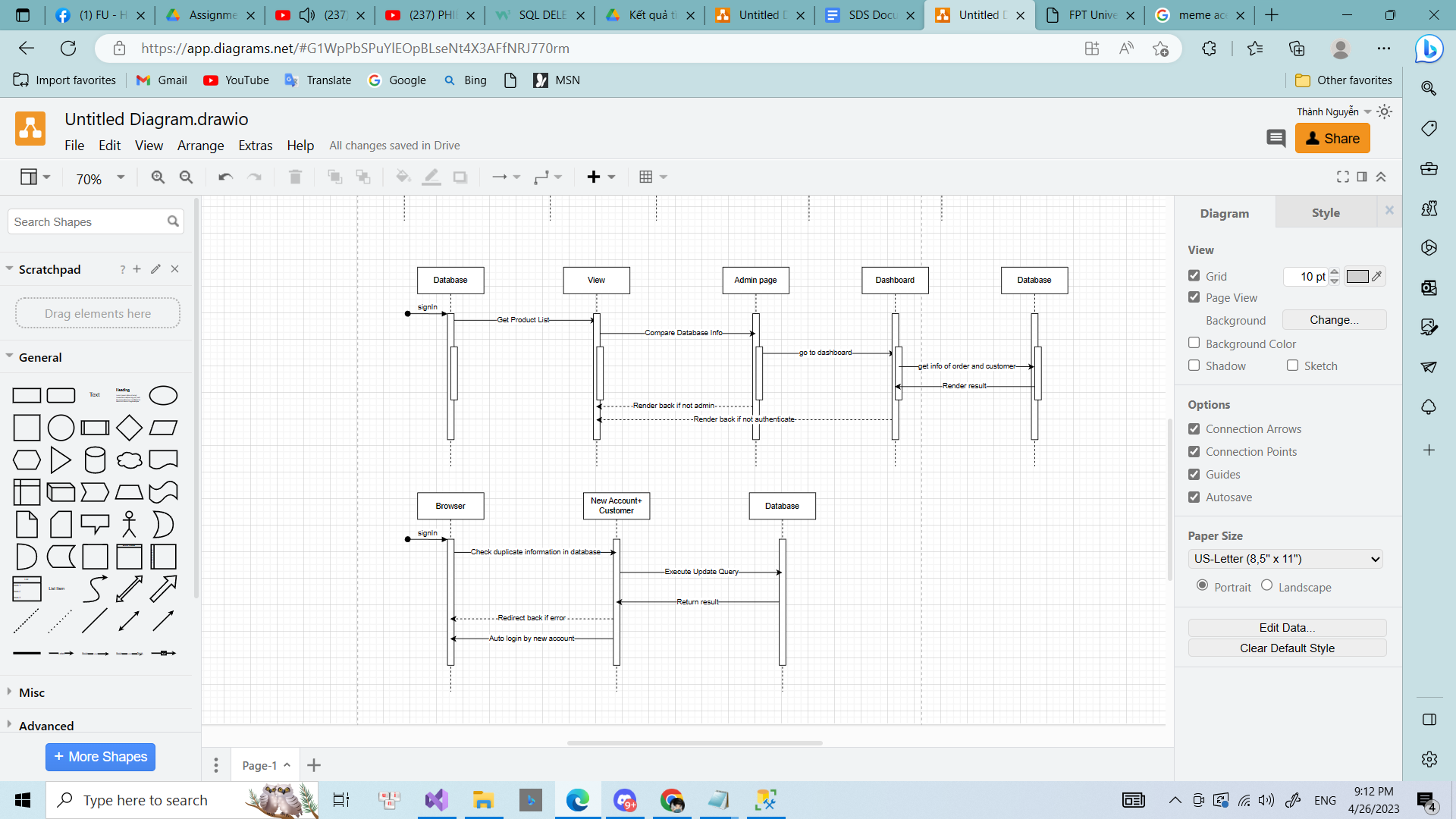
### 

### DBContext Class

| No | Method | Description |
| --- | --- | --- |
| 01 | getConnection() | class attempts to establish a connection to the database by using the given database url. |

### 

### c. Sequence Diagram(s)



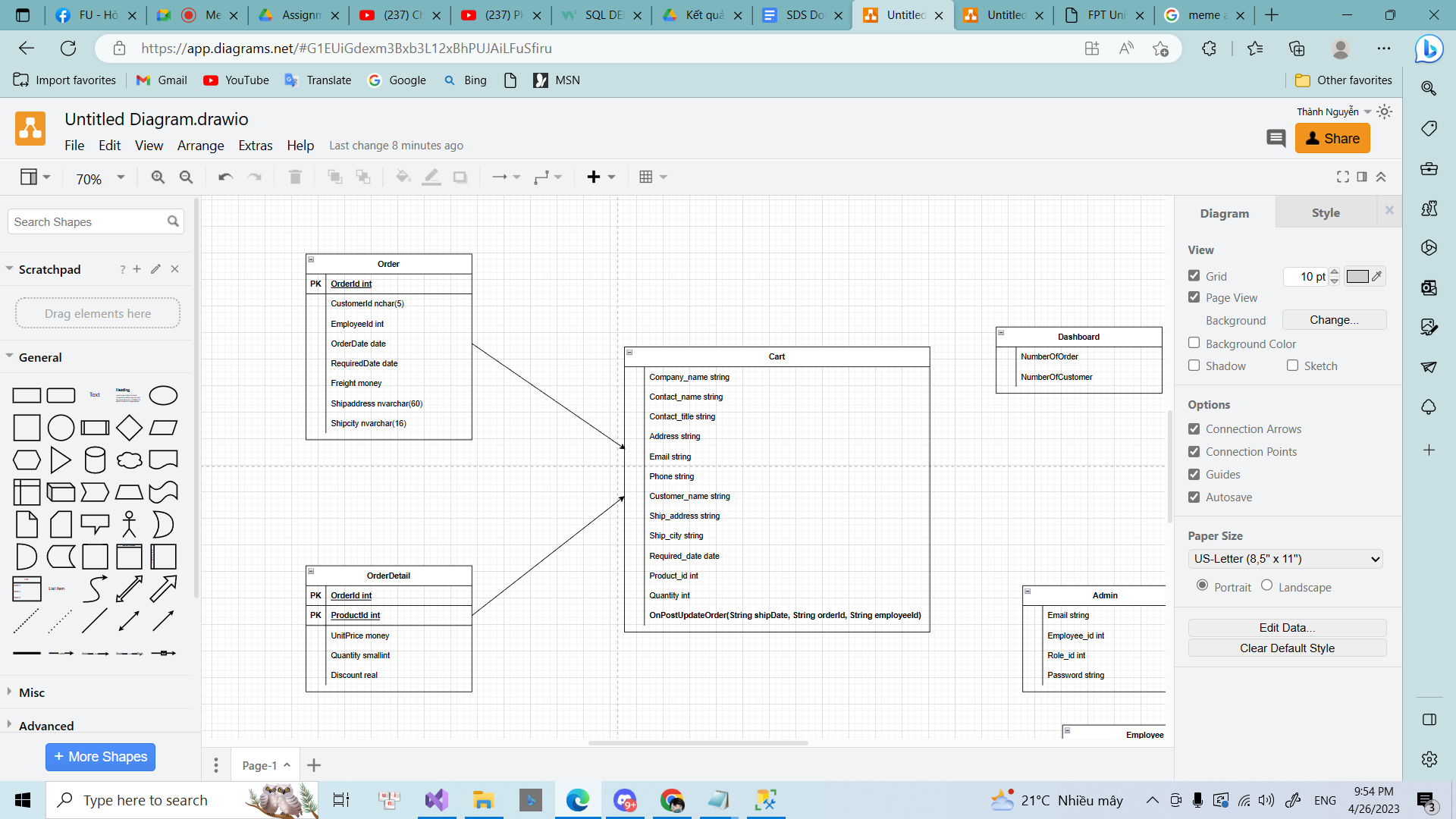
### d. Database Queries

await dBContext.Accounts.Where(

a => a.Email.Equals(account.Email) && a.Password.Equals(account.Password)).SingleOrDefaultAsync();

## 3. Order

### a. Class Diagram



### b. Class Specifications

#### Order

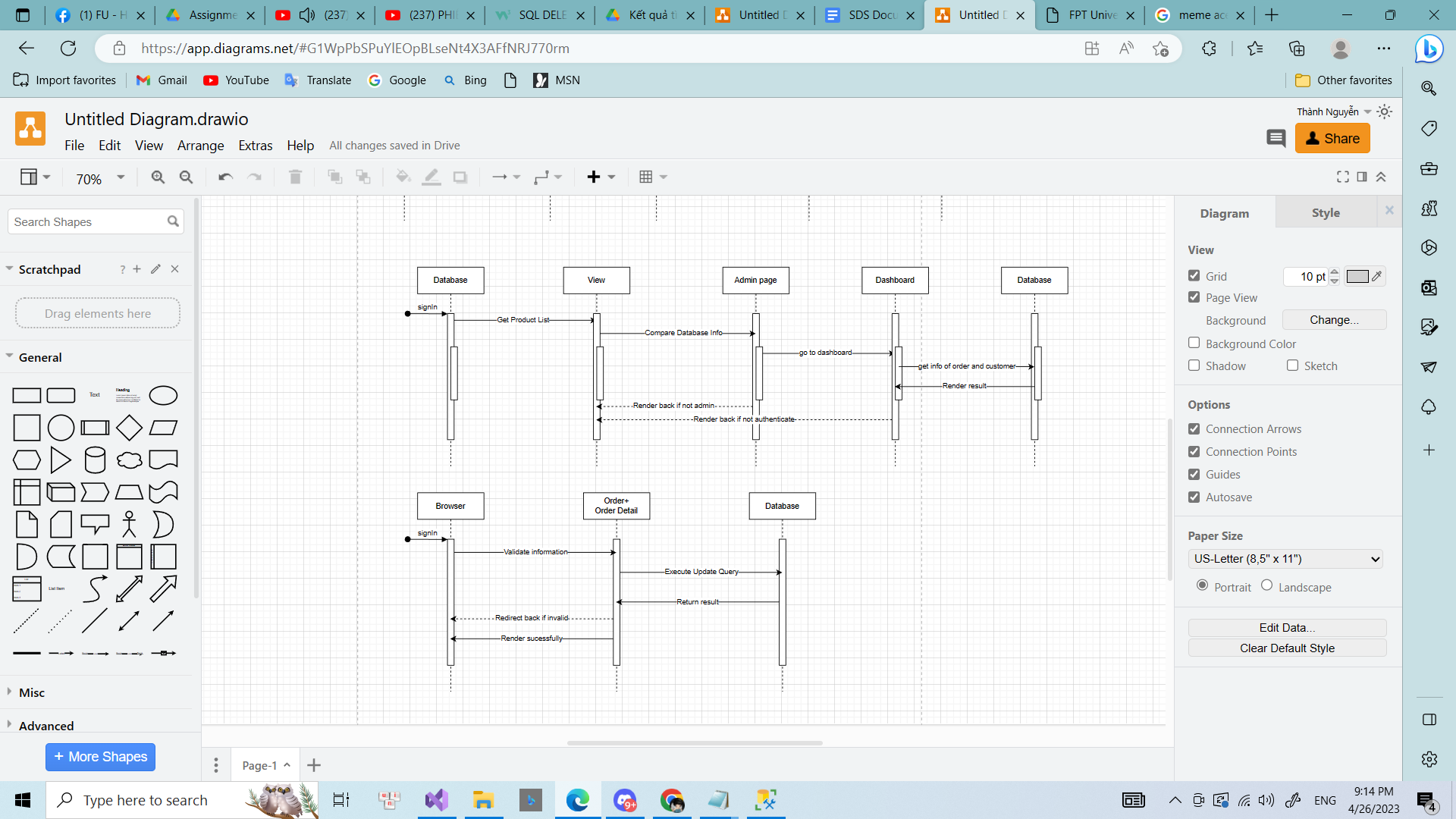
| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

### DBContext Class

| No | Method | Description |
| --- | --- | --- |
| 01 | getConnection() | class attempts to establish a connection to the database by using the given database url. |

### 

### c. Sequence Diagram(s)

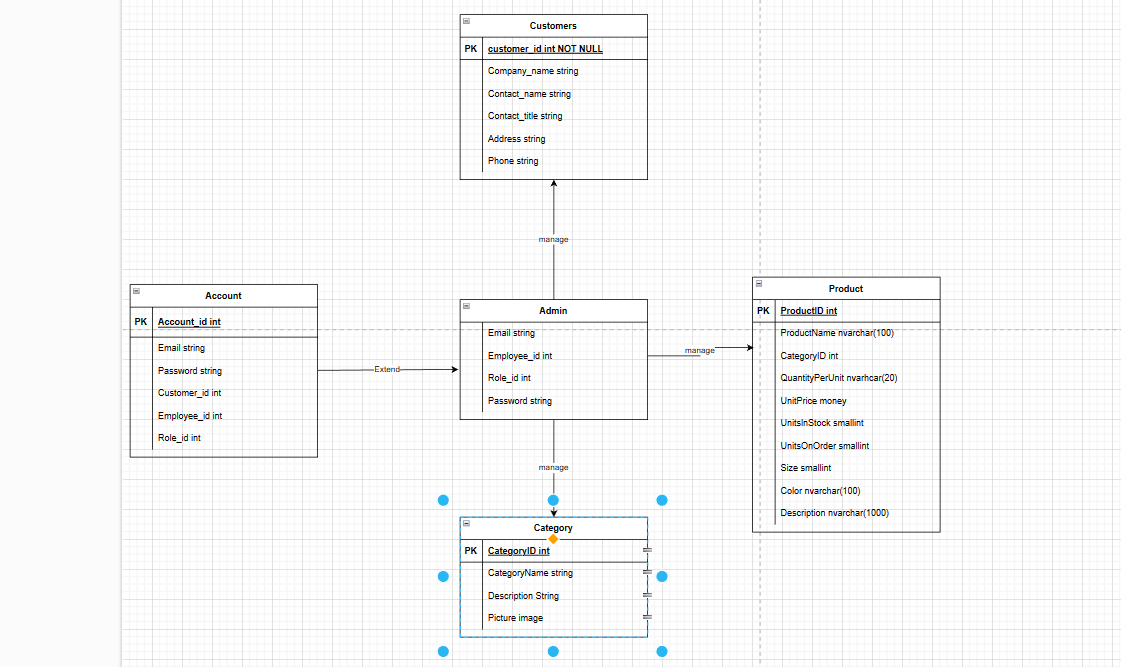


### d. Database Queries

\_dbContext.Orders.toList();

## 4. CRUD

### a. Class Diagram



### b. Class Specifications

#### Order

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

#### Customer

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

#### Category

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

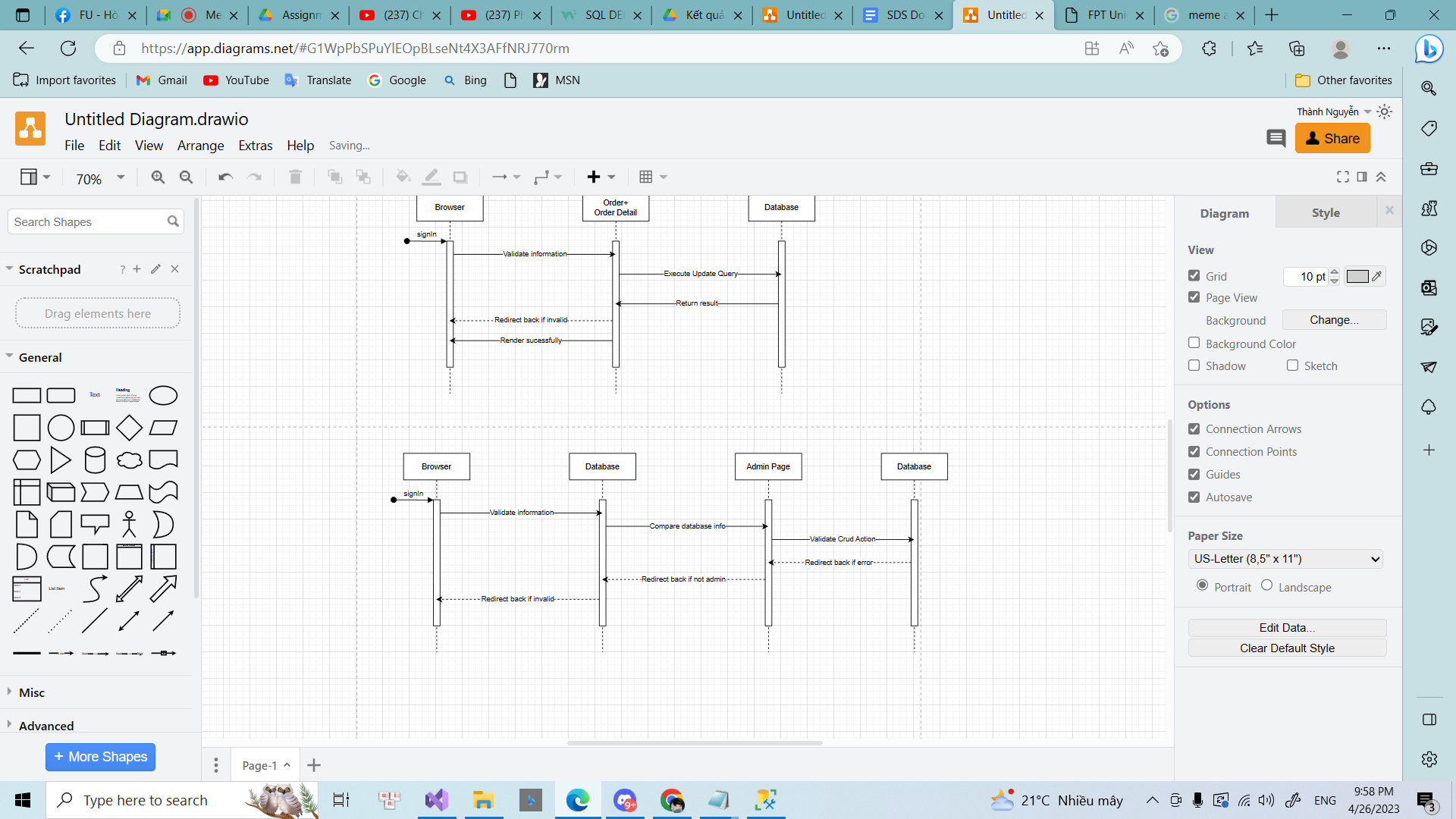
#### Product

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

### DBContext Class

| No | Method | Description |
| --- | --- | --- |
| 01 | getConnection() | class attempts to establish a connection to the database by using the given database url. |

## *c. Sequence Diagram(s)*



### d. Database Queries

\_dbContext.Customers.toList();

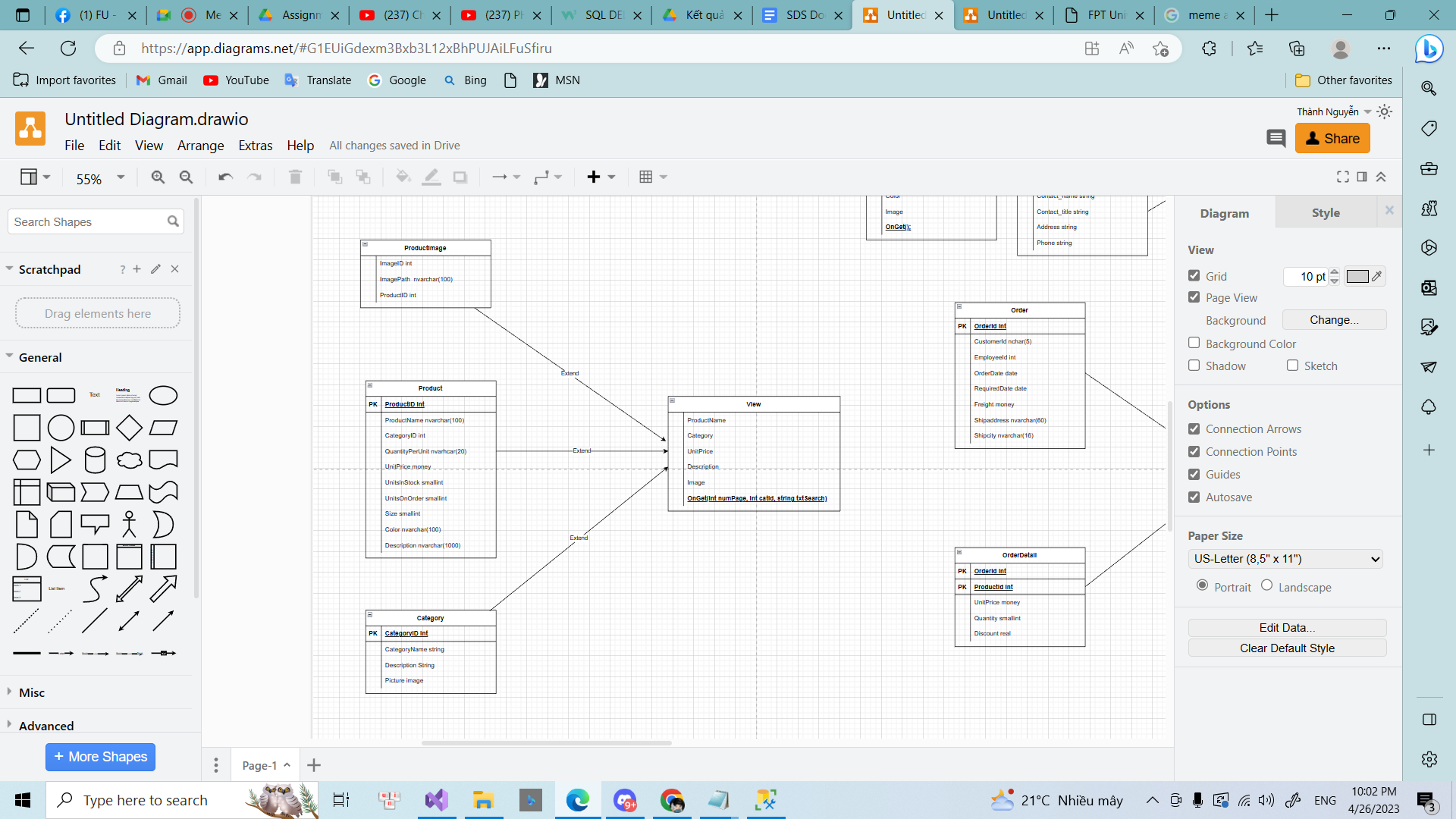
\_dbContext.Accounts.toList();

\_dbContext.Products.toList();

\_dbContext.Categories.toList();

## 5. ProductList

### a. Class Diagram



### b. Class Specifications

#### Product

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

### DBContext Class

| No | Method | Description |
| --- | --- | --- |
| 01 | getConnection() | class attempts to establish a connection to the database by using the given database url. |

## *c. Sequence Diagram(s)*

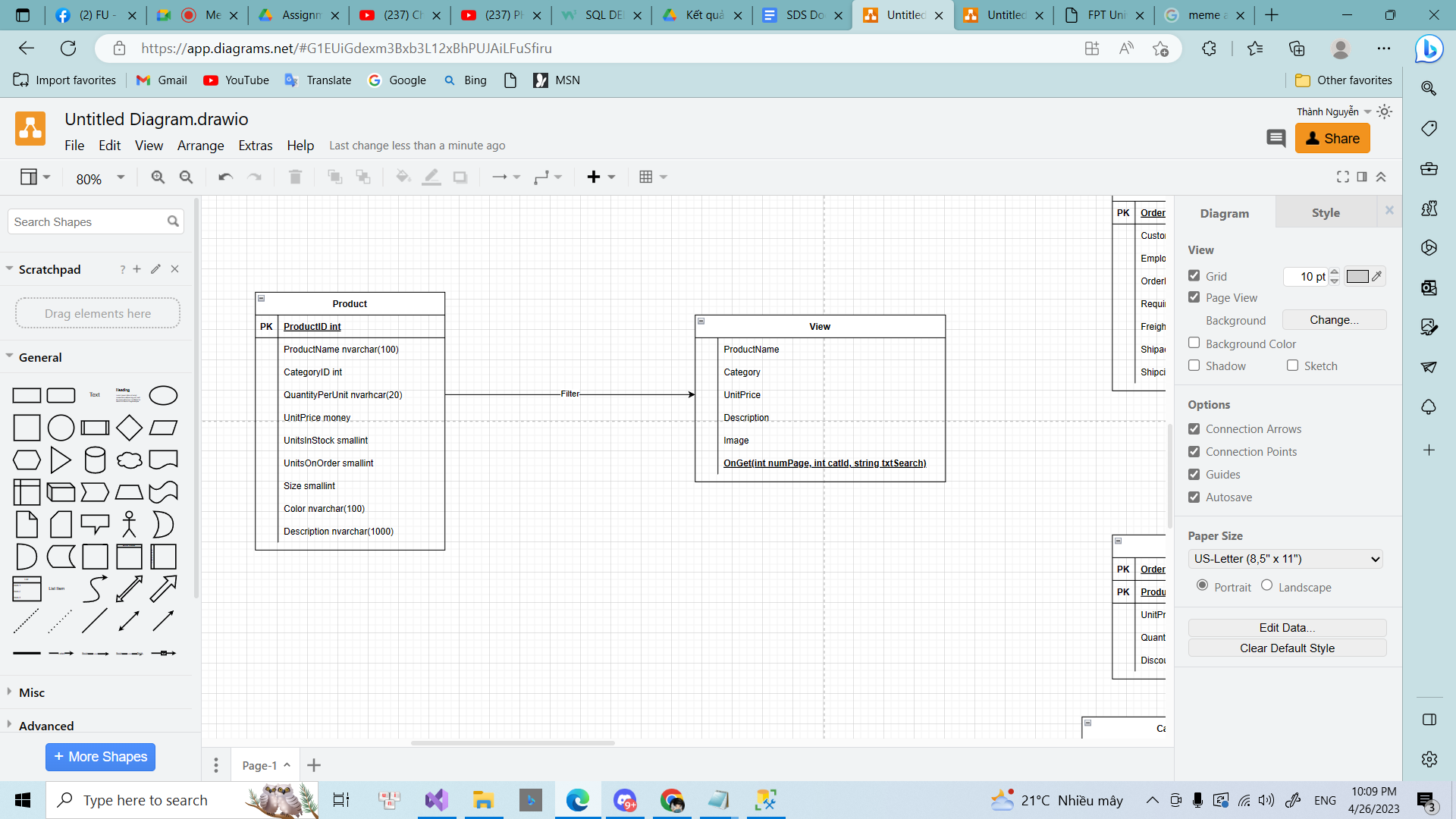


### d. Database Queries

\_dbContext.Products.toList();

## 6. Filter

### a. Class Diagram



### b. Class Specifications

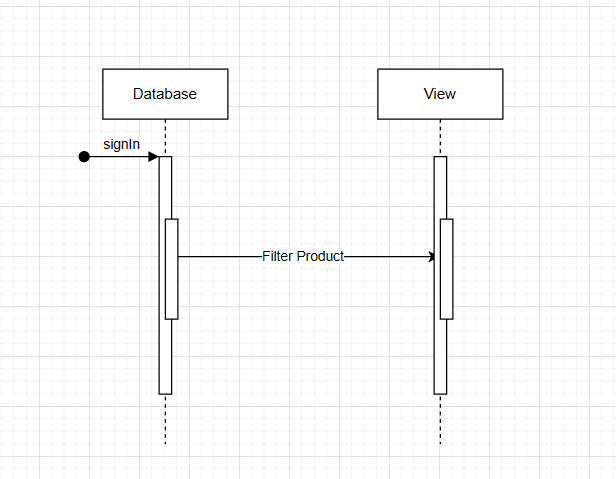
#### Product

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

### DBContext Class

| No | Method | Description |
| --- | --- | --- |
| 01 | getConnection() | class attempts to establish a connection to the database by using the given database url. |

## *c. Sequence Diagram(s)*



### d. Database Queries

productPerPage.Where(p => p.ProductId.ToString().Contains(txtSearch)

|| p.ProductName.Contains(txtSearch)

|| p.UnitPrice.ToString().Contains(txtSearch)

|| p.QuantityPerUnit.Contains(txtSearch)

|| p.UnitsInStock.ToString().Contains(txtSearch)

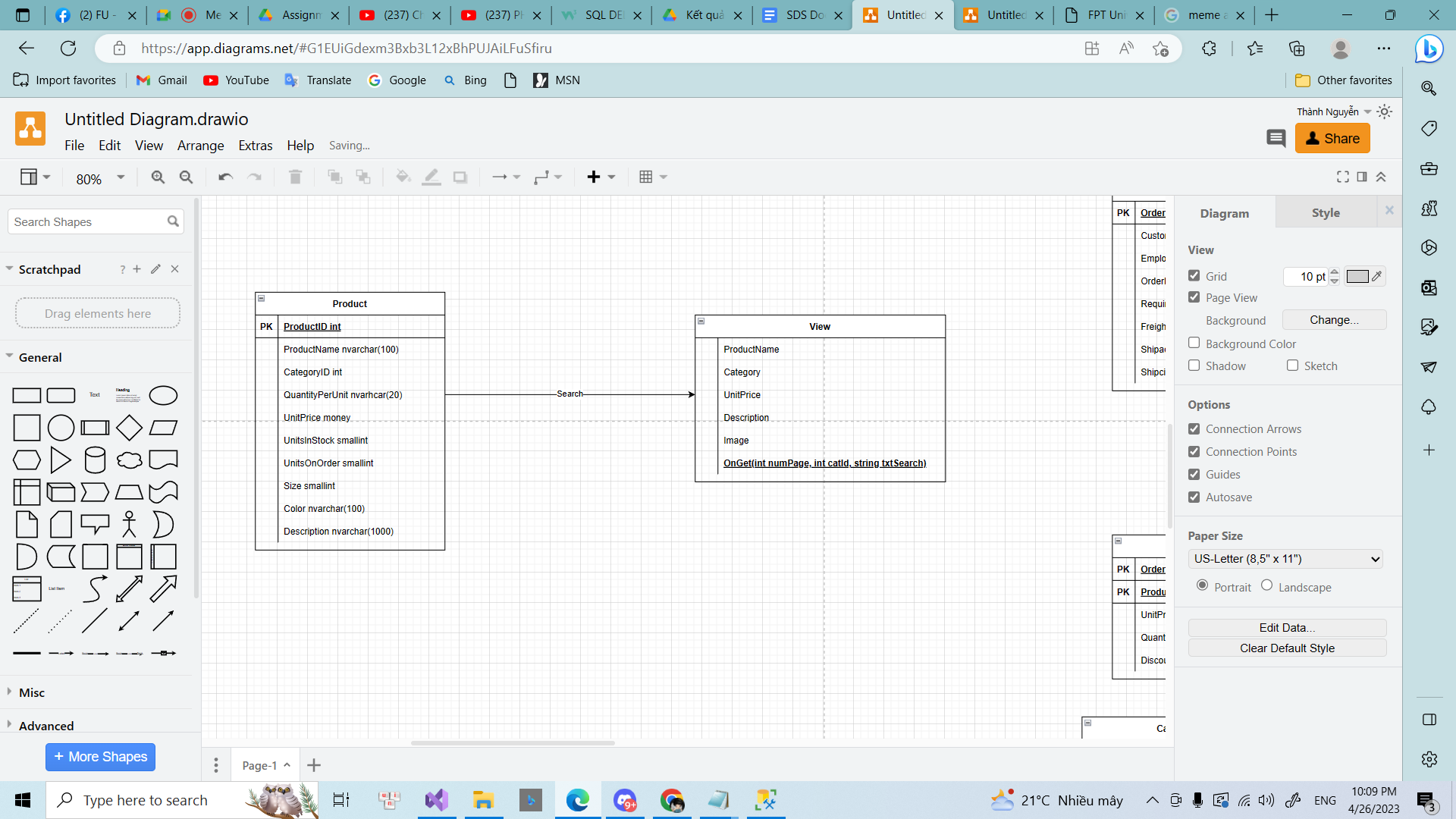
|| p.Category.CategoryName.Contains(txtSearch)

)

.ToList();

## 7. Search

### a. Class Diagram



### b. Class Specifications

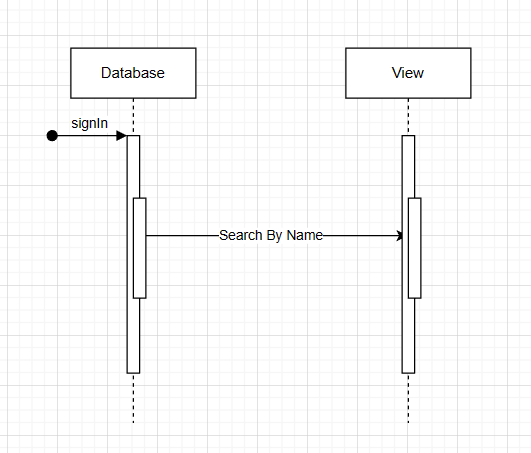
#### Product

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

### DBContext Class

| No | Method | Description |
| --- | --- | --- |
| 01 | getConnection() | class attempts to establish a connection to the database by using the given database url. |

## *c. Sequence Diagram(s)*

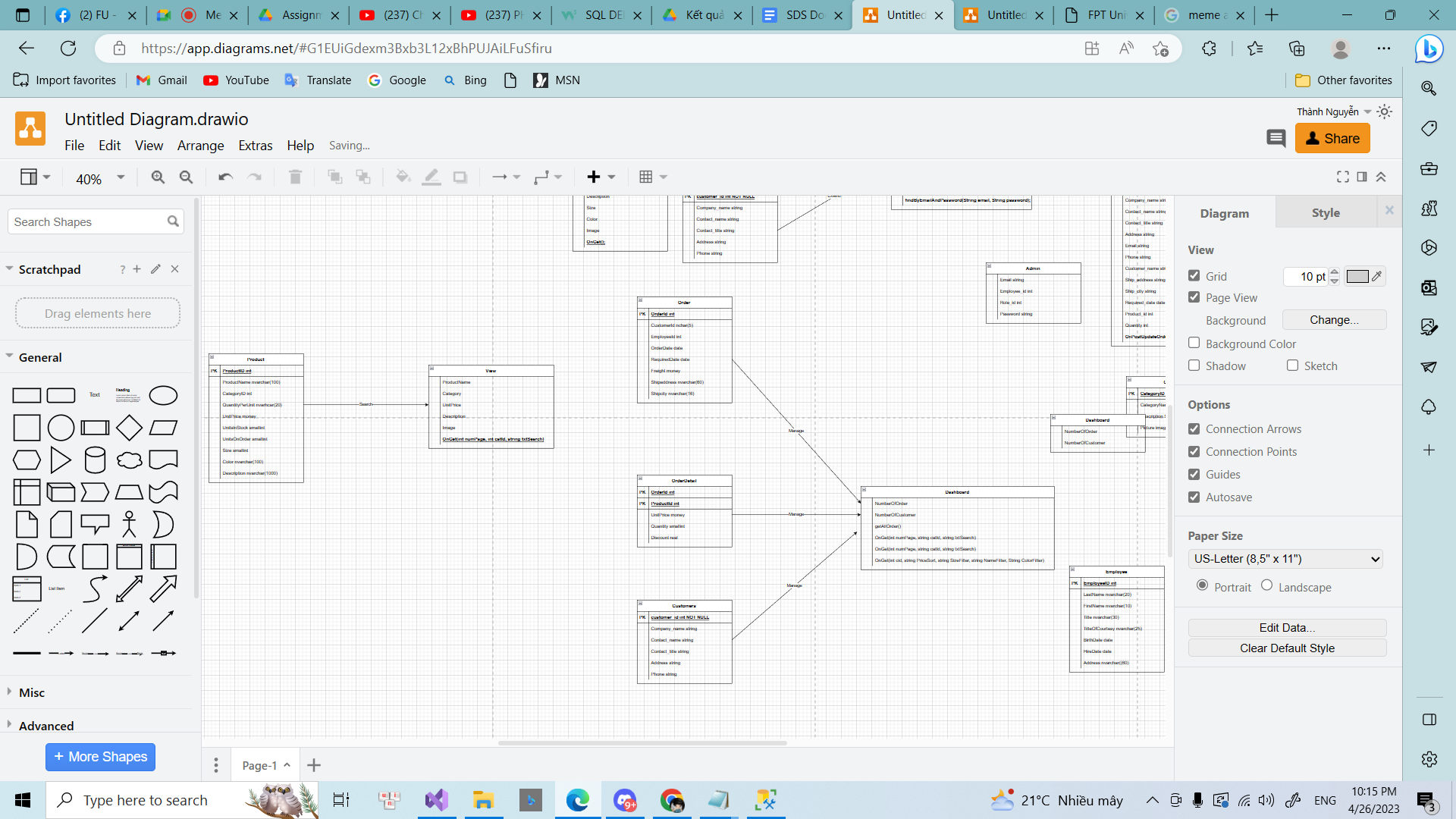


### d. Database Queries

\_dbContext.Products.Where(p => p.name.Contain(search)).toList();

## 8. Admin Dashboard

### a. Class Diagram



### b. Class Specifications

#### Order

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

#### Customer

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

### DBContext Class

| No | Method | Description |
| --- | --- | --- |
| 01 | getConnection() | class attempts to establish a connection to the database by using the given database url. |

## *c. Sequence Diagram(s)*

## 

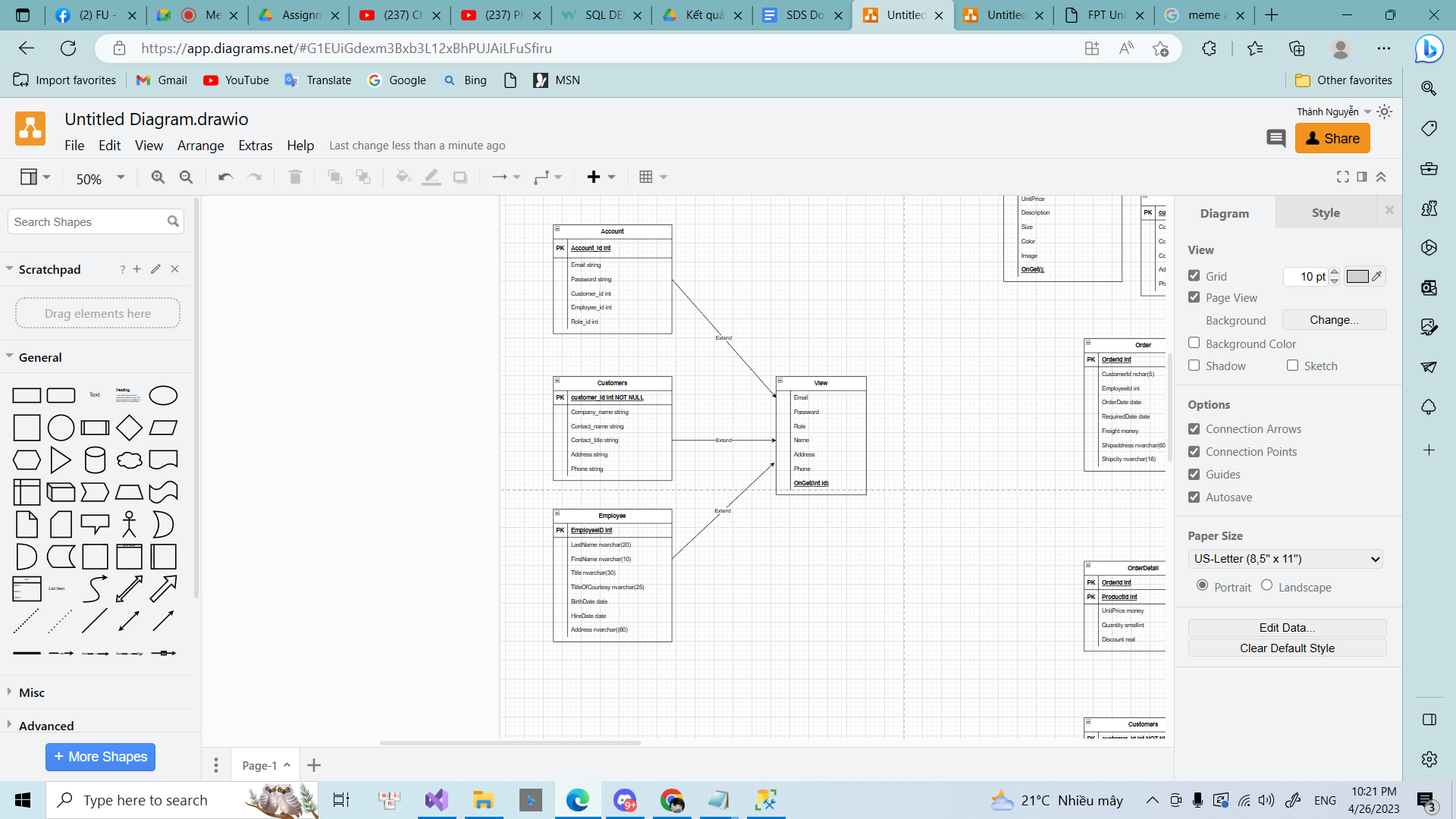
### d. Database Queries

\_dbContext.Customers.toList();

\_dbContext.Order.toList();

## 9. View profile

### a. Class Diagram



### b. Class Specifications

#### Customer

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

#### Account

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

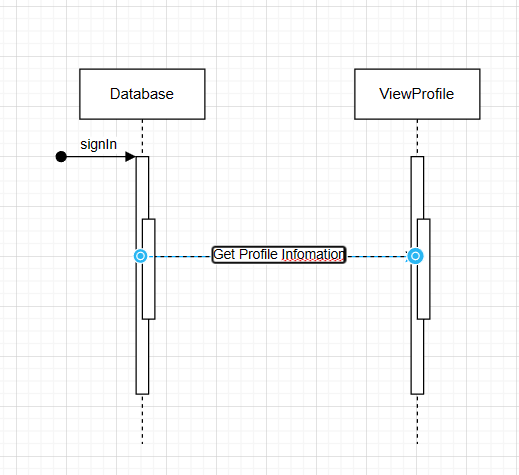
#### Employee

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

### DBContext Class

| No | Method | Description |
| --- | --- | --- |
| 01 | getConnection() | class attempts to establish a connection to the database by using the given database url. |

## *c. Sequence Diagram(s)*



### d. Database Queries

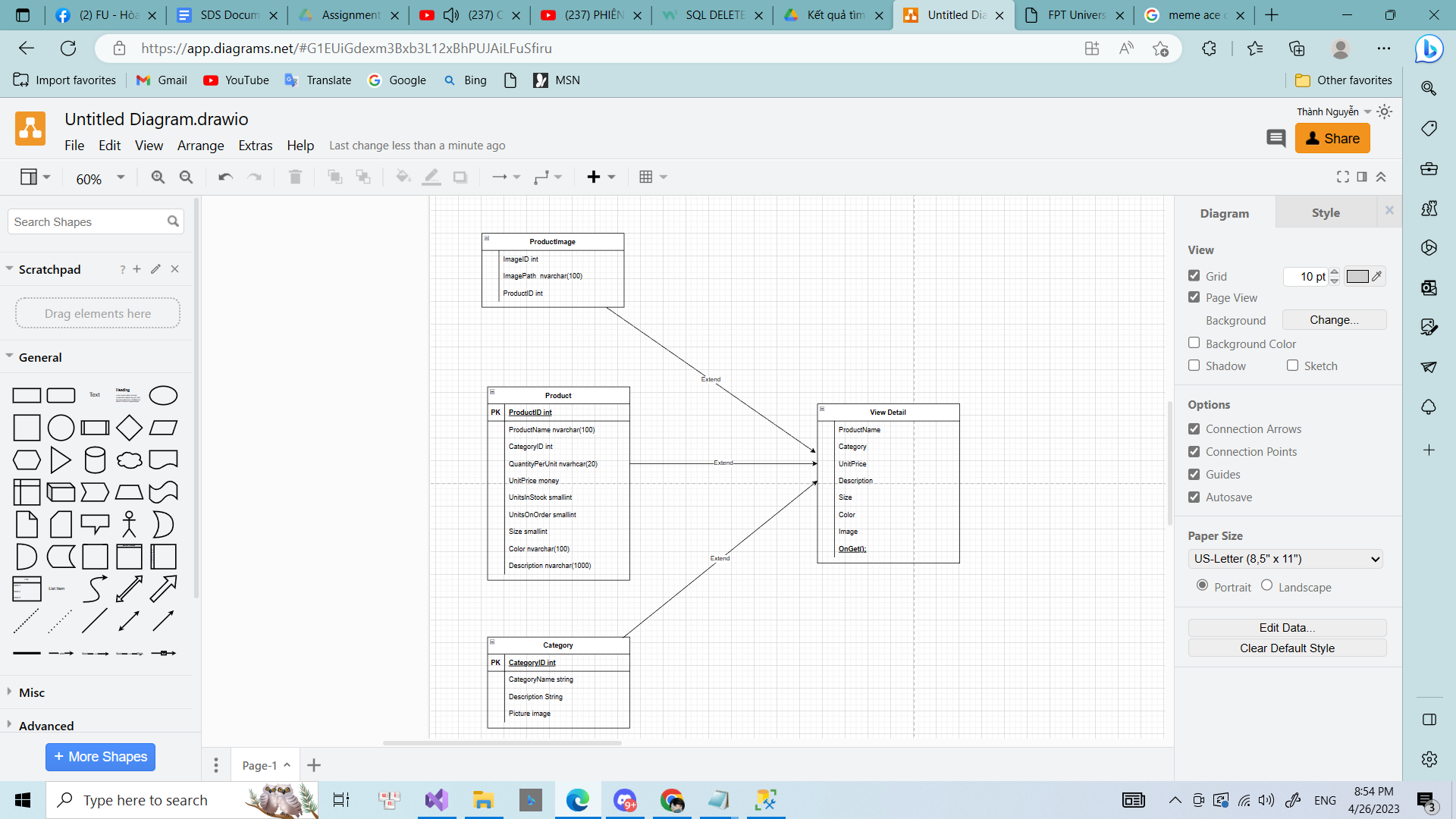
\_dbContext.Customers.SingleOrDefault(c => c.id = id);

\_dbContext.Accounts.SingleOrDefault(a => a.id = id);

\_dbContext.Employee.SingleOrDefault.(e => e.id = id);

## 10. Product Detail

### a. Class Diagram



### b. Class Specifications

#### Product

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

#### Category

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

#### ProductImage

| **No** | **Method** | **Description** |
| --- | --- | --- |
| *01* | *getter/setter* | *Get value of private attributes* |
|  |  |  |

### 

## *c. Sequence Diagram(s)*

### 

### d. Database Queries

\_dbContext.Products.SingleOrDefault(c => c.id = id)

\_dbContext.Categories.SingleOrDefault(a => a.id = categoryId);

\_dbContext.ProductImage.SingleOrDefault.(e => e.ProductId = id);