

**online Gas production shop**

**PROJECT**

**Software Design Specification**

– SPRING 2023 –

Record of changeS

|  |  |  |  |
| --- | --- | --- | --- |
| Date | A\* M, D | In charge | Change Description |
| 16/05/2023 | A | Đỗ Đức Hiếu, Nhâm Mạnh Hùng, Trần Quang Nam, Nguyễn Hoàng Dương | Add basic functions to Client site |
| 30/05/2023 | A | Đỗ Đức Hiếu, Nhâm Mạnh Hùng, Trần Quang Nam, Nguyễn Hoàng Dương | Add basic functions to Admin site |
| 13/06/2023 | A, M, D | Đỗ Đức Hiếu, Nhâm Mạnh Hùng, Trần Quang Nam, Nguyễn Hoàng Dương | Modify and add Functions and features to Admin site |
| 22/06/2023 | A, M, D | Đỗ Đức Hiếu, Nhâm Mạnh Hùng, Trần Quang Nam, Nguyễn Hoàng Dương | Modify and add Functions and features to Client site |
| 29/06/2023 | M | Đỗ Đức Hiếu, Nhâm Mạnh Hùng, Trần Quang Nam, Nguyễn Hoàng Dương | Complete, summarize functions, planning for future functions and features |
| 13/07/2023 | M, D | Đỗ Đức Hiếu, Nhâm Mạnh Hùng, Trần Quang Nam, Nguyễn Hoàng Dương | Complete project |

\*A - Added M - Modified D – Deleted

**Table of Contents**

[I. Overview 5](#_Toc140016899)

[1. Code Packages 5](#_Toc140016900)

[2. Database Design 6](#_Toc140016901)

[a. Database Schema 6](#_Toc140016902)

[b. Table Description 8](#_Toc140016903)

[II. Code Designs 13](#_Toc140016904)

[1. Public Customer 13](#_Toc140016905)

[a. Class Diagram 13](#_Toc140016906)

[b. Class Specifications 14](#_Toc140016907)

[c. Sequence Diagram(s) 18](#_Toc140016908)

[2. Public Admin 22](#_Toc140016910)

[a. Class Diagram 22](#_Toc140016911)

[b. Class Specifications 22](#_Toc140016912)

[c. Sequence Diagram(s) 24](#_Toc140016913)

[3. Public Order 28](#_Toc140016914)

[a. Class Diagram 28](#_Toc140016915)

[b. Class Specifications 29](#_Toc140016916)

[c. Sequence Diagram(s) 32](#_Toc140016917)

[4. Public Product 37](#_Toc140016918)

[a. Class Diagram 37](#_Toc140016919)

[b. Class Specifications 37](#_Toc140016920)

[c. Sequence Diagram(s) 41](#_Toc140016921)

[5. Public News 46](#_Toc140016922)

[a. Class Diagram 46](#_Toc140016923)

[b. Class Specifications 47](#_Toc140016924)

[c. Sequence Diagram(s) 49](#_Toc140016925)

[6. Public Category 53](#_Toc140016926)

[a. Class Diagram 53](#_Toc140016927)

[b. Class Specifications 53](#_Toc140016928)

[c. Sequence Diagram(s) 55](#_Toc140016929)

[7. Public Service 56](#_Toc140016930)

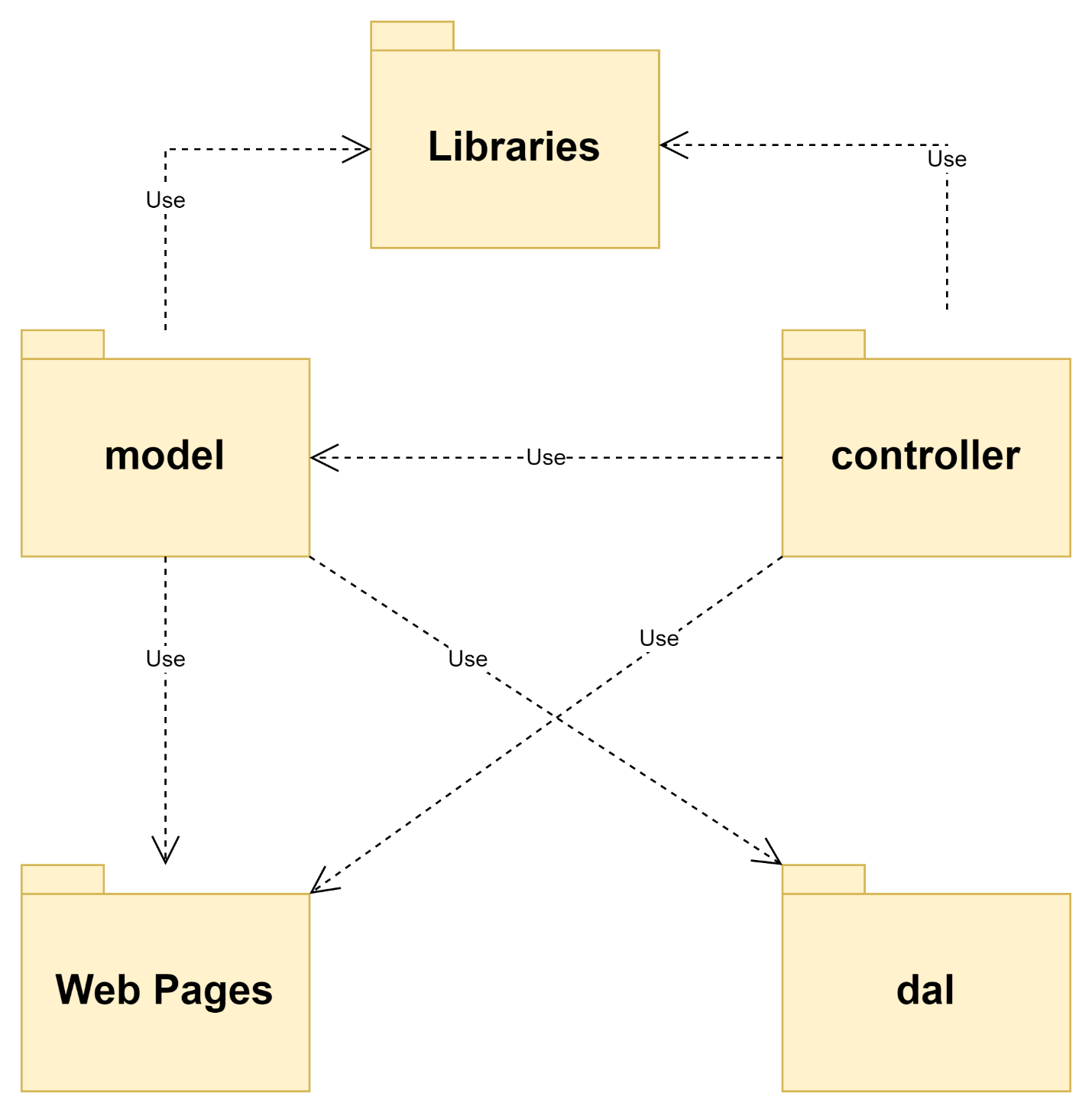
[a. Class Diagram 56](#_Toc140016931)

[b. Class Specifications 57](#_Toc140016932)

[c. Sequence Diagram(s) 60](#_Toc140016933)

# I. Overview

## 1. Code Packages



**Figure 1.1.** Code packages diagram

***Package descriptions***

|  |  |  |
| --- | --- | --- |
| **No** | **Package** | **Description** |
| 1 | Libraries | Contains libraries of functions that are needed for coding |
| 2 | model | Contains main entities |
| 3 | controller | Controller package contains APIs, servlet files to process data and show in the website. |
| 4 | dal | Contains file DbContext.java helps connect to the database |
| 5 | Web Pages | Contains screens, GUIs help display content and data to the client |

## 2. Database Design

### a. Database Schema



**Figure 1.2.** Database schemas

### b. Table Description

Admin:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | Bigint |  | x | X | x | PK |
| 2 | roleId | Bigint |  |  | X | x | FK |
| 3 | firstName | Nvarchar | 50 |  | X |  |  |
| 4 | lastName | Nvarchar | 50 |  | X |  |  |
| 5 | Mobile | Navarchar | 15 |  | X |  |  |
| 6 | email | Navarchar | 50 |  | X |  |  |
| 7 | passwordHash | Navarchar | 32 |  | X |  |  |
| 8 | Image | Navarchar | max |  |  |  |  |
| 9 | lastLogin | Datetime |  |  |  |  |  |
| 10 | lastLogout | Datetime |  |  |  |  |  |

Category:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | int |  | x | x | x | PK |
| 2 | Name | nvarchar | 75 |  | X |  |  |
| 3 | description | nvarchar | max |  |  |  |  |

Customer promotion:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | PromotionID | bigint |  | x |  | x | PK |
| 2 | CustomerID | bigint |  |  |  |  |  |
| 3 | CouponID | bigint |  |  |  |  |  |

Country:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | Int |  | x | X | x | PK |
| 2 | Name | nvarchar | 50 |  | x |  |  |
| 3 | Tax | Float |  |  |  |  |  |
| 5 | Shipping | float |  |  |  |  |  |

Discount:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Code | Varchar | 15 | x | X | x | PK |
| 2 | Name | Nvarchar | 50 |  |  |  |  |
| 3 | Amount | Float |  |  |  |  |  |
| 4 | Description | nvarchar | Max |  |  |  |  |
| 5 | Type | nvarchar | 20 |  |  |  |  |

News:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | Bigint |  | x | X | x | PK |
| 2 | AdminId | Bigint | 100 |  |  |  |  |
| 3 | groupId | Bigint |  |  | X | X |  |
| 4 | Title | nvarchar | 100 |  |  |  |  |
| 5 | Heading | Nvarchar | Max |  |  |  |  |
| 6 | Author | nvarchar | 50 |  |  |  |  |
| 7 | Image | Nvarchar | Max |  |  |  |  |
| 8 | view | Bigint |  |  |  |  |  |
| 9 | STT | Bigint |  |  |  |  |  |
| 10 | link | nvarchar | Max |  |  |  |  |
| 11 | createdAt | Datetime |  |  |  |  |  |
| 12 | updatedAt | Datetime |  |  |  |  |  |
| 13 | content | nvarchar | Max |  |  |  |  |

NewsGroup:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | bigint |  | x | X | X | PK |
| 2 | Name | Nvarchar | 75 |  |  |  |  |
| 3 | type | Nvarchar | 75 |  |  |  |  |

Order:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | bigInt |  | x | X | X | PK |
| 2 | UserID | Bigint |  |  | X | X | FK |
| 3 | firstName | nvarchar | 50 |  |  |  |  |
| 4 | lastName | nvarchar | 50 |  |  |  |  |
| 5 | Mobile | nvarchar | 15 |  |  |  |  |
| 6 | StatusId | Tinyint |  |  | X | X | FK |
| 7 | discountCode | Nvarchar | 15 |  |  | X | FK |
| 8 | subtotal | Float |  |  | X |  |  |
| 9 | grandTotal | Float |  |  | X |  |  |
| 10 | Line1 | Nvarchar | 50 |  |  |  |  |
| 11 | Line2 | Nvarchar | 50 |  |  |  |  |
| 12 | City | Nvarchar | 50 |  |  |  |  |
| 13 | Province | Nvarchar | 50 |  |  |  |  |
| 14 | countryId | Int |  |  |  | X | FK |
| 15 | createdAt | Datetime |  |  |  |  |  |
| 16 | updatedAt | datetime |  |  |  |  |  |
| 17 | Content | Nvarchar | max |  |  |  |  |
| 18 | Payment | nvarchar | 50 |  |  |  |  |

OrderItem:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | Bigint |  | x | X | x | PK |
| 2 | ProductId | Bigint | 50 |  | X |  | FK |
| 3 | orderId | Bigint |  |  | X | x | FK |
| 4 | Quantity | int |  |  | X |  |  |
| 5 | Content | nvarchar | Max |  |  |  |  |

Product:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | bigint |  | x | X | x | PK |
| 2 | Model | nvarchar | 50 |  |  |  |  |
| 3 | categoryId | Int |  |  |  | x | FK |
| 4 | Name | nvarchar | 75 |  | X |  |  |
| 5 | Description | Nvarchar | Max |  |  |  |  |
| 6 | sellPrice | Float |  |  |  |  |  |
| 7 | Warranty | Smallint |  |  |  |  |  |
| 8 | Sold | Bigint |  |  |  |  |  |
| 9 | View | Bigint |  |  |  |  |  |
| 10 | manufacturer | nvarchar | 50 |  |  |  |  |
| 11 | createdAt | Datetime |  |  | x |  |  |
| 12 | updatedAt | datetime |  |  |  |  |  |

Product\_discount:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | ProductId | bigint |  | X | X | X | PK, FK |
| 2 | DiscountCode | varchar | 15 |  | X | X | PK, FK |
| 3 | FromDate | datetime |  |  |  |  |  |
| 4 | ToDate | datetime |  |  |  |  |  |

ProductComment:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | bigint |  | x | x | x | PK |
| 2 | ProductID | Bigint |  |  | x | x | FK |
| 3 | UserID | Bigint |  |  |  |  |  |
| 4 | Name | nvarchar | 100 |  |  |  |  |
| 5 | Email | nvarchar | 100 |  |  |  |  |
| 6 | Title | nvarchar | 100 |  |  |  |  |
| 7 | Rating | tinyint |  |  | X |  |  |
| 8 | Image | nvarchar | MAX |  |  |  |  |
| 9 | CreatedAt | datetime |  |  | X |  |  |
| 10 | UpdatedAt | datetime |  |  |  |  |  |
| 11 | Content | nvarchar | MAX |  |  |  |  |

ProductImage:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | bigint |  | x | X | x | PK |
| 2 | ProductId | Bigint |  |  | X | x | FK |
| 3 | Alt | Nvarchar | 100 |  |  |  |  |
| 4 | Source | Nvarchar | MAX |  |  |  |  |

ProductIdStock:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Serial | Nvarchar | 50 | x | X | x | PK |
| 2 | ProductId | Bigint |  |  | X | X | FK |
| 3 | orderItemId | Bigint |  |  |  | x | FK |
| 4 | mfgDate | Datetime |  |  |  |  |  |
| 5 | warrantlyExp | datetime |  |  |  |  |  |

Role:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | Bigint |  | x | X | X | PK |
| 2 | Role | Nvarchar | 50 |  | X |  |  |

Service:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Code | nvarchar | 20 | x | X | x | PK |
| 2 | Type | Nvarchar | 75 |  | X |  |  |
| 3 | Name | Nvarchar | 75 |  |  |  |  |
| 4 | Amount | Float |  |  |  |  |  |
| 5 | Price | Float |  |  |  |  |  |
| 6 | Status | Nvarchar | 20 |  |  |  |  |
| 7 | Content | nvarchar | MAX |  |  |  |  |
| 8 | createdAt | Datetime |  |  |  |  |  |
| 9 | updatedAt | Datetime |  |  |  |  |  |

Status:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | tinyint |  | x | X | x | PK |
| 2 | Name | Nvarchar | 50 |  | X |  |  |
| 3 | content | Nvarchar | MAX |  |  |  |  |

User:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | Id | bigint |  | x | X | x | PK |
| 2 | FirstName | Nvarchar | 50 |  |  |  |  |
| 3 | LastName | Nvarchar | 50 |  |  |  |  |
| 4 | Mobile | Nvarchar | 15 |  |  |  |  |
| 5 | email | Nvarchar | 50 |  |  |  |  |
| 6 | passwordHash | nvarchar | 32 |  | X |  |  |
| 7 | Image | Nvarchar | MAX |  |  |  |  |
| 8 | registerAt | Datetime |  |  | X |  |  |
| 9 | lastLogin | Datetime |  |  |  |  |  |
| 10 | lastLogout | datetime |  |  |  |  |  |

User\_discount:

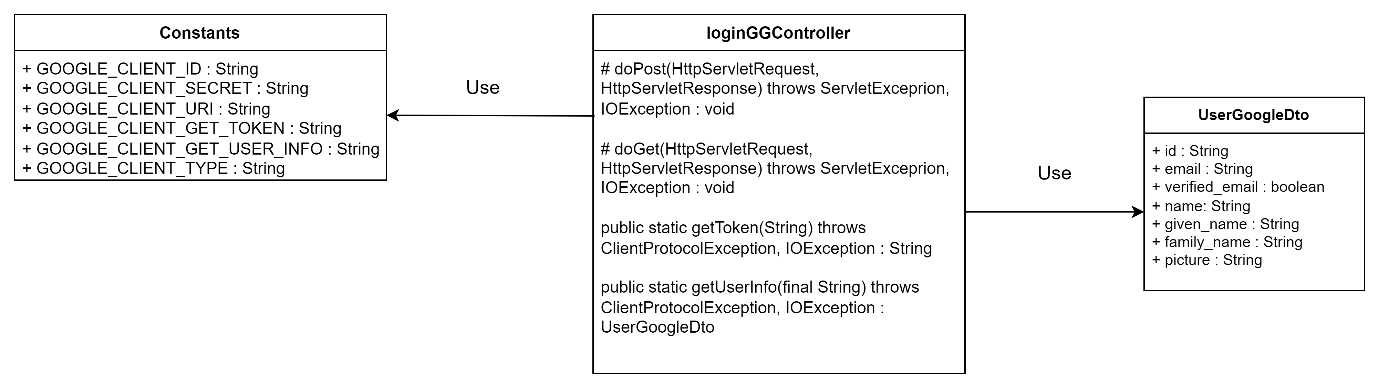
|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Field name** | **Type** | **Size** | **Unique** | **Not null** | **PK/ FK** | **Notes** |
| 1 | useId | bigint |  | x | X | x | PK, FK |
| 2 | discountCode | varchar | 15 |  | X | x | PK, FK |
| 3 | number | Tinyint |  |  |  |  |  |

# II. Code Designs

## 1. Public Customer

### a. Class Diagram

#### C:\Users\fpt\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\8A5BA6D.tmpClient



#### C:\Users\fpt\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\81A505C7.tmpAdmin

### b. Class Specifications

#### Client

##### User

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public User getLogin(String, String) | Handle request get account information |
| 02 | public boolean checkExistMobile(String) | Handle request check exist mobile |
| 03 | public boolean checkExistGmailUser(String) | Handle request check exist gmail |
| 04 | public void signUp(String frame, String, String, String, String, String) | Handle request add account to database |
| 05 | public String getEncryptedPassword(String) throws NoSuchAlgorithmException | Handle request hash password |
| 06 | public boolean verifyPassword(String, String) throws NoSuchAlgorithmException | Handle request check password with password in database |
| 07 | public User getUserByMobile(String) | Handle request get account by mobile |
| 08 | public boolean isValidEmail(String) | Handle request check email format |
| 09 | public void updateUserDetail(String, String, String, String, int) | Handle request update account detail |
| 10 | public void updateUserDetailAndPass(String, String, String, String, int, String) | Handle request update account detail and change password |
| 11 | public void updatePass(String, String) | Handle request update password |
| 12 | public User getUserByld(int) | Handle request get account by id |
| 13 | public String convertDateTimeFormat(String) | Handle request convert date |
| 14 | public void updateLastLogin(String,int) | Handle request update last login time |
| 15 | public void updateLastLogOut(String,int) | Handle request update last logout time |

##### loginGGController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |
| 03 | public static String getToken(String code) throws ClientProtocolException, IOException | Handle encode token |
| 04 | public static UserGoogleDto getUserInfo(final String) throws ClientProtocolException, IOException | Get information from google |

##### userDetailController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### forgotPasswordController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | private String generateVerificationCode() | Handle requests in GET method |

##### signUpController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |
| 03 | public static int calPage(String, String) | Handle page index |
| 04 | public static boolean isIncludedDigits(String) | Handle input include digit |
| 05 | public static boolean isIncludedLetters(String) | Handle input include letters |
| 06 | public static boolean isIncludedSpecialChars(String) | Handle input include specialChars |

##### changePasswordController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |
| 03 | public static int calPage(String, String) | Handle page index |
| 04 | public static boolean isIncludedDigits(String) | Handle input include digit |
| 05 | public static boolean isIncludedLetters(String) | Handle input include letters |
| 06 | public static boolean isIncludedSpecialChars(String) | Handle input include specialChars |

##### signInController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### signOutController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### loginGGController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |
| 03 | public static String getToken(String code) throws ClientProtocolException, IOException | Handle encode token |
| 04 | public static UserGoogleDto getUserInfo(final String) throws ClientProtocolException, IOException | Get information from google |

#### Admin

##### Customer

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public List getListCountry() | Handle request get list countries |
| 02 | public void getOrderItem(int, int) | Handle request update total when applying tax and shipping |
| 03 | public void updateRecent(int, String) | Handle request apply recent delivery addresses to current order |
| 04 | public Boolean applyDiscount(int, String) | Handle request apply discount to current order |
| 05 | public void getCart(int) | Handle request get orders in cart |
| 06 | public void getOrderDetail(int) | Handle request get detail information of an order |
| 07 | public List getListOrder(int) | Handle request list of orders |
| 08 | public void checkout(int, String[]) | Handle request checkout an order |
| 09 | public void getCheckoutDetail(int) | Handle request get detail information of a checkout |
| 10 | public List getAddressList(int) | Handle request list of delivery addresses |
| 11 | public void placeOrder(int, String, String, String, String, String, String, String, String,  String) | Handle request place an order |
| 12 | public void dropOrder(int, int) | Handle request cancel an order before making purchase |
| 13 | public void cancelOrder(int) | Handle request cancel an order after making purchase |

##### userManageController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

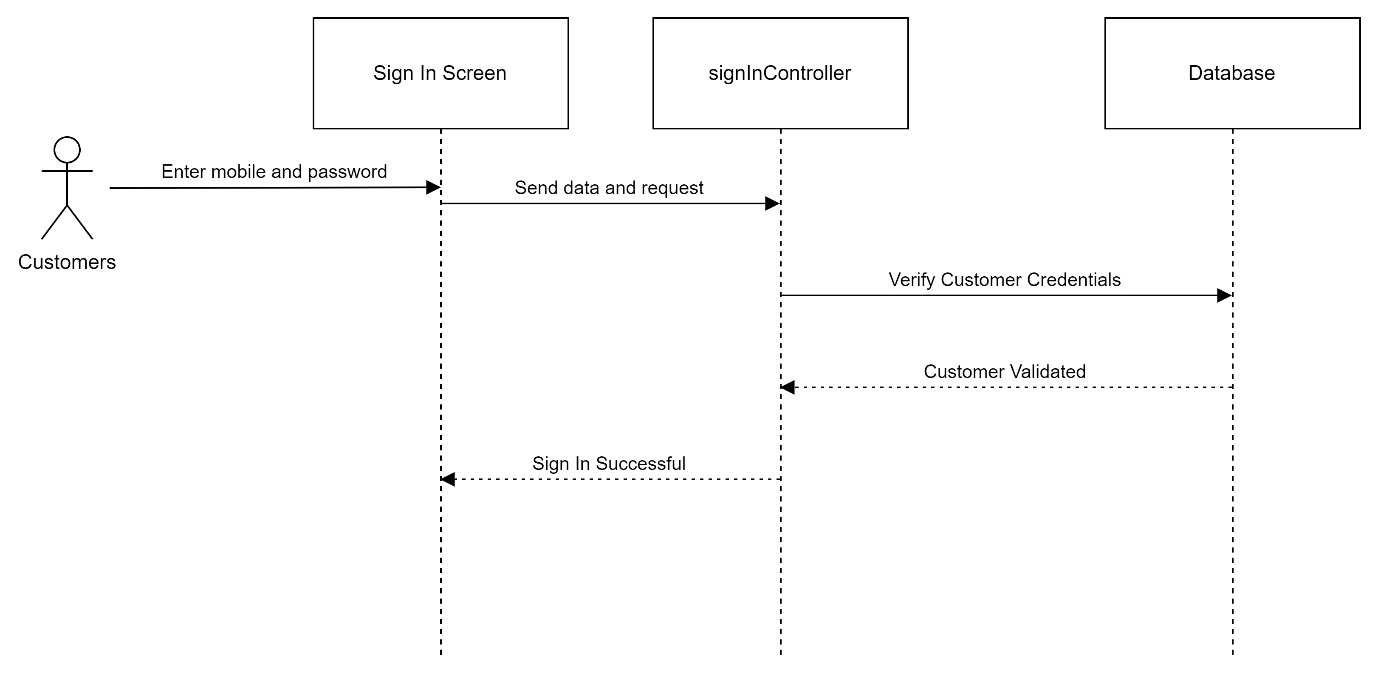
##### homeController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

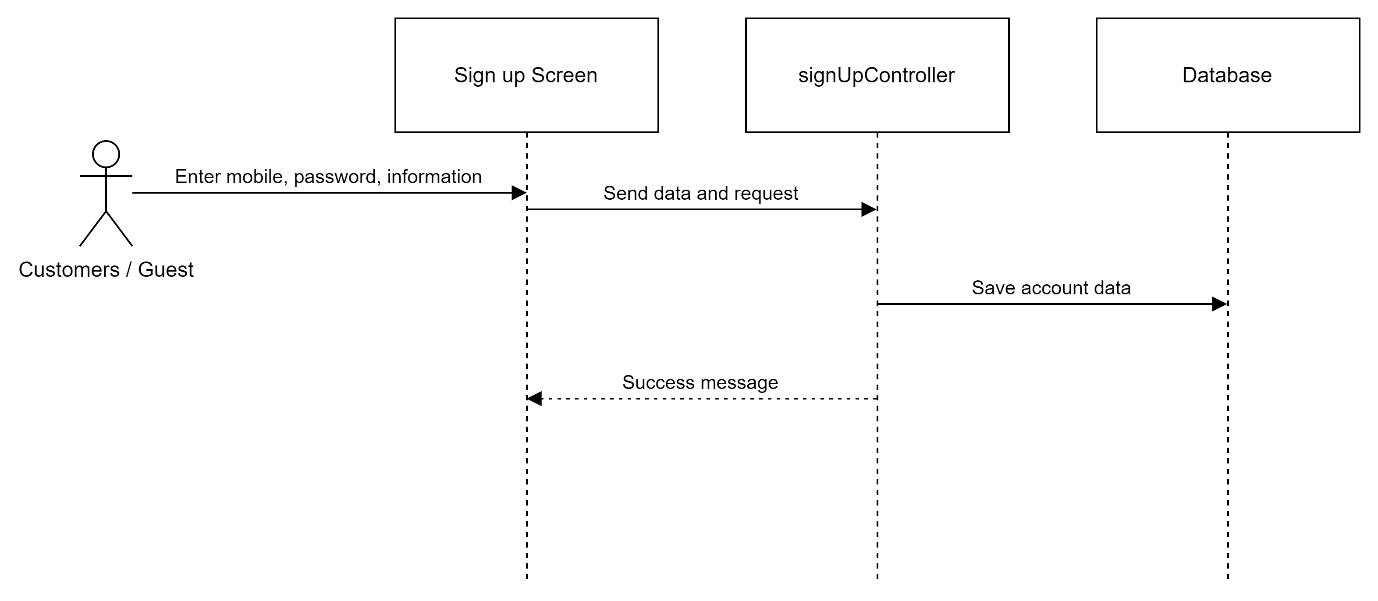
### c. Sequence Diagram(s)

#### Client

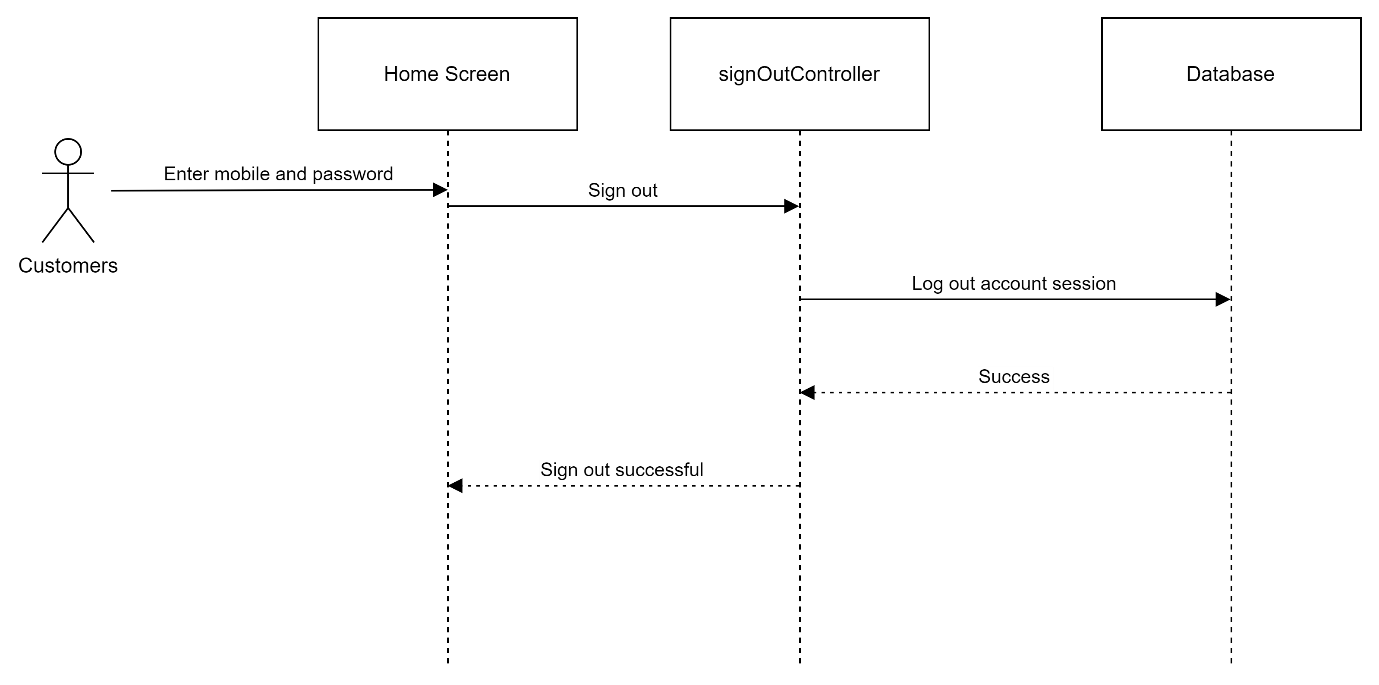
##### Sign in with password



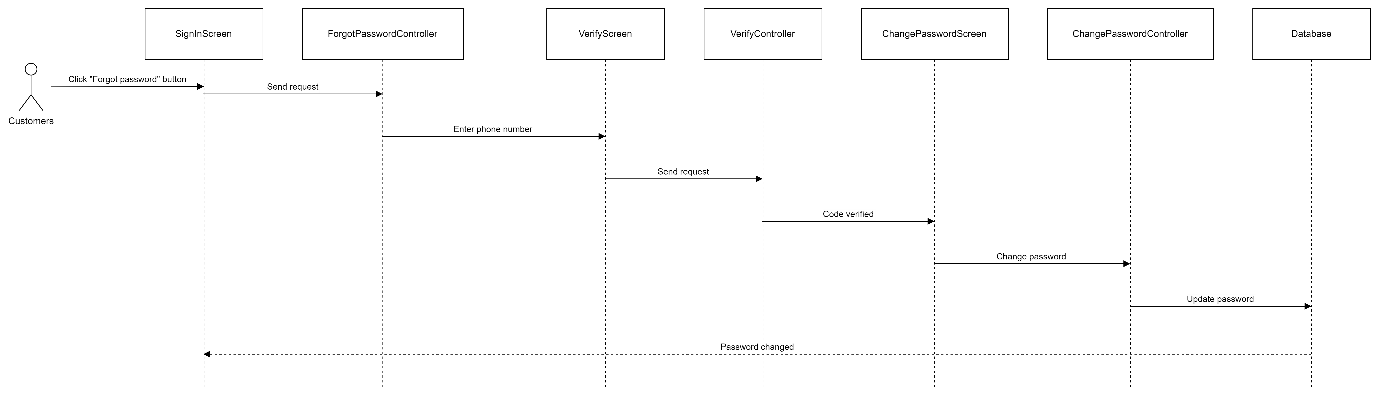
##### Sign up with password



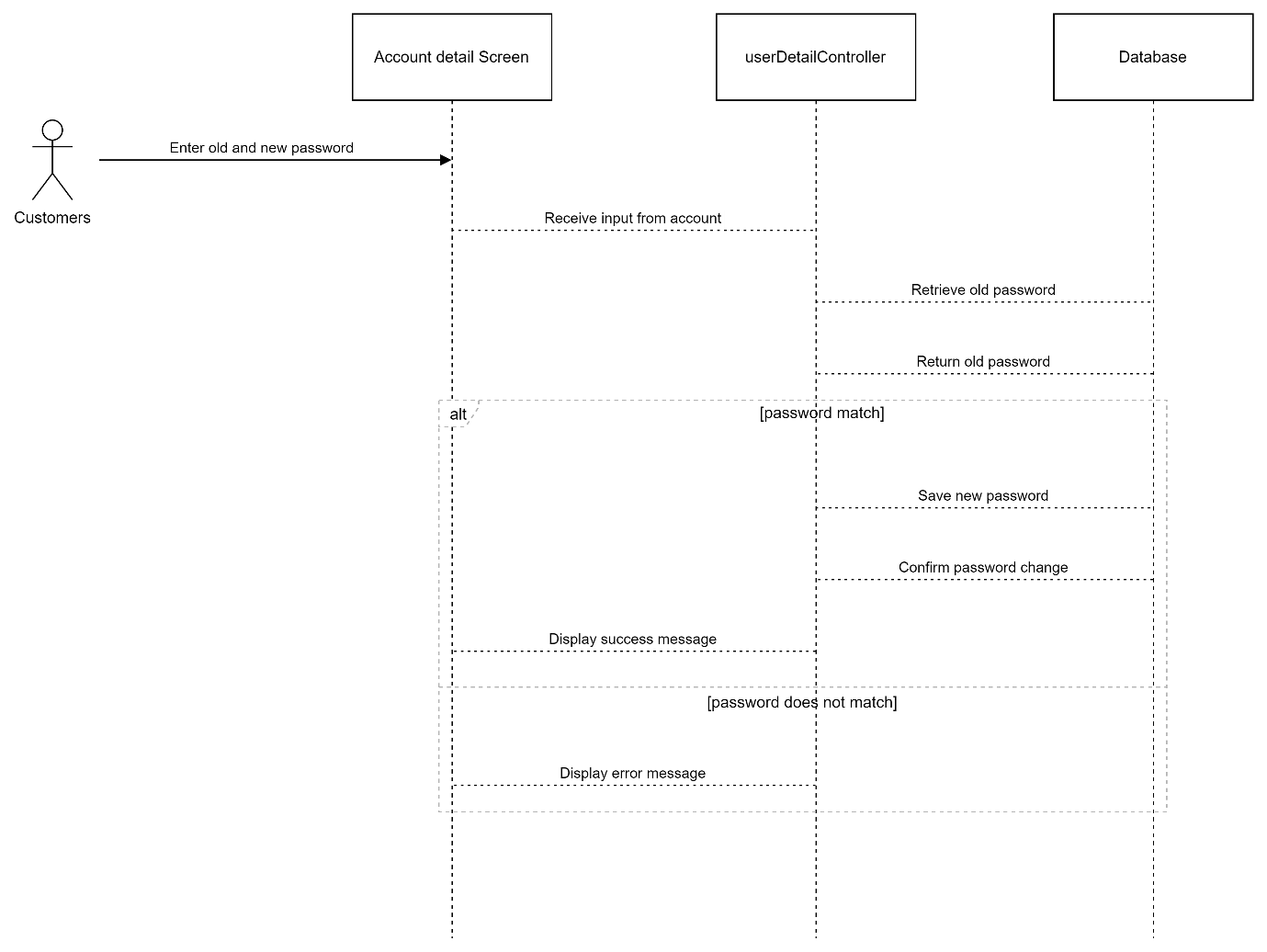
##### Sign out



##### Forgot password



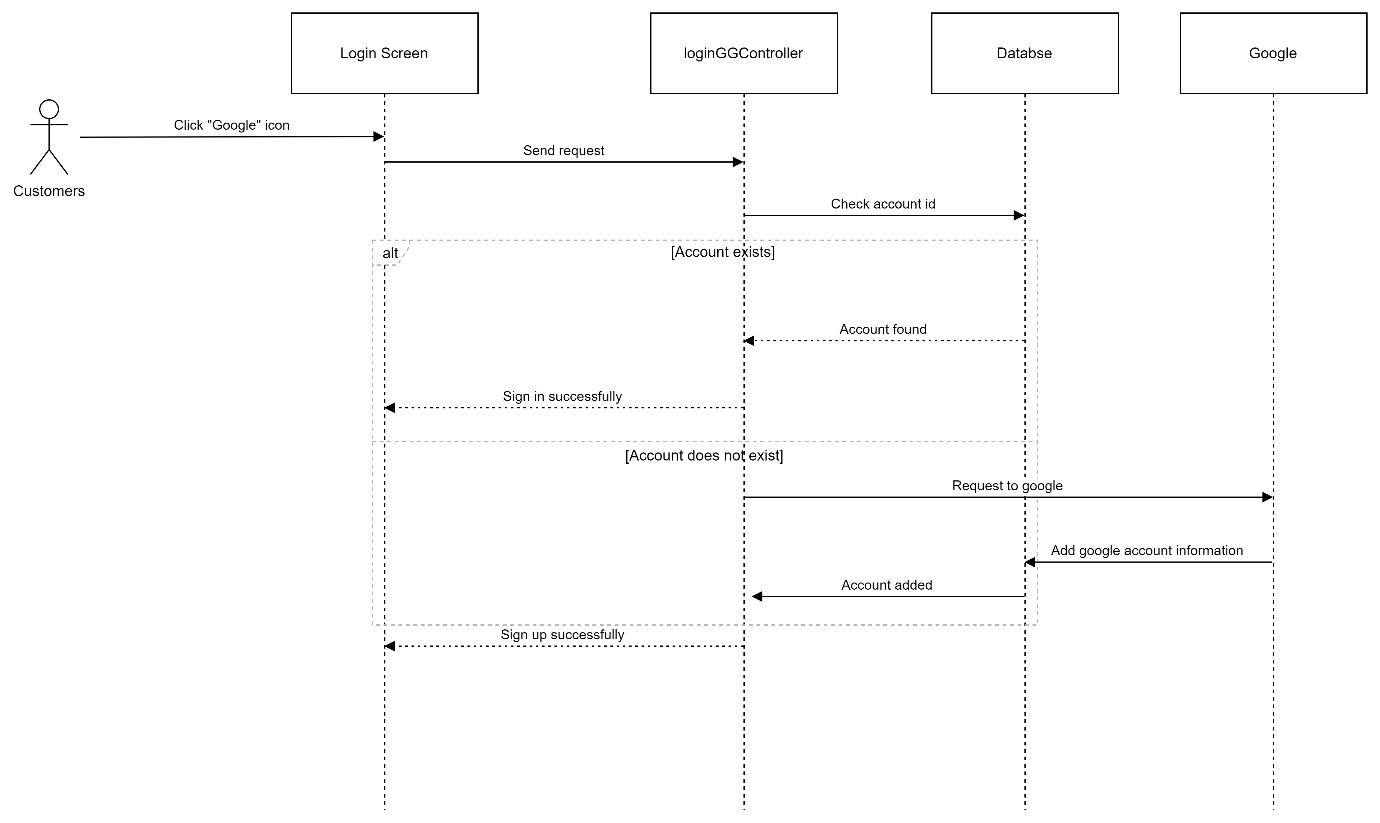
##### Change password



##### Update account detail



##### **Sign in or Sign Up with GG**



## 2. Public Admin

### C:\Users\fpt\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\63003C42.tmpa. Class Diagram

### b. Class Specifications

#### Admin

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Public String convertDateTimeFormat(String) | Handle request convert date |
| 02 | public Admin getAdminByMobile(String) | Handle request get account by mobile |
| 03 | public List<Admin> getListRole() | Handle request get list role |
| 04 | public String getRoleByld(int) | Handle request get role by id |
| 05 | public int getEndPage(filterBy) | Handle request get total page |
| 06 | public int getEndPageResearch(String) | Handle request get total page while searching |
| 07 | public List<Admin> getListStaff(int, String) | Handle request get list staff |
| 08 | public String getEncryptedPassword(String) throws NoSuchAlgorithmException | Handle request hash password |
| 09 | public boolean verifyPassword(String, String) throws NoSuchAlgorithmException | Handle request check password with password in database |
| 10 | public void updateLastLogin(String,int) | Handle request update last login time |
| 11 | public void updateLastLogOut(String,int) | Handle request update last logout time |
| 12 | public void deleteAdmin(int) | Handle request delete account |
| 13 | public void updatePass(String, String) | Handle request update password |
| 14 | public void updateRole(int,int) | Handle request update role |
| 15 | public void addStaff (int, String, String, String, String, String) | Handle request add staff |

##### VerifyNumController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |
| 03 | private String generateVerificationCode() | Handle generate verify code |

##### infoManageController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### changePasswordController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |
| 03 | public static int calPage(String, String) | Handle page index |
| 04 | public static boolean isIncludedDigits(String) | Handle input include digit |
| 05 | public static boolean isIncludedLetters(String) | Handle input include letters |
| 06 | public static boolean isIncludedSpecialChars(String) | Handle input include specialChars |

##### signInController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### staffController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |
| 03 | public static int calPage(String, String) | Handle page idnex |
| 04 | public static boolean isIncludedDigits(String) | Handle input include digit |
| 05 | public static boolean isIncludedLetters(String) | Handle input include letters |
| 06 | public static boolean isIncludedSpecialChars(String) | Handle input include specialChars |

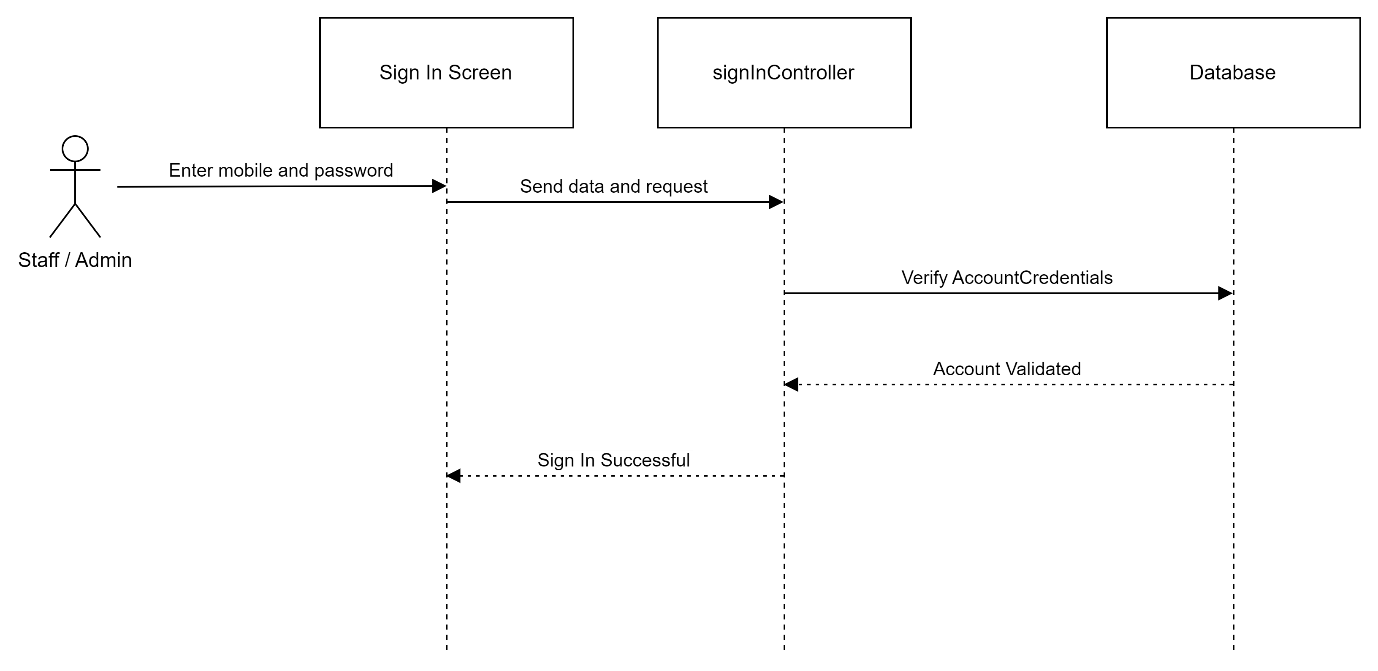
##### signOutController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

### c. Sequence Diagram(s)

#### Admin

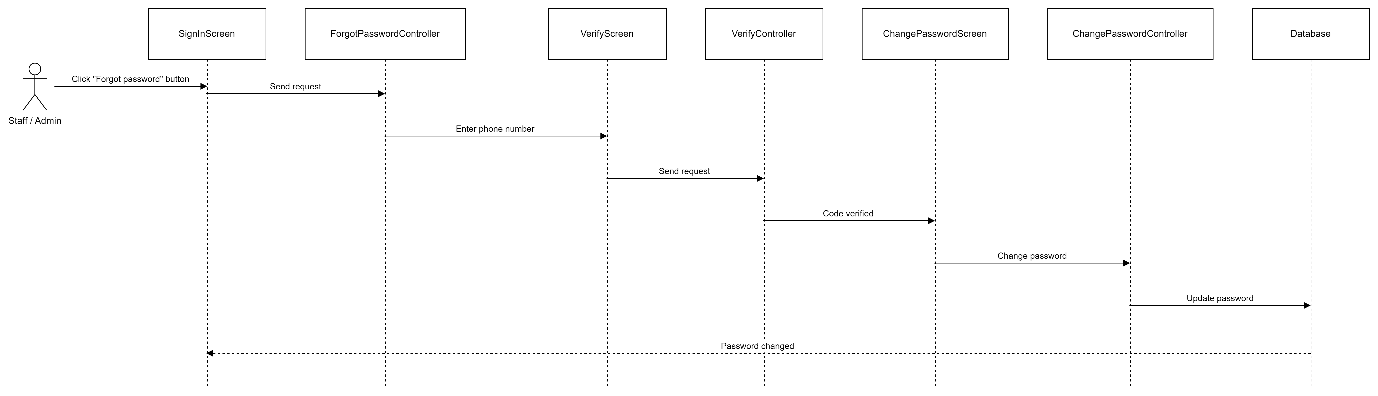
##### Sign in with password



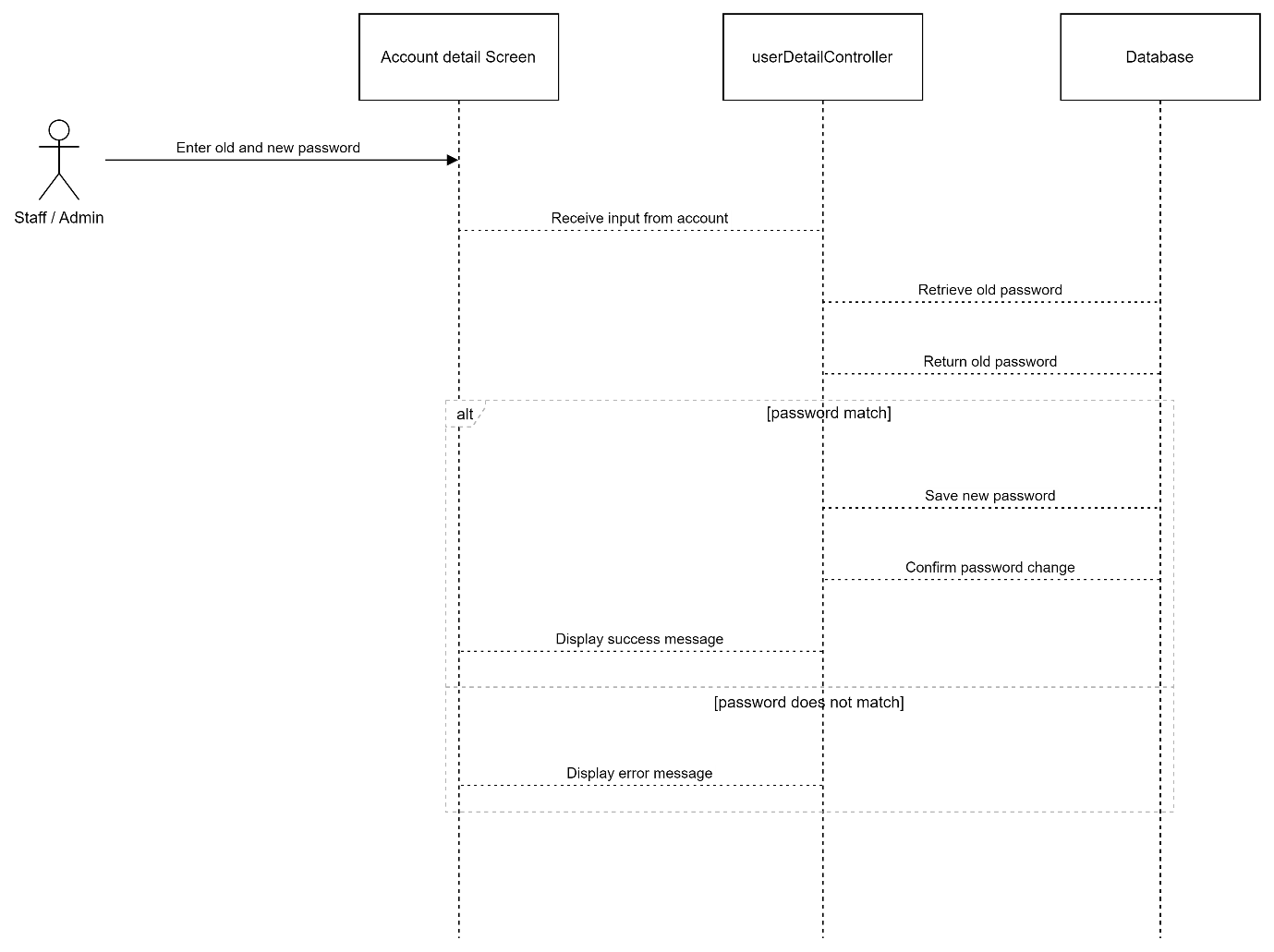
##### Sign out



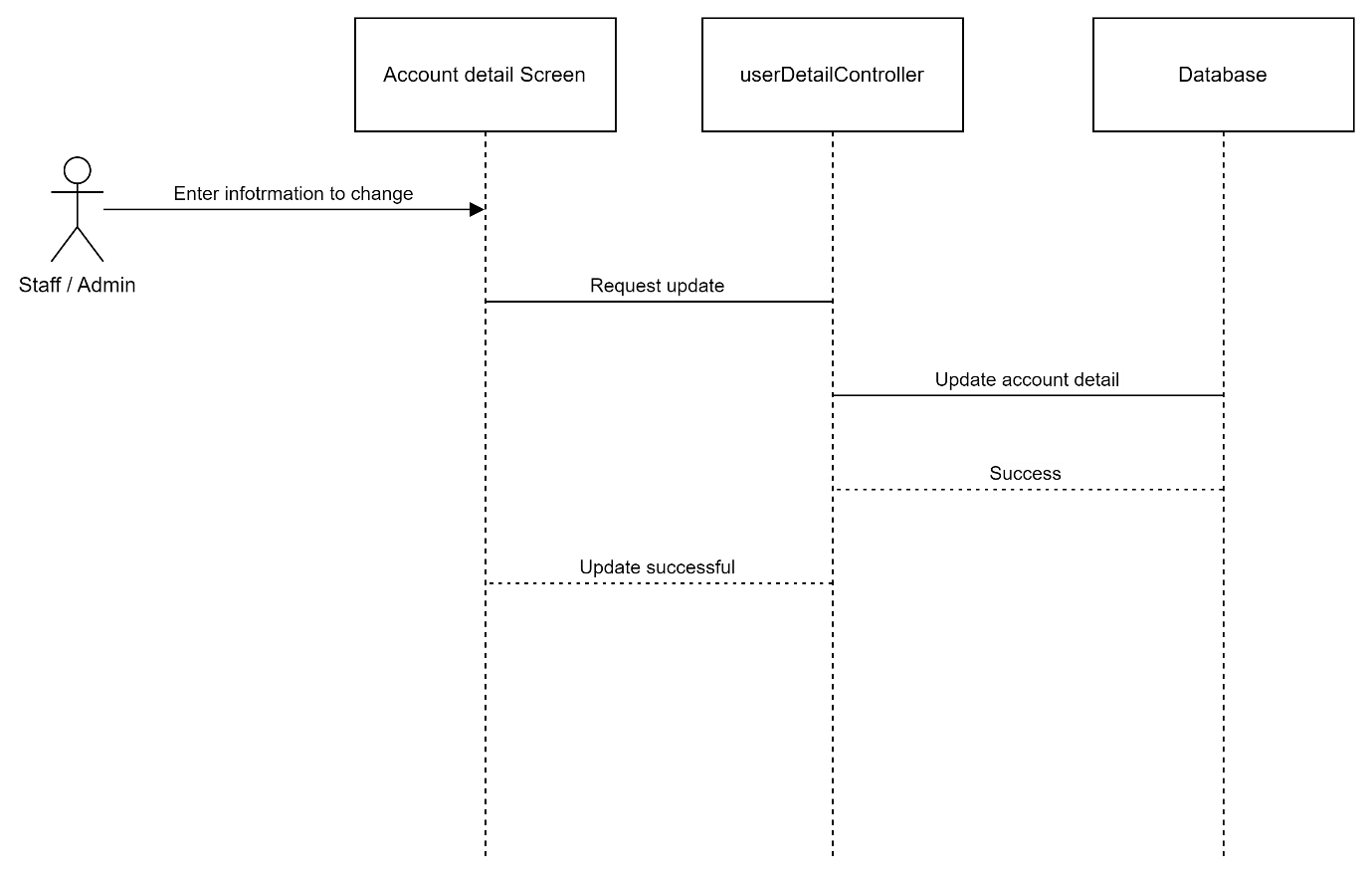
##### Forgot password



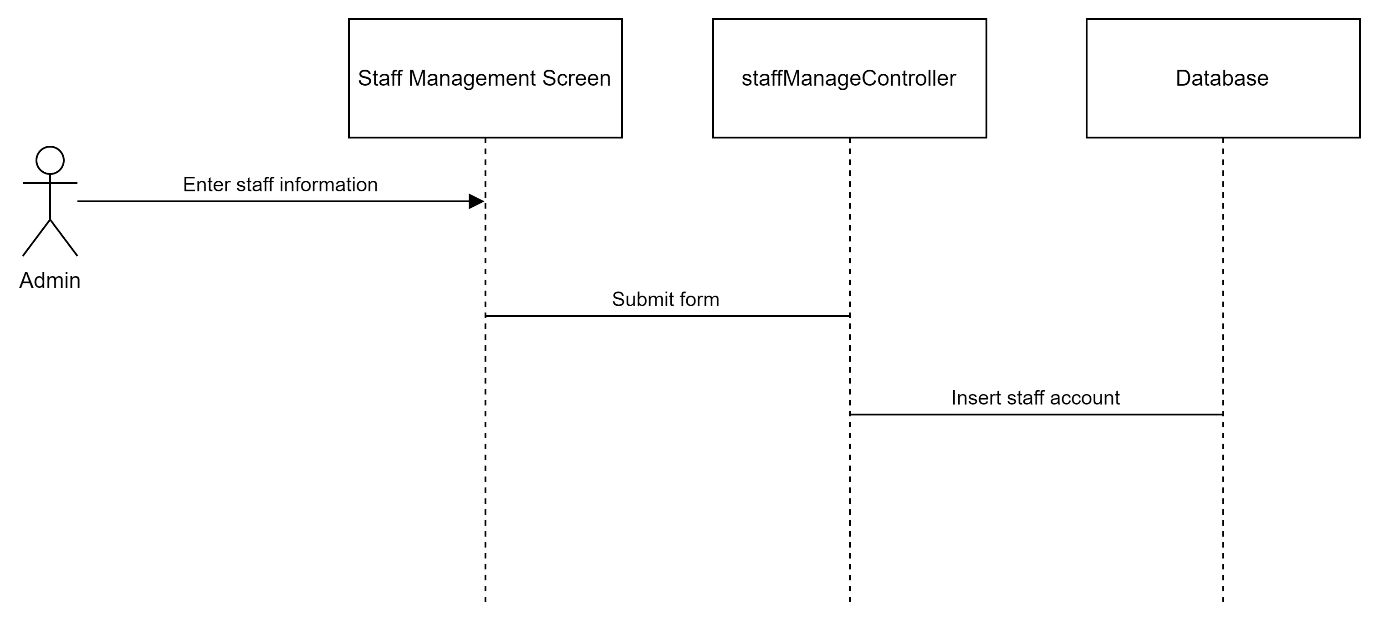
##### Change password



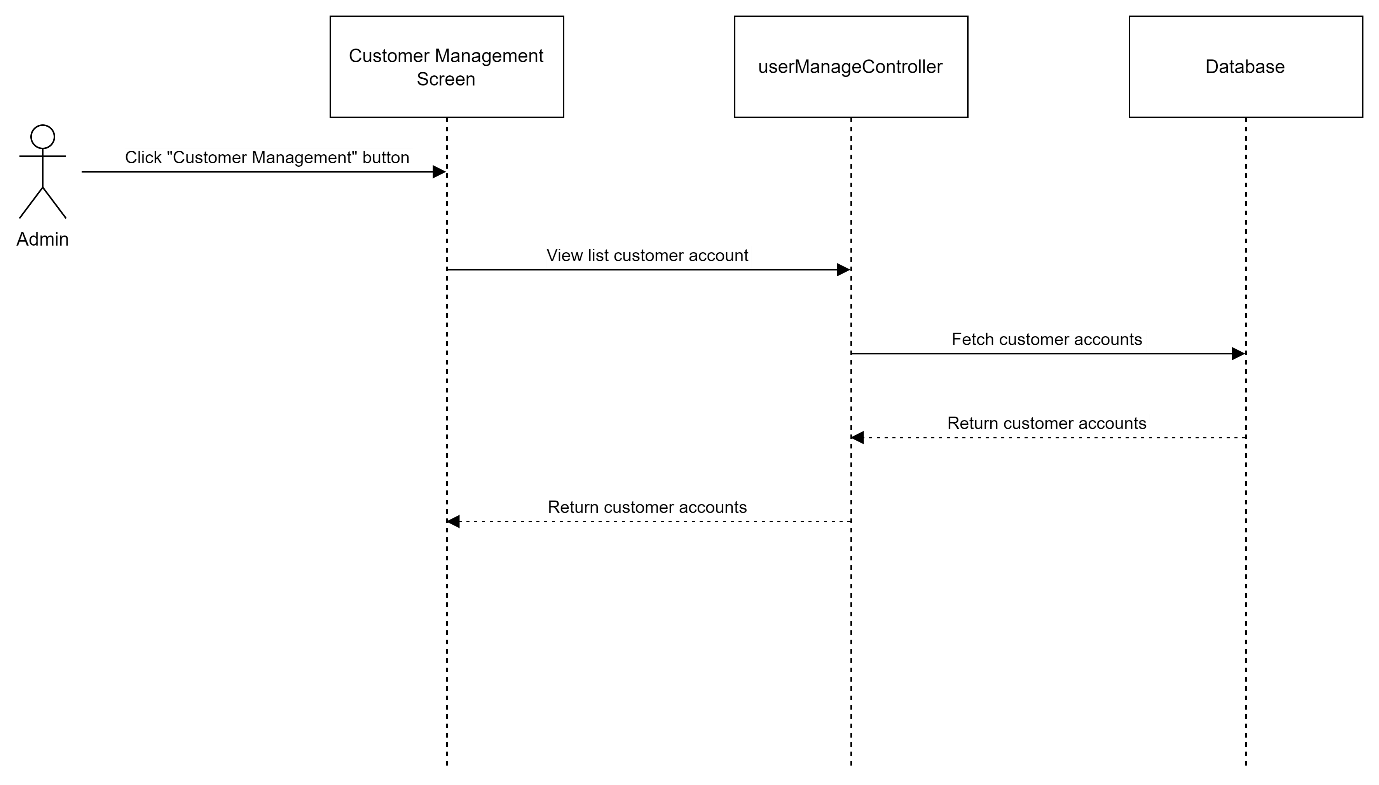
##### Update account detail



##### Create staff account



##### View list customer account

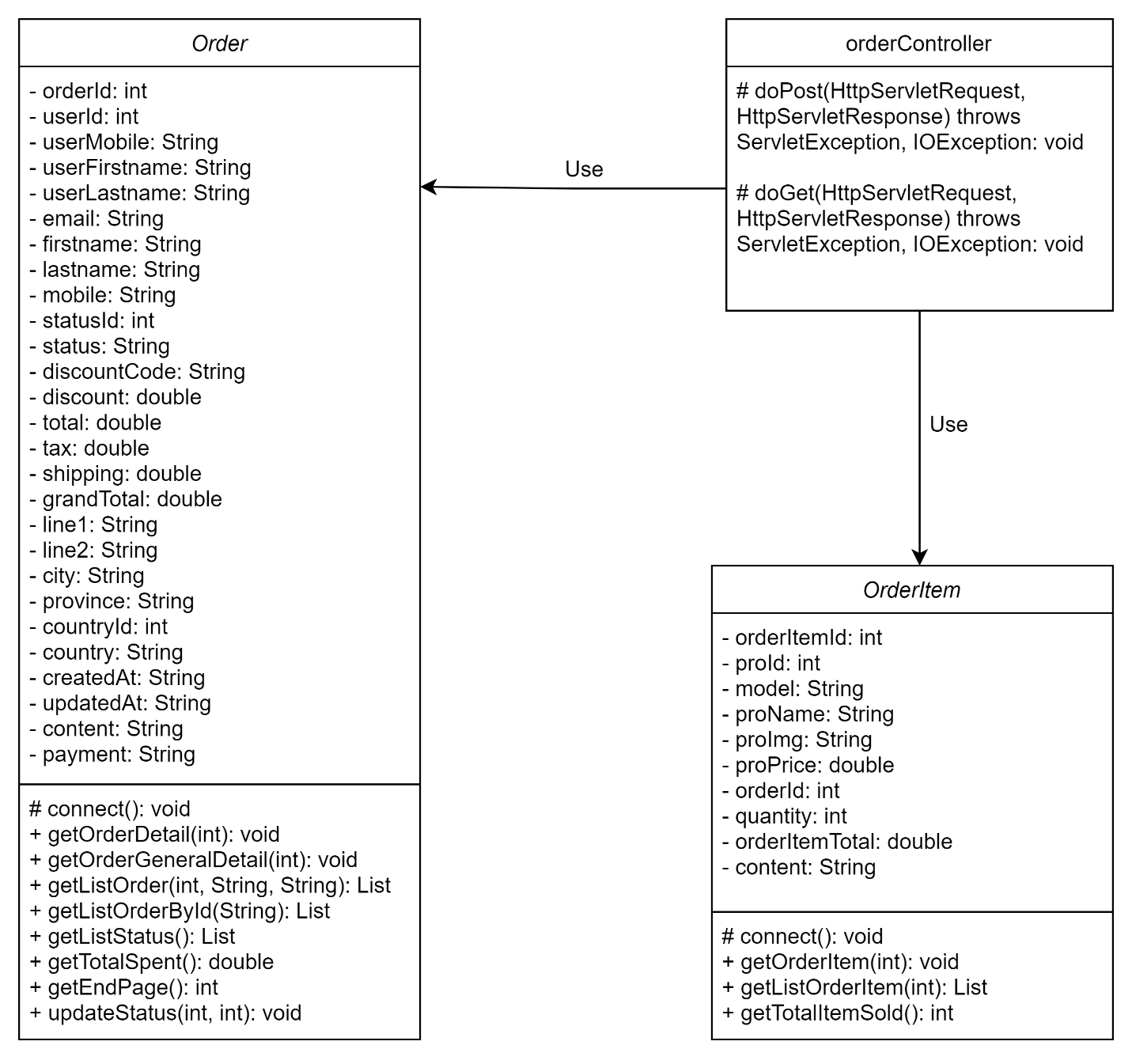


## 3. Public Order

### a. Class Diagram

#### C:\Users\Dell\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\E207ACA3.tmpClient

#### Admin



### b. Class Specifications

#### Client

##### Order

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public List getListCountry() | Handle request get list countries |
| 02 | public void getOrderItem(int, int) | Handle request update total when applying tax and shipping |
| 03 | public void updateRecent(int, String) | Handle request apply recent delivery addresses to current order |
| 04 | public Boolean applyDiscount(int, String) | Handle request apply discount to current order |
| 05 | public void getCart(int) | Handle request get orders in cart |
| 06 | public void getOrderDetail(int) | Handle request get detail information of an order |
| 07 | public List getListOrder(int) | Handle request list of orders |
| 08 | public void checkout(int, String[]) | Handle request checkout an order |
| 09 | public void getCheckoutDetail(int) | Handle request get detail information of a checkout |
| 10 | public List getAddressList(int) | Handle request list of delivery addresses |
| 11 | public void placeOrder(int, String, String, String, String, String, String, String, String,  String) | Handle request place an order |
| 12 | public void dropOrder(int, int) | Handle request cancel an order before making purchase |
| 13 | public void cancelOrder(int) | Handle request cancel an order after making purchase |

##### OrderItem

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public List getListOrderItem(int) | Handle request get list order items |
| 02 | public void getOrderItem(int) | Handle request get detail of a order item |
| 03 | public void updateRecent(int, String) | Handle request apply recent delivery addresses to current order |
| 04 | public void addOrderItem(int, int, int) | Handle request add products into cart |
| 05 | public void deleteSingleOrderItem(int) | Handle request delete a single kind of product from cart |
| 06 | public void deleteOrderItems String[]) | Handle request delete many kinds of products from cart |

##### Config

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public static String md5(String) | Handle request digest a string by md5 algorithm |
| 02 | public static String Sha256(String) | Handle request digest a string by sha256 algorithm |
| 03 | public static String hashAllFields(Map) | Handle request hash input fields |
| 04 | public static String hmacSHA512(final String, final String) | Handle request digest a string by hmacSHA512 algorithm |
| 05 | public static String getIpAddress(HttpServletRequest) | Handle request get IP address of request |
| 06 | public static String getRandomNumber(int) | Handle request generate random string numbers |

##### orderController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### vnpayController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |

#### Admin

##### Order

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public void getOrderDetail(int) | Handle request get detail information of an order |
| 02 | public void getOrderGeneralDetail(int) | Handle request get general information of an order |
| 03 | public List getListOrder(int, String, String) | Handle request get list of orders |
| 04 | public List getListOrderById(String) | Handle request get list of orders by ID |
| 05 | public List getListStatus() | Handle request get list of statuses |
| 06 | public double getTotalSpent() | Handle request get total earning |
| 07 | public int getEndPage() | Handle request get last page when dividing list of orders into pages |
| 08 | public void updateStatus(in, int) | Handle request update status of a request |

##### OrderItem

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public List getListOrderItem(int) | Handle request get list order items |
| 02 | public void getOrderItem(int) | Handle request get detail of a order item |
| 03 | public int getTotalItemSold() | Handle request get total number of items sold |

##### orderController

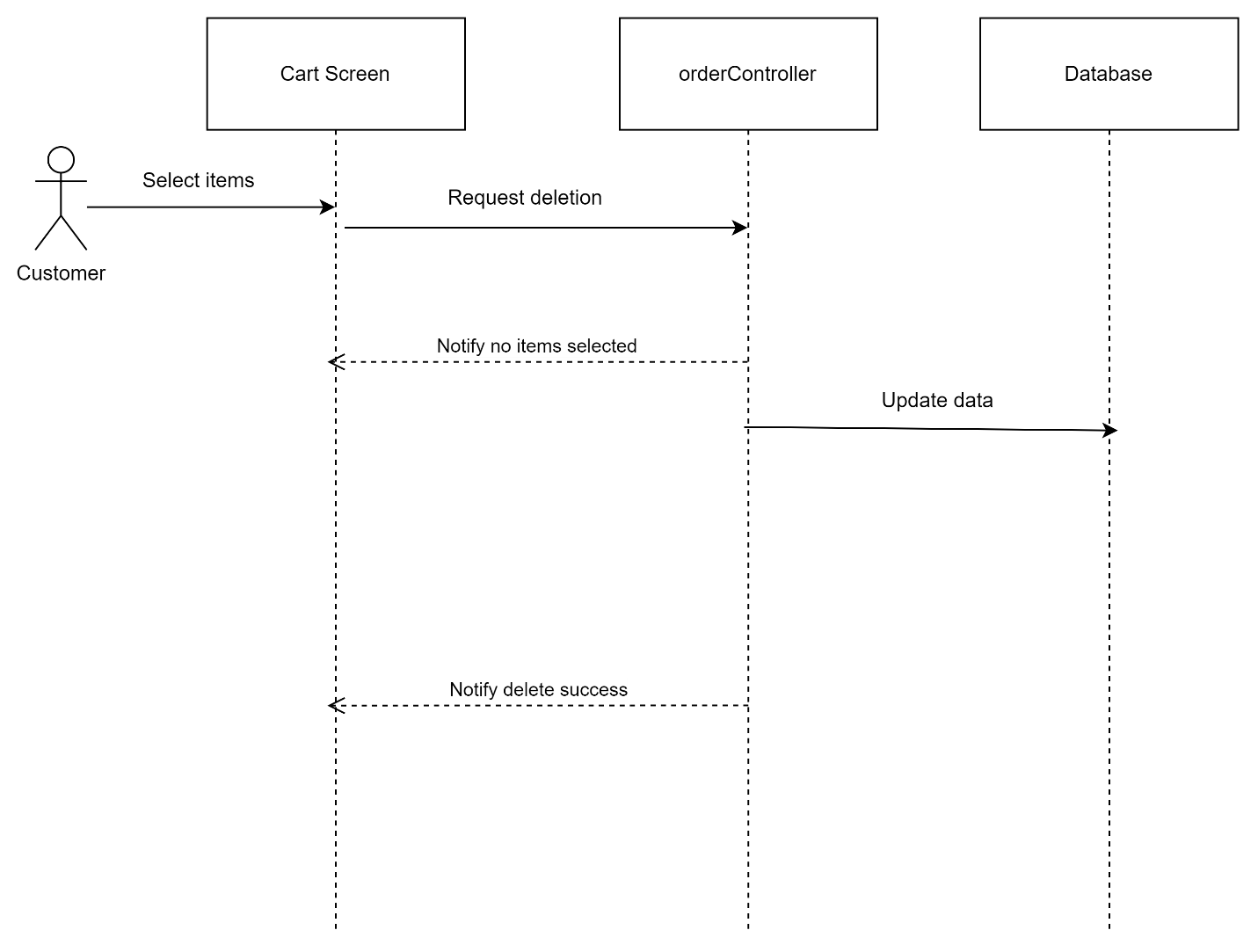
|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

### c. Sequence Diagram(s)

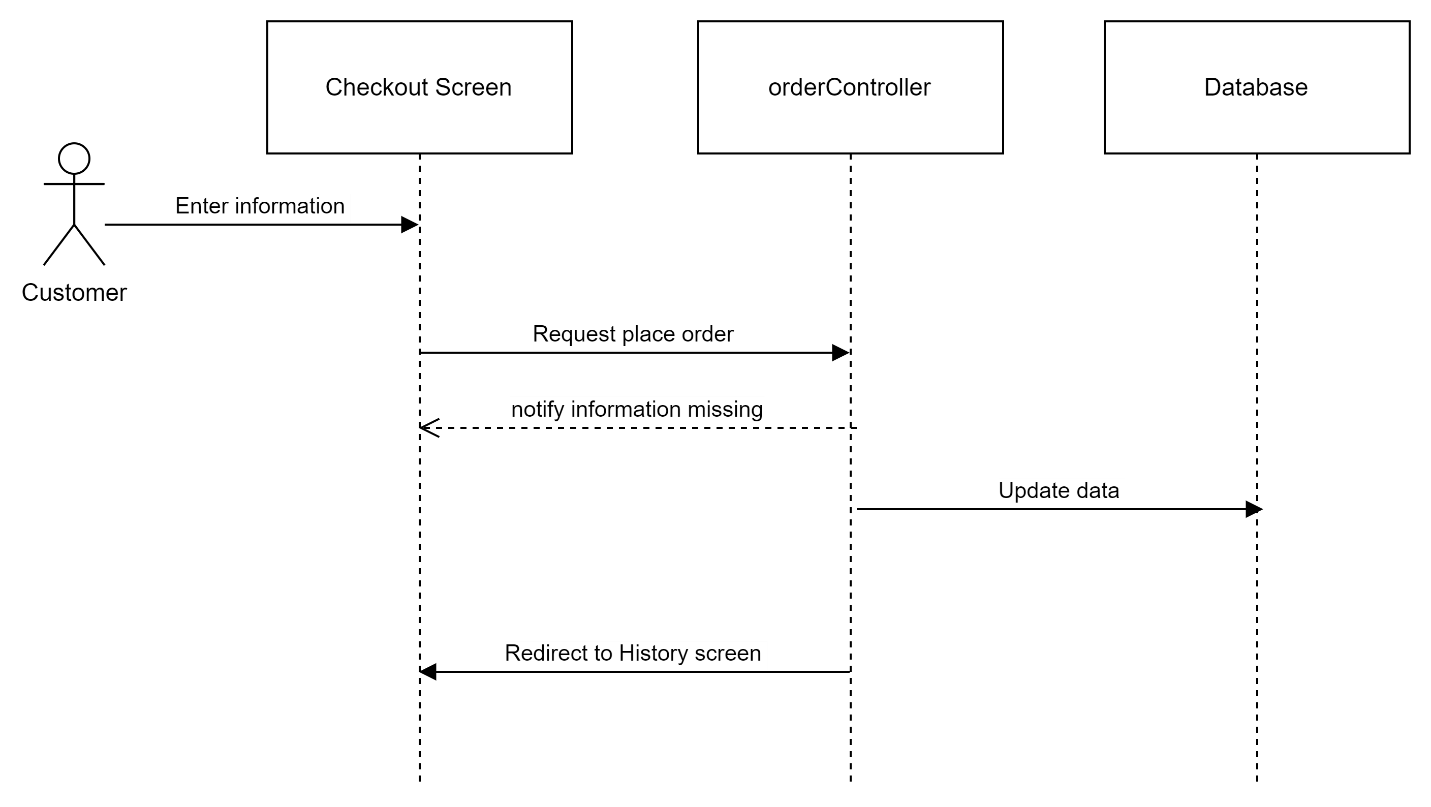
#### Client

##### C:\Users\Dell\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\A9EB279B.tmpAdd to cart

##### Delete from cart

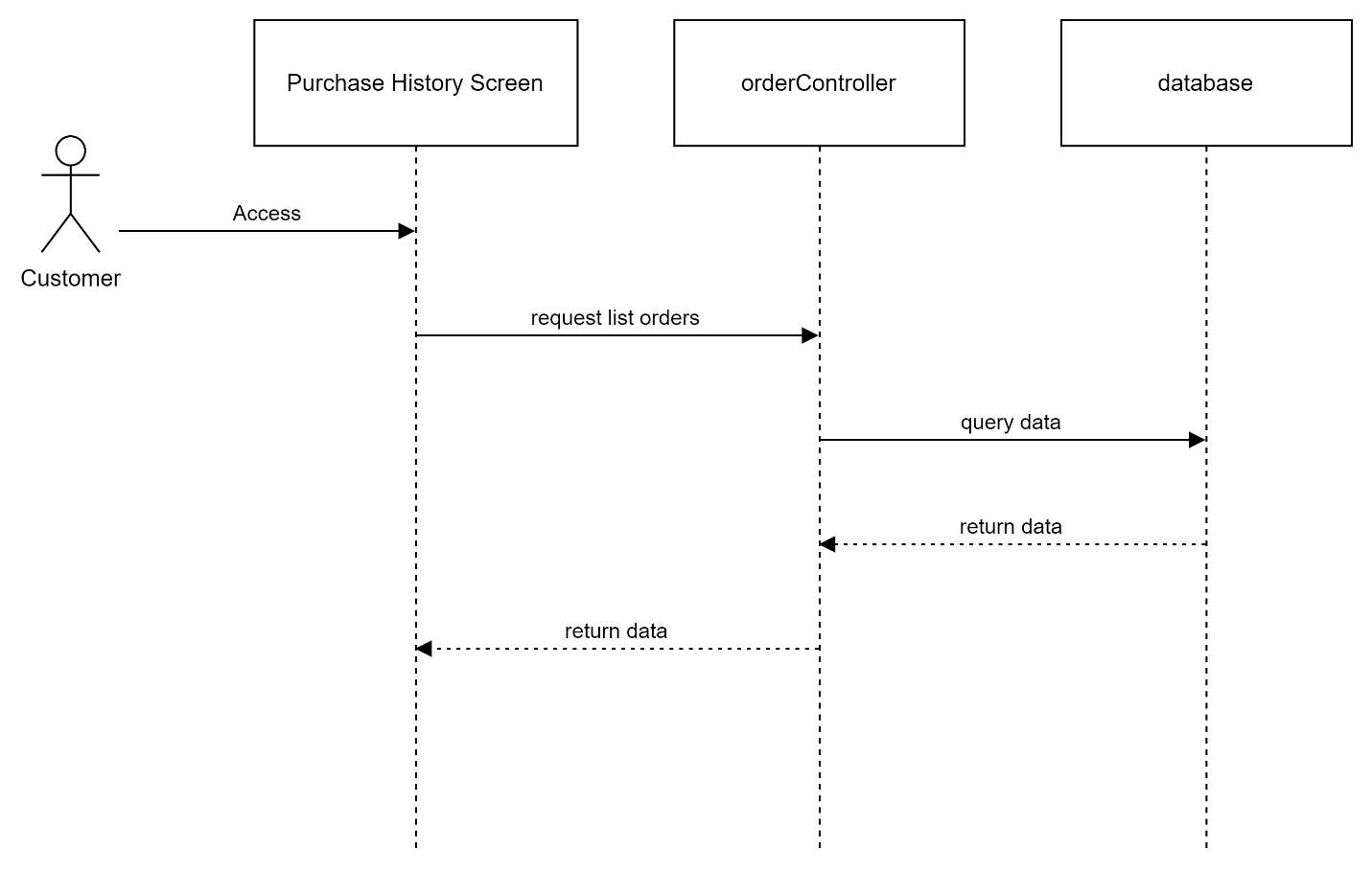


##### Place order

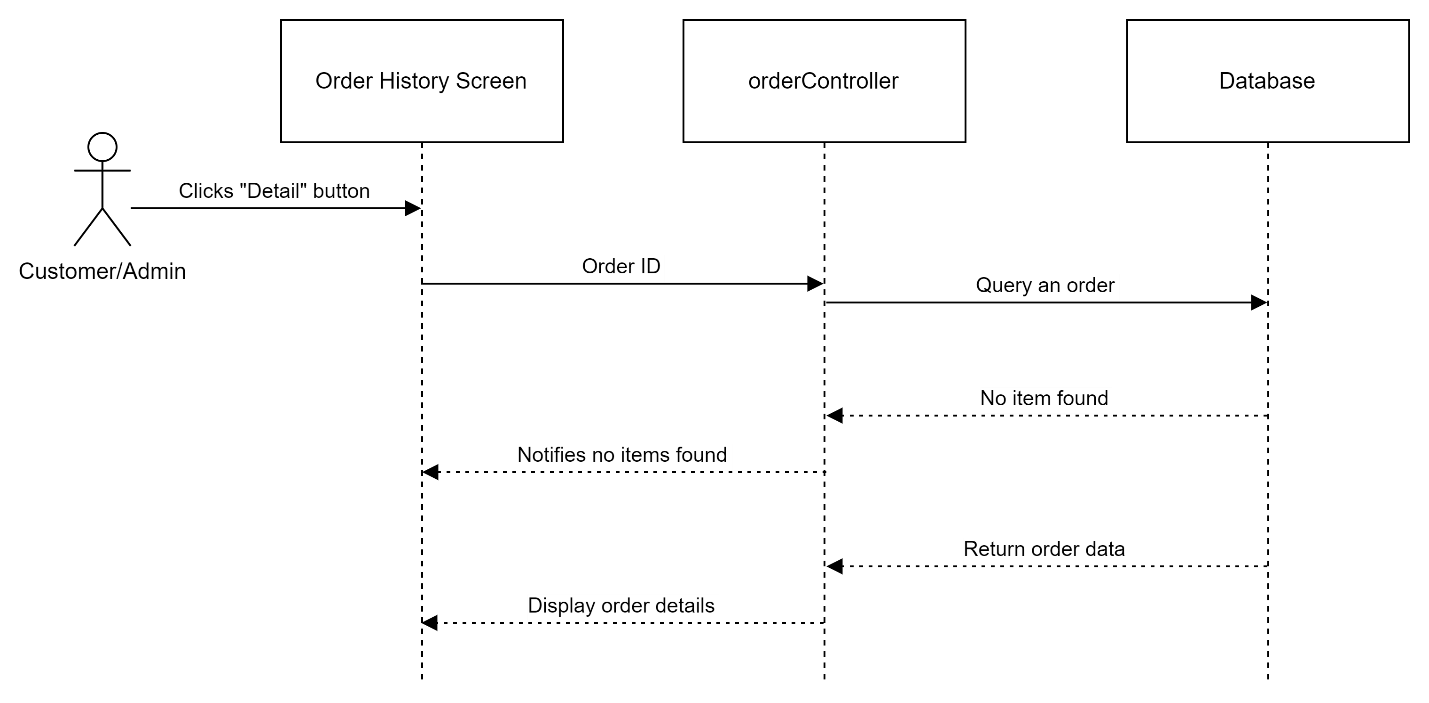


##### C:\Users\Dell\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\ABD7EBE2.tmpPlace order with VNPAY Sandbox

##### View order history

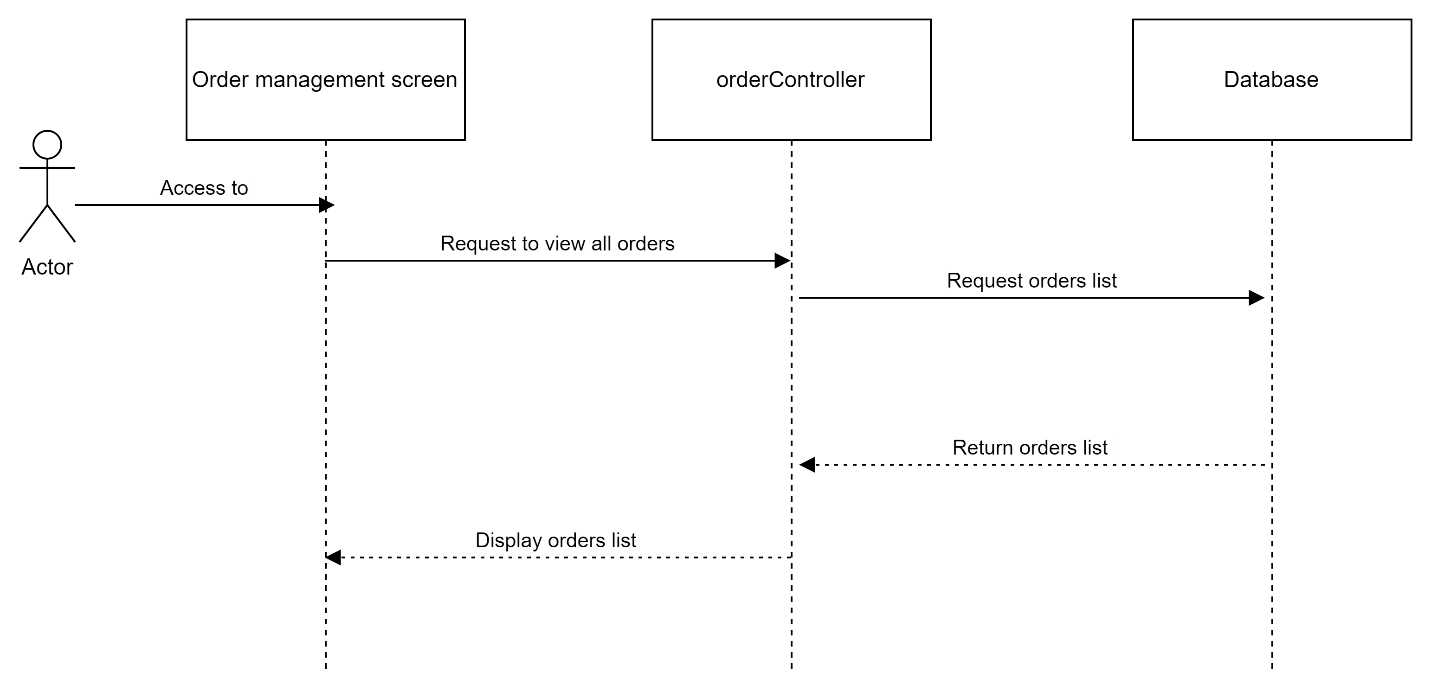


##### View order detail

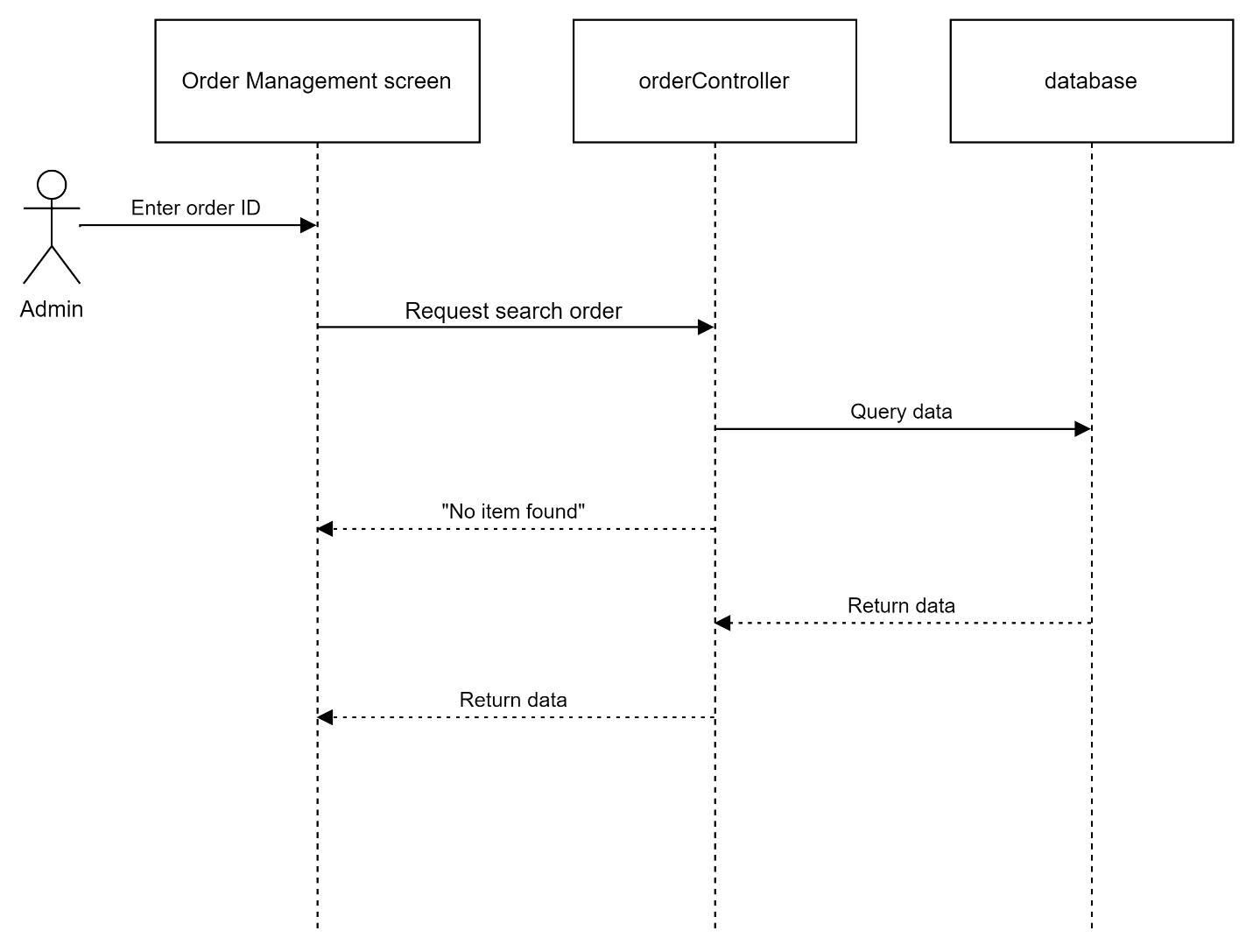


#### Admin

##### View list orders



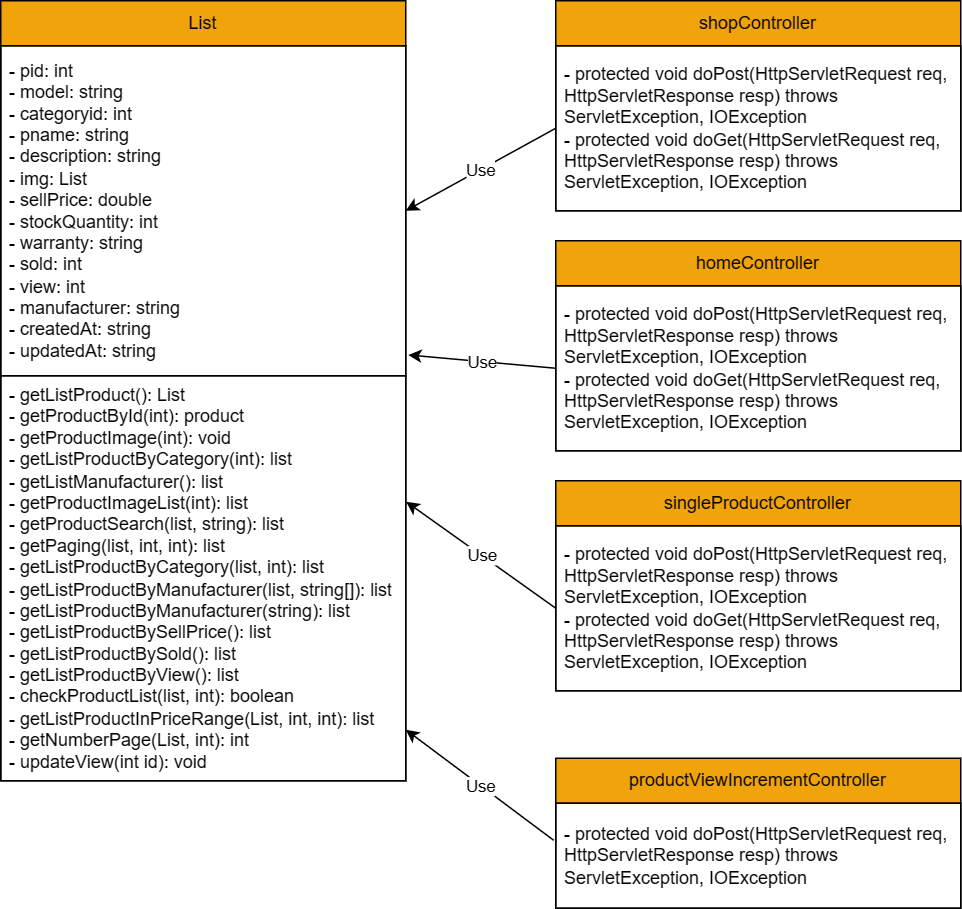
##### Search order



## 4. Public Product

### a. Class Diagram

#### Client



### b. Class Specifications

#### Client

##### Product

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public List<Product> getListProduct() | Handle request get list product |
| 02 | public boolean checkProductList(List<Product> list, int pid) | Handle request check a product available in the list |
| 03 | public Product getProductById(int id); | Handle request get product by Id |
| 04 | public void getProductImage(int productId) | Handle request set status deactive a product |
| 05 | public List<Product> getListProductByCategory(int cid) | Handle request get list product by category for shop page and admin page |
| 06 | public List<String> getListManufacturer() | Handle request get list product manufacturer |
| 07 | public List<String> getProductImageList(int pid) | Handle request get list images of product |
| 08 | public List<Product> getProductSearch(List<Product> data, String substring) | Handle request search a product |
| 09 | public List<Product> getPaging(List<Product> data, int index, int numberDisplay) | Handle request paging of products |
| 10 | public List<Product> getListProductByCategory(List<Product> data, int cid) | Handle request get list product by category for filter |
| 11 | public List<Product> getListProductByManufacturer(List<Product> data, String[] manufacturer) | Handle request get list product by manufacturer for filter |
| 12 | public List<Product> getListProductByManufacturer(String manu) | Handle request get list product by manufacturer for shop |
| 13 | public List<Product> getListProductBySellPrice() | Handle request get list product by sell price ascending for shop |
| 14 | public List<Product> getListProductBySold() | Handle request get list product by sold descending for shop |
| 15 | public List<Product> getListProductByView() | Handle request get list product by view descending for shop |
| 16 | public List<Product> getListProductInPriceRange(List<Product> data, int min, int max) | Handle request get list products in price range |
| 17 | public int getNumberPage(List<Product> data, int numberDisplay) | Handle request get number of page for paging products |
| 18 | public void updateView(int id) | Handle request increment number of views in product by Id |

##### homeController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### shopController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### singleProductController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### productViewIncrementController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |

##### productManageController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### productDetailManageController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

#### Admin

##### Product

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public List<Product> getListProduct() | Handle request get list product |
| 02 | public boolean checkProductList(List<Product> list, int pid) | Handle request check a product available in the list |
| 03 | public void deleteProduct(int pid) | Handle request delete a product |
| 04 | public void addProduct(Product p); | Handle request add a product |
| 05 | public Product getProductById(int id); | Handle request get product by Id |
| 06 | public void updateProduct(); | Handle request update product |
| 07 | public void getProductImage(int productId) | Handle request set status deactive a product |
| 08 | public List<Product> getListProductByCategory(int cid) | Handle request get list product by category for shop page and admin page |
| 09 | public List<String> getListManufacturer() | Handle request get list product manufacturer |
| 10 | public void deleteProductImage(int pid) | Handle request delete product images |
| 11 | public List<String> getProductImageList(int pid) | Handle request get list images of product |
| 12 | public List<Product> getProductSearch(List<Product> data, String substring) | Handle request search a product |
| 13 | public List<Product> getPaging(List<Product> data, int index, int numberDisplay) | Handle request paging of products |
| 14 | public void deleteProductInStock() | Handle request delete product in stock |
| 15 | public List<Product> getListProductByCategory(List<Product> data, int cid) | Handle request get list product by category for filter |
| 16 | public List<Product> getListProductByManufacturer(String manu) | Handle request get list product by manufacturer for shop |
| 17 | public int getNumberPage(List<Product> data, int numberDisplay) | Handle request get number of page for paging products |

##### productManageController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### productDetailManageController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

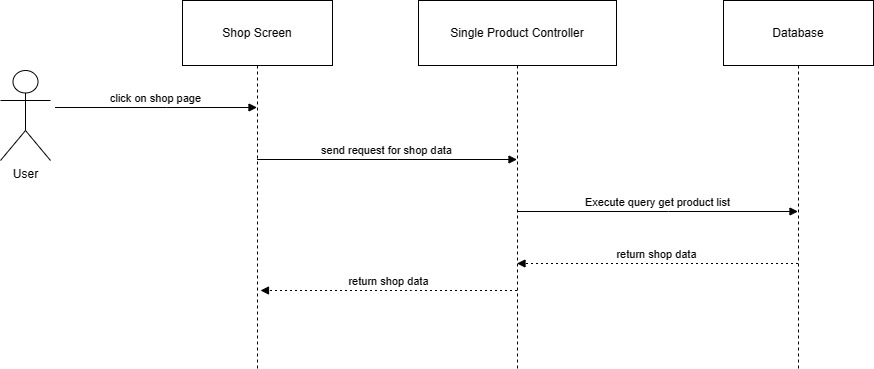
### c. Sequence Diagram(s)

#### Client

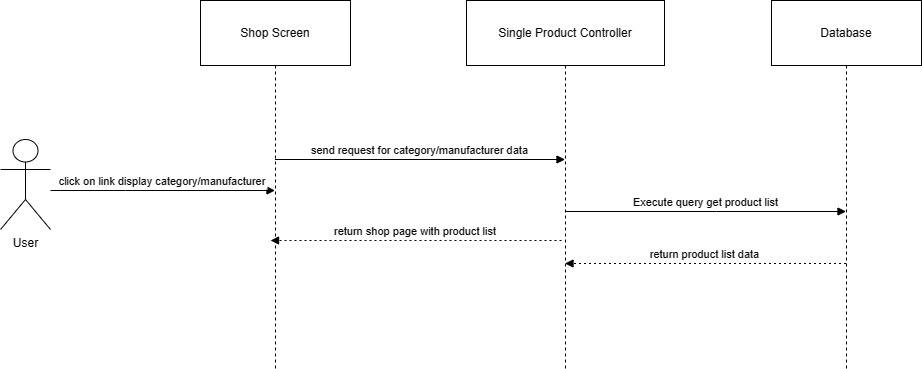
##### View product detail



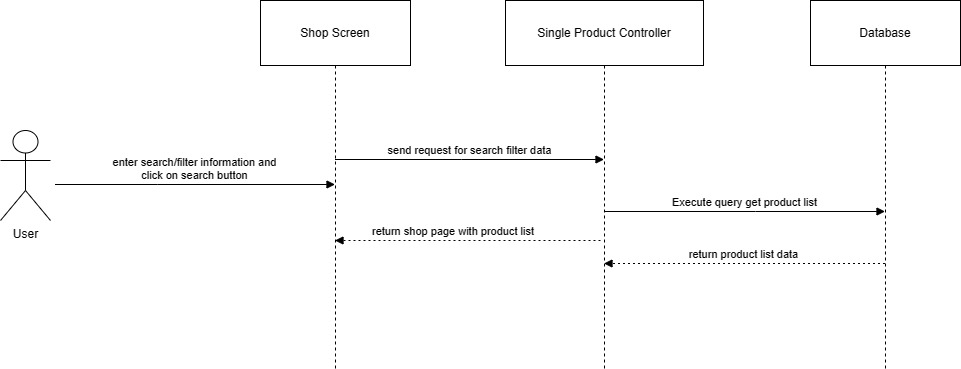
##### View shop page



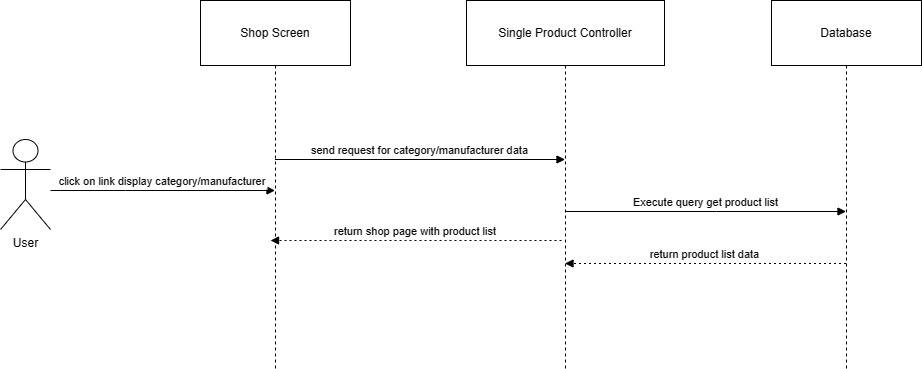
##### View all product by Category/Manufacturer



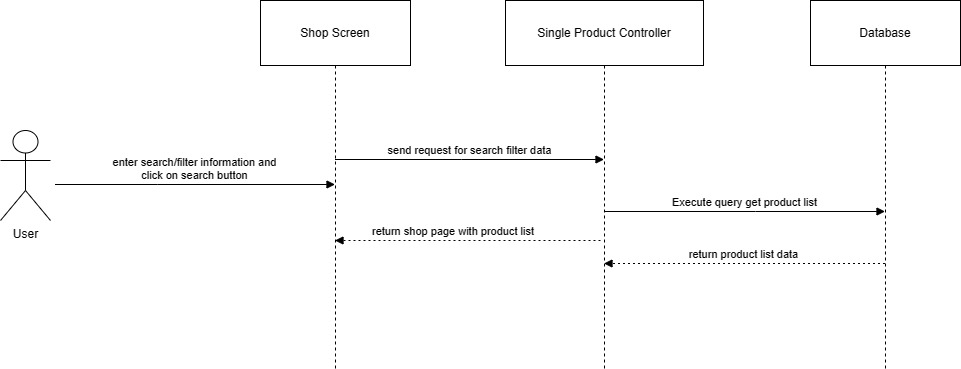
##### Search Product



##### View all product by Category/Manufacturer

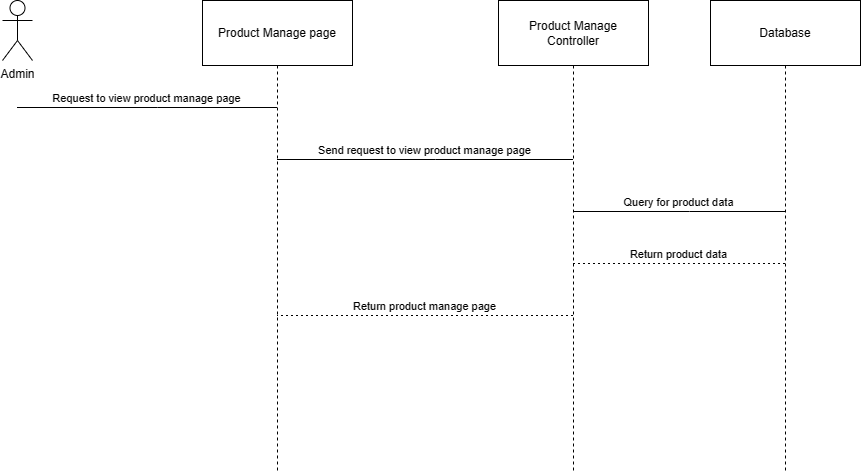


##### Search/Filter Product (Client)

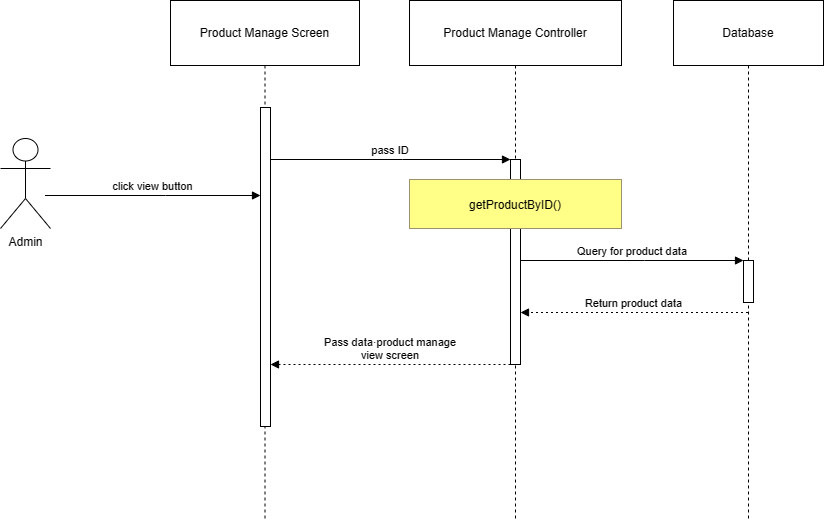


#### Admin

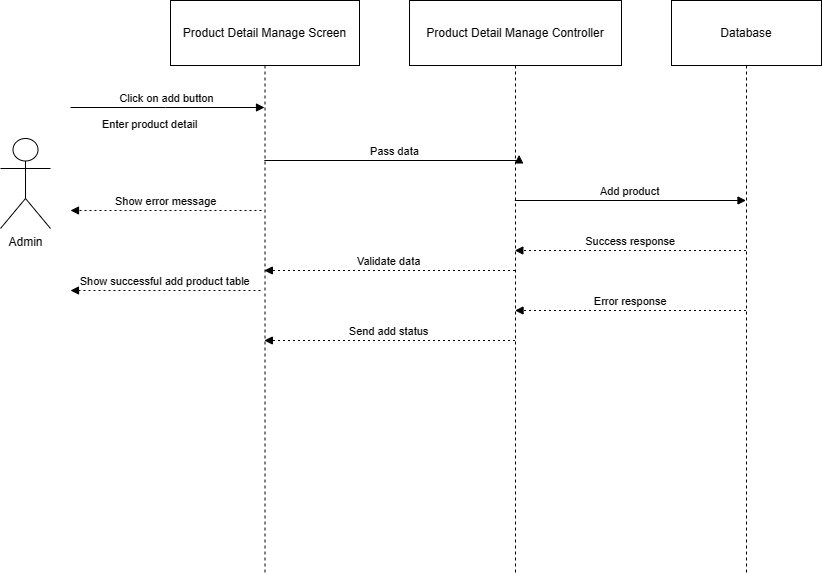
##### View all product



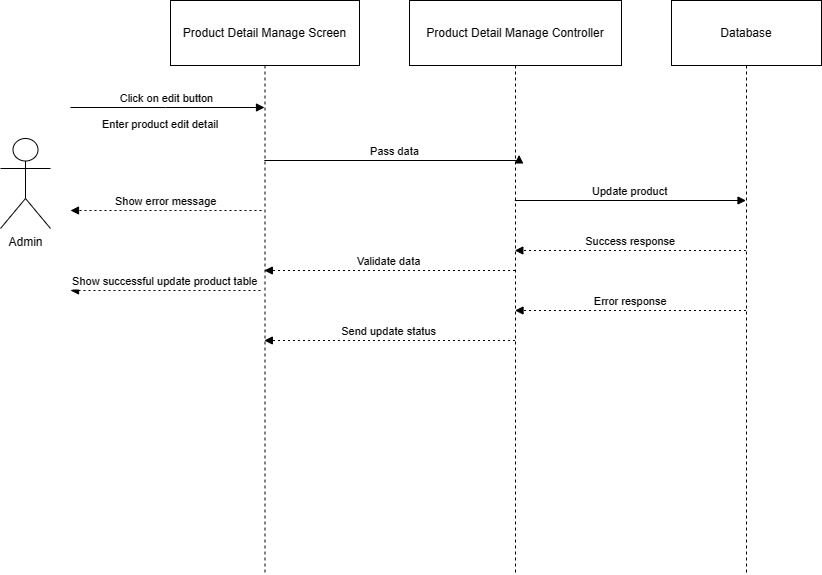
##### View product



##### Add Product



##### Edit product



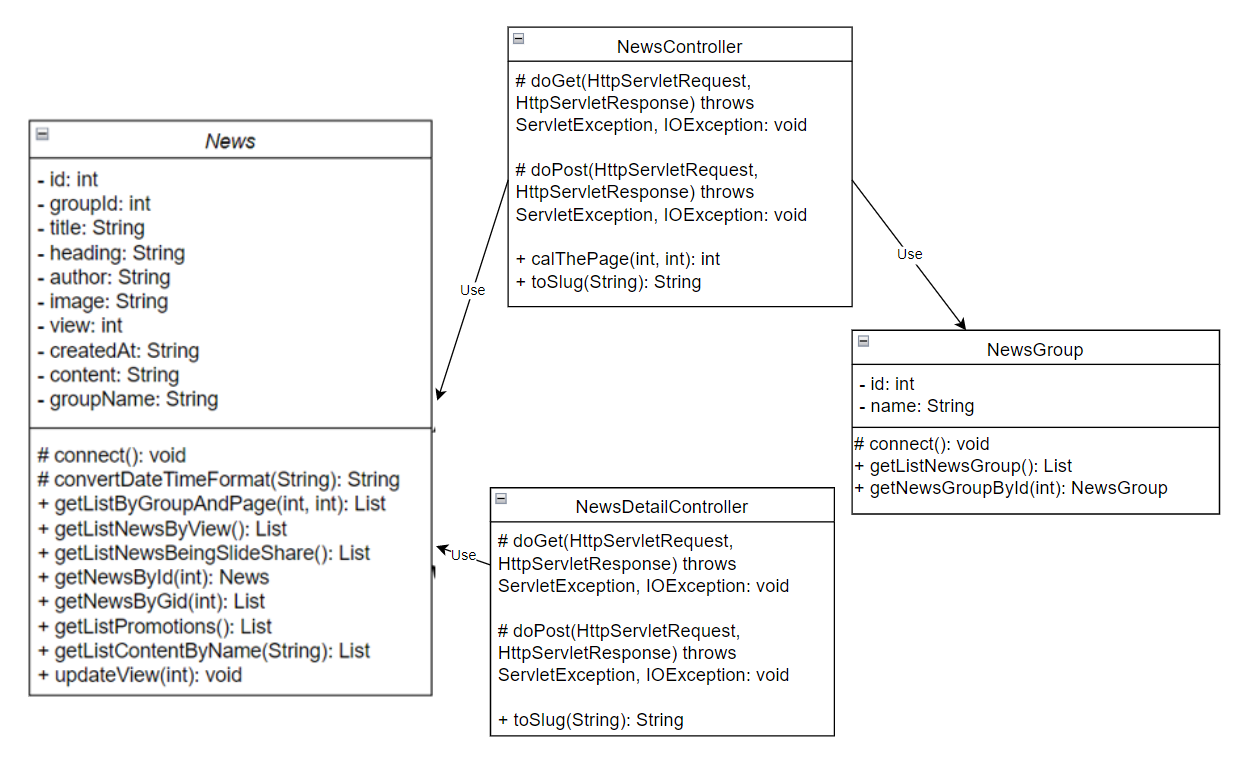
##### Search Product



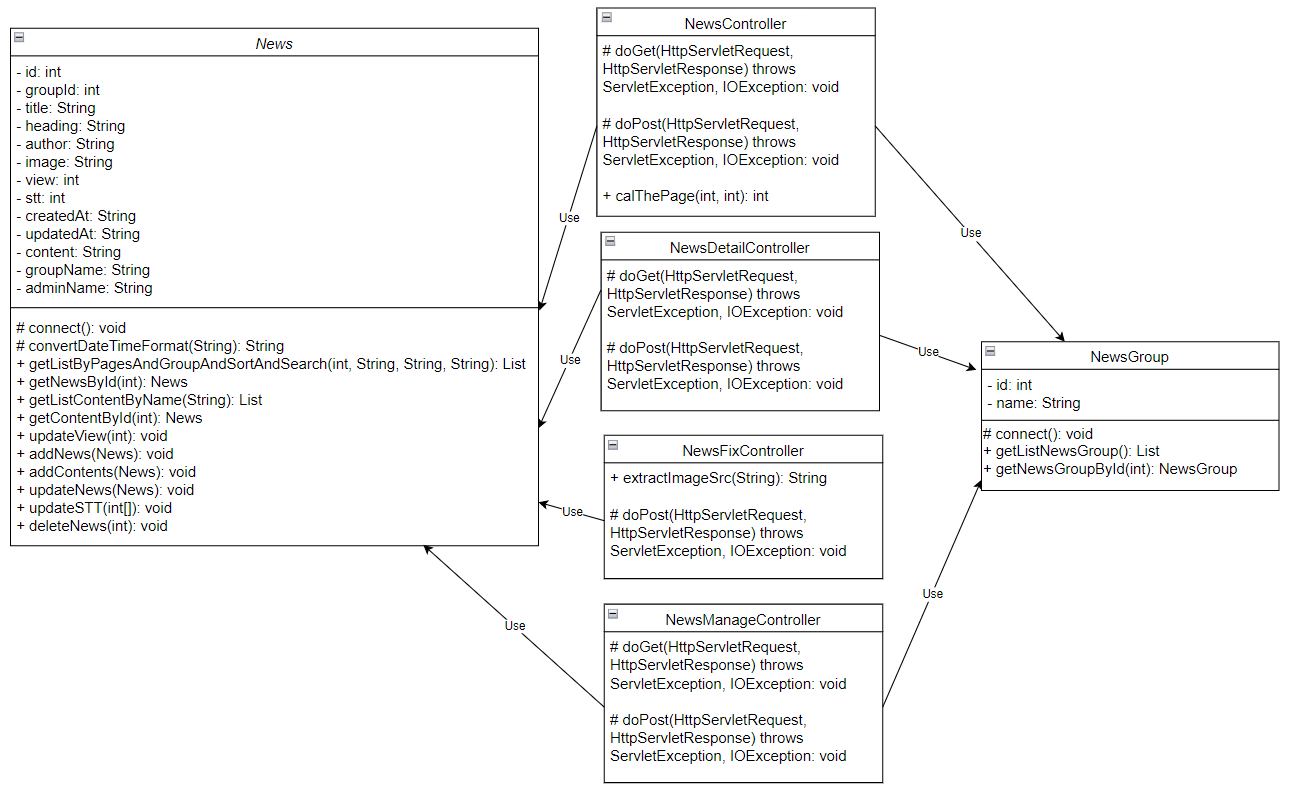
## 5. Public News

### a. Class Diagram

#### Client



#### Admin



### b. Class Specifications

#### Client

##### News

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public List getListByGroupAndPage(int, int) | Handle request get list of news being paginated or grouped |
| 02 | public List getListNewsByView() | Handle request get list of most viewed news |
| 03 | public List getListNewsBeingSlideShare() | Handle request get list of news being displayed on the slide banner at home page |
| 04 | public List getNewsByGid(int) | Handle request get list of news of a selected news group |
| 05 | Public News getNewsById(int) | Handle request get a selected news by id |
| 06 | public List getListPromotion() | Handle request get list of news which are categorized promotion |
| 07 | public List getListContentByName(String) | Handle request list of content by name |
| 08 | public void updateView(int) | Handle request update view of a news when click on that one |
| 09 | Private String convertDateTimeFormat(String) | Handle format the input with data type date time |

##### NewsGroup

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public List getListNewsGroup() | Handle request get list of news group |
| 02 | public NewsGroup getNewsGroupById(int) | Handle request get news group by id |

##### newsController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |
| 03 | Private int calThePage(int, int) | Handle calculation the page of the list |
| 04 | Private String toSlug(String) | Handle slug the title of the news link |

##### newsDetailController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Private String toSlug(String) | Handle slug the title of the news link |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |
| 03 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |

#### Admin

##### News

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | getListByPagesAndGroupAndSortAndSearch (int, String, String, String) | Handle request get list of news being paginated or grouped or sorted |
| 02 | public News getNewsById(int) | Handle request get a selected news by id |
| 03 | public void addNews(News) | Handle request add a news to database |
| 04 | public void deleteNews(News) | Handle request delete a news by its id |
| 05 | public void updateNews(News) | Handle request update a news with its news attributes |
| 06 | Public void addContents(News) | Handle request add a new content |
| 07 | Public News getContentById(int) | Handle request get a selected content by id |
| 08 | public List getListContentByName(String) | Handle request list of content by name |
| 09 | public void updateSTT(int) | Handle request update order of a content when edit that one |
| 10 | Private String convertDateTimeFormat(String) | Handle format the input with data type date time |

##### NewsGroup

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public List getListNewsGroup() | Handle request get list of news group |
| 02 | public NewsGroup getNewsGroupById(int) | Handle request get news group by id |

##### newsController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |
| 03 | Private int calThePage(int, int) | Handle calculation the page of the list |

##### newsDetailController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

##### newsManageController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

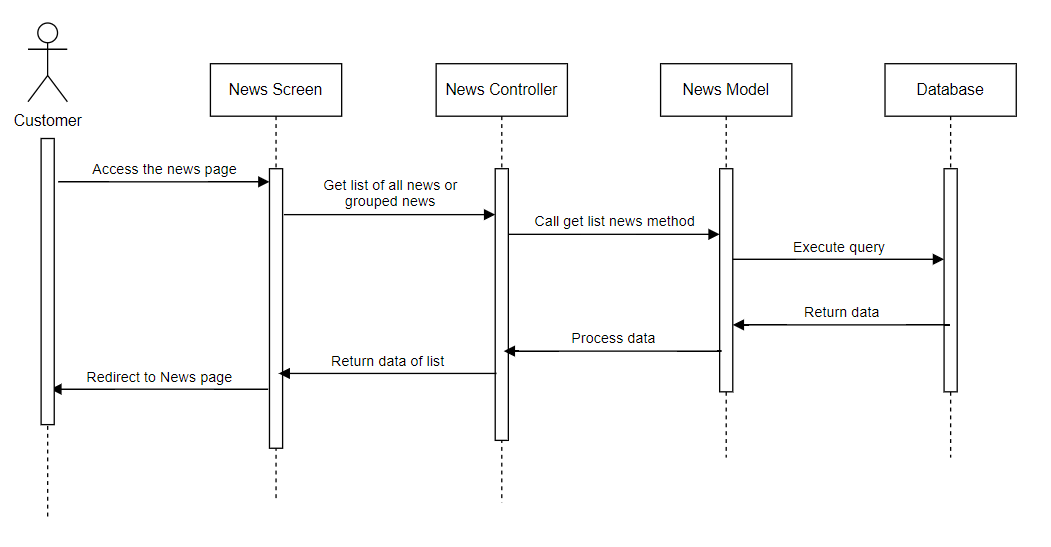
##### newsFixController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Private String extractImageSrc(String) | Handle extract the source image of the news |
| 02 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |

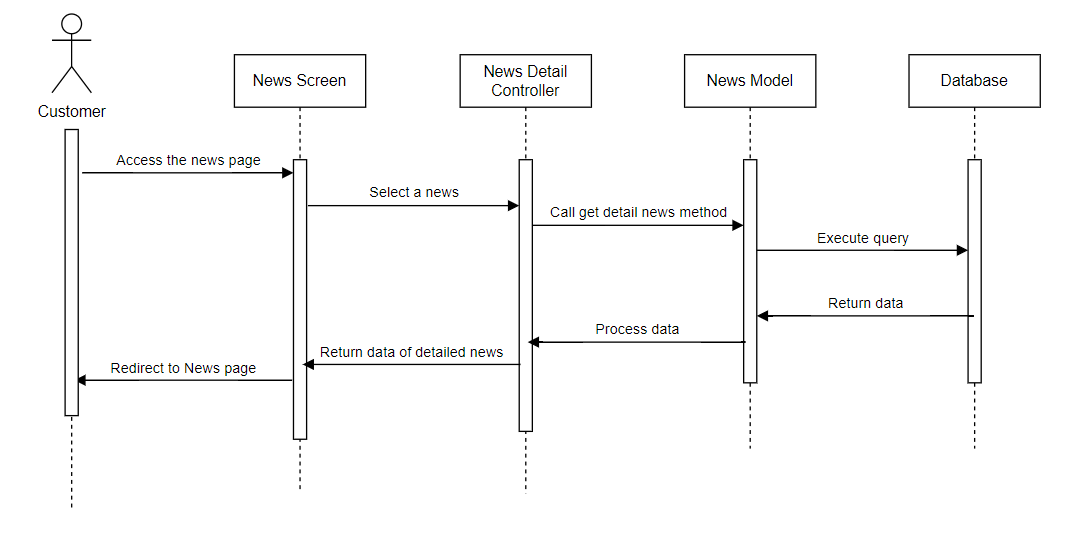
### c. Sequence Diagram(s)

#### Client

##### View list news

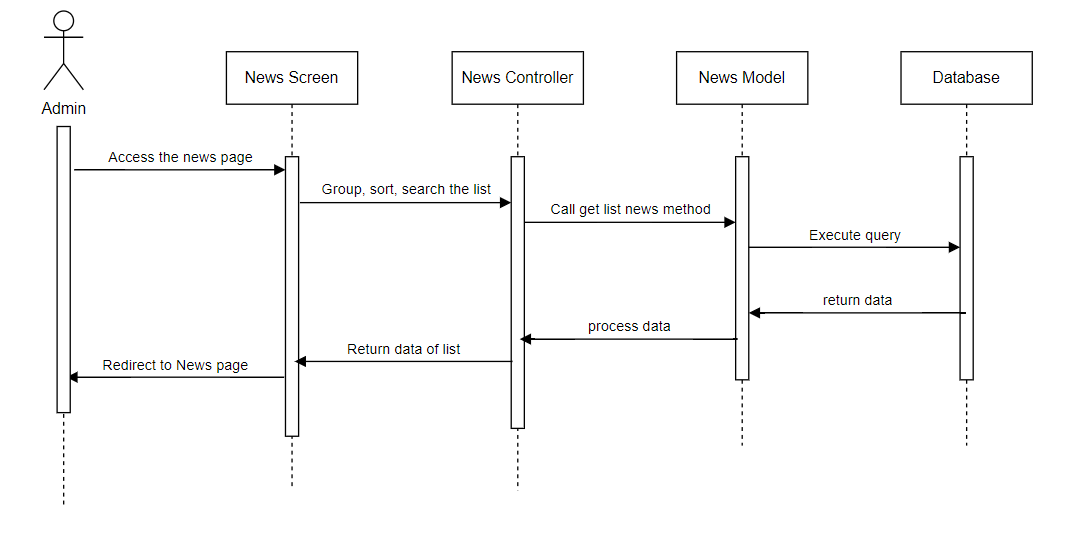


##### View news detail

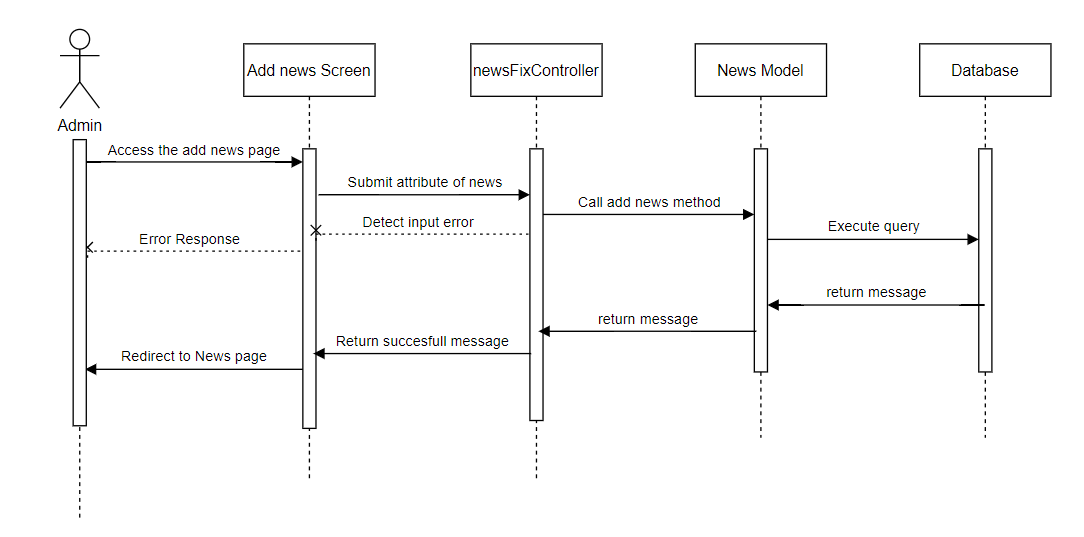


#### Admin

##### View news



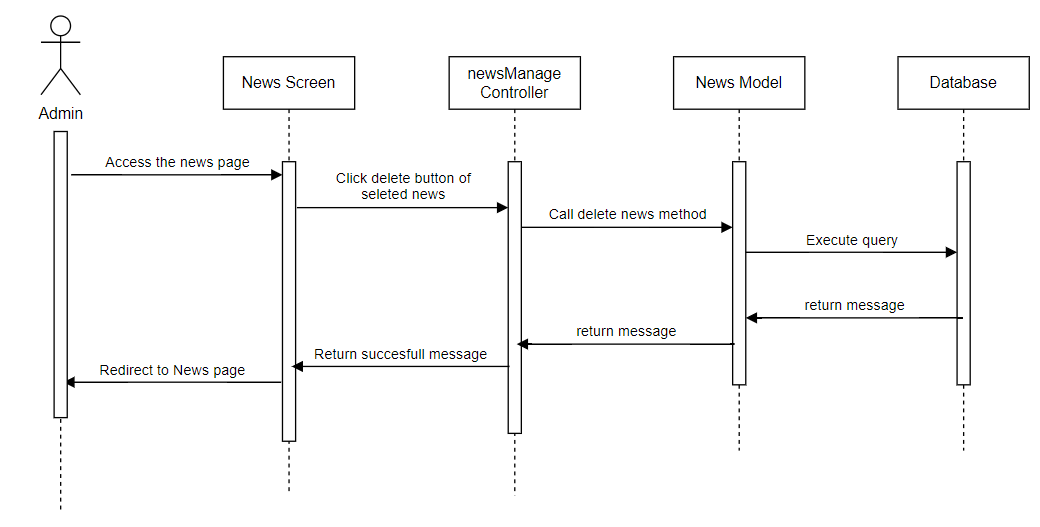
##### Add news



##### Update news

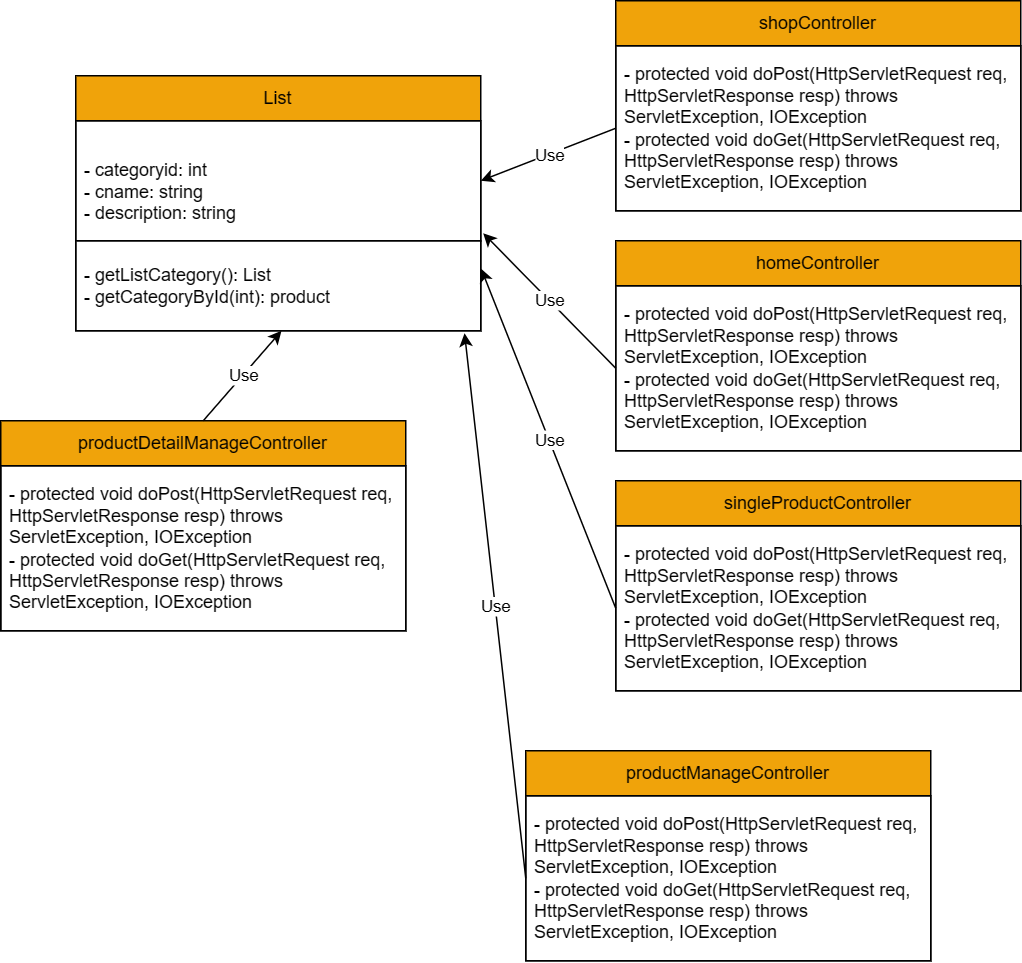


##### Delete news



## 6. Public Category

### a. Class Diagram



### b. Class Specifications

#### Category

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public List<Category> getListCategory() | Handle request get list category |
| 02 | public Category getCategoryById(int id) | Handle request get category by ID |

#### homeController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

#### shopController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

#### singleProductController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

#### productManageController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

#### productDetailManageController

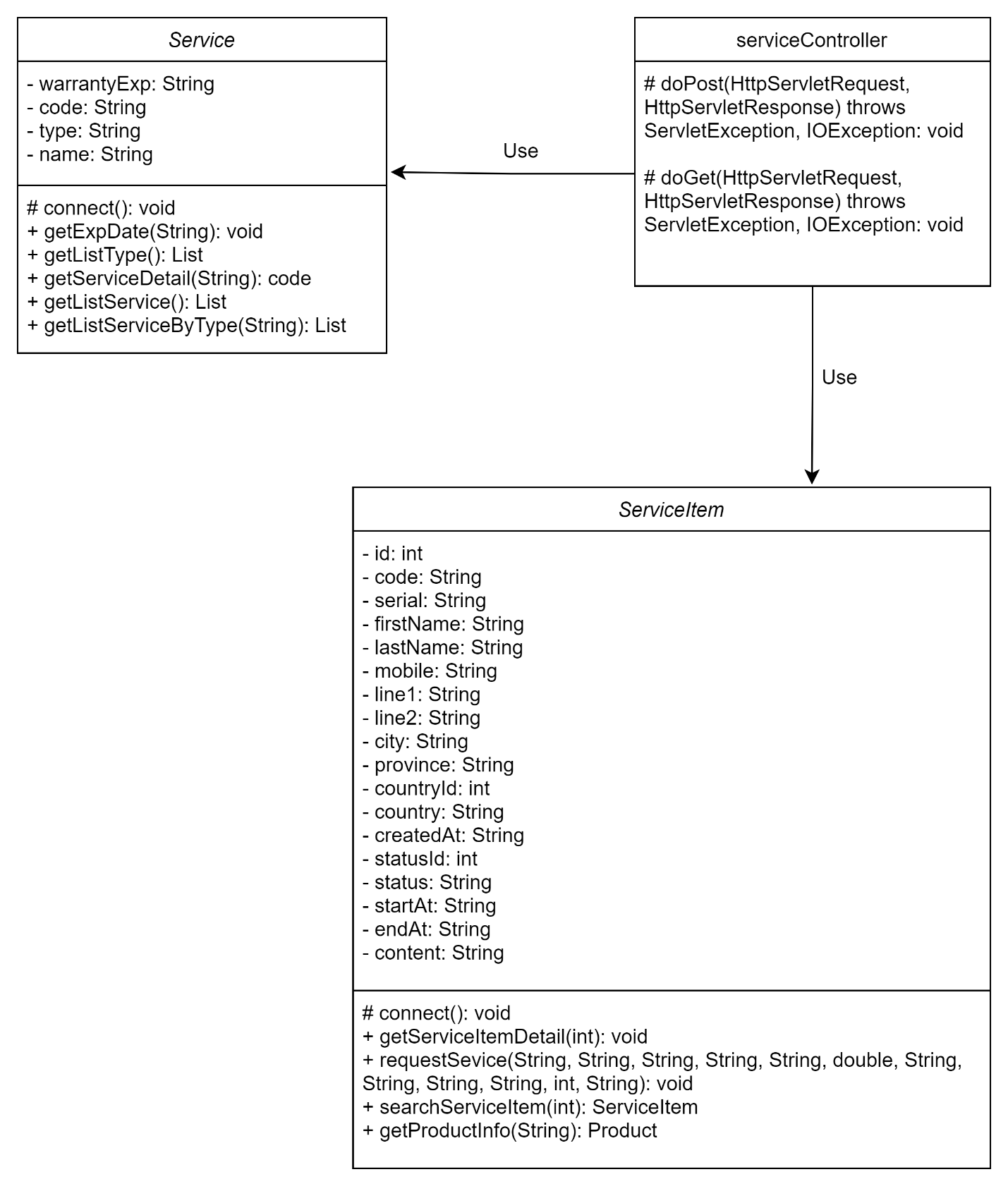
|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

### c. Sequence Diagram(s)

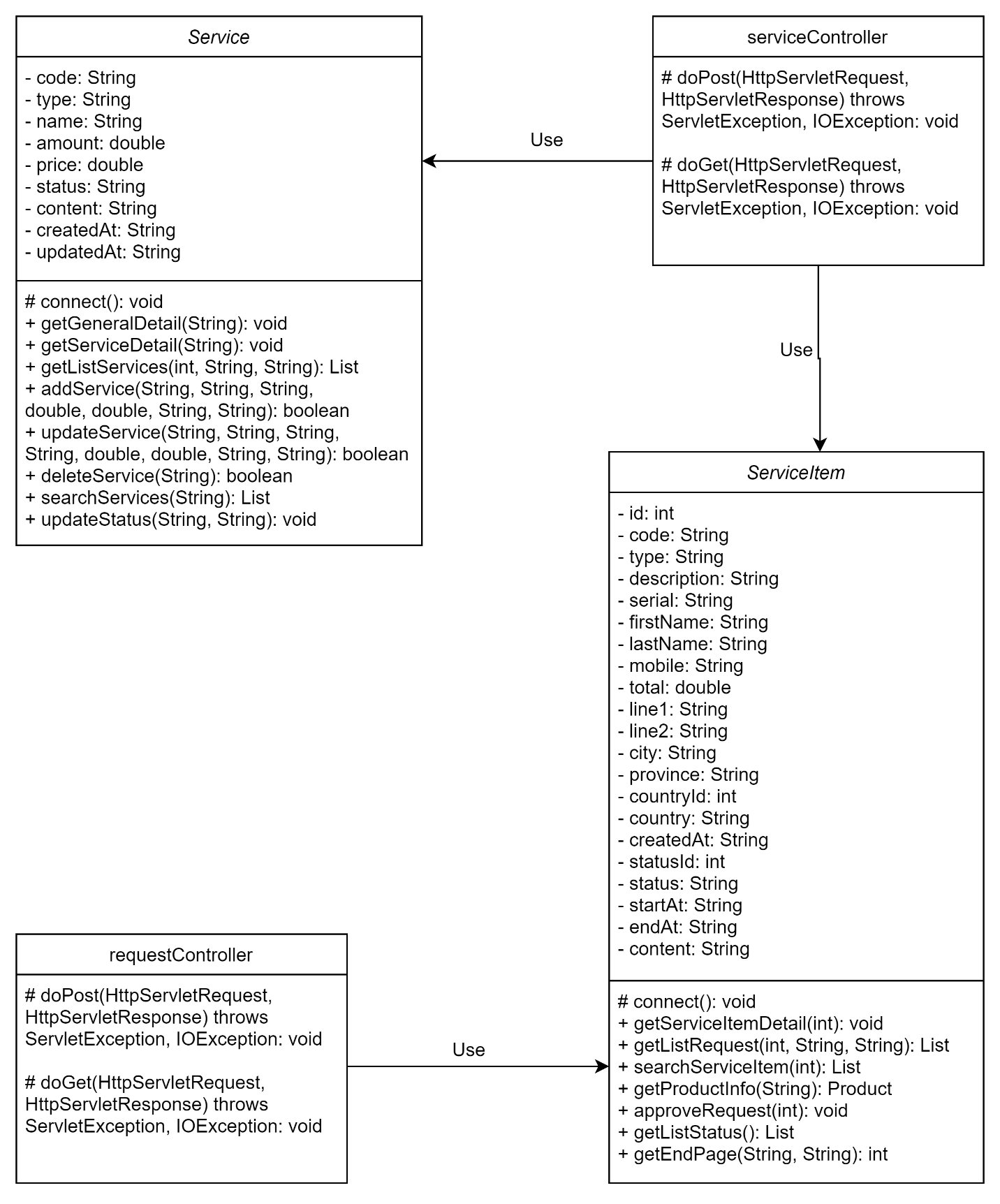
## 7. Public Service

### a. Class Diagram

#### Client



#### Admin



### b. Class Specifications

#### Client

##### Service

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public void getServiceDetail(String) | Handle request get detail of a service |
| 02 | public List getListService() | Handle request get list of services |
| 03 | public List<Service> getListServiceByType(String) | Handle request get list of services by type |

##### ServiceItem

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public void getServiceItemDetail(int) | Handle request get detail of a service item |
| 02 | public void requestSevice(String, String, String, String, String, double, String, String, String, String, int, String) | Handle request request a service |
| 03 | public ServiceItem searchServiceItem(int) | Handle request search a service item by ID |
| 04 | public Product getProductInfo(String) | Handle request get information of a product |

##### serviceController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

#### Admin

##### Service

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public void getGeneralDetail(String) | Handle request get general information of a service |
| 02 | public void getServiceDetail(String) | Handle request get detail information of a service |
| 03 | public List getListServices(int, String, String) | Handle request get list of services |
| 04 | public boolean addService(String, String, String, double, double, String, String) | Handle request add a new service |
| 05 | public boolean updateService(String, String, String, String, double, double, String, String) | Handle request update an existing service |
| 06 | public boolean deleteService(String) | Handle request delete an existing service |
| 07 | public List searchServices(String) | Handle request search an existing service |
| 08 | public void updateStatus(String, String) | Handle request update status of a service |
| 09 | public List getListType() | Handle request get list of types |
| 10 | public List getListStatus() | Handle request get list of statuses |
| 11 | public int getEndPage(String, String) | Handle request get last page when dividing list of orders into pages |

##### ServiceItem

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | public void getServiceItemDetail(int) | Handle request get detail of a service item |
| 02 | public List getListServiceRequest(int, String, String) | Handle request get list of service items |
| 03 | public List searchServiceItem(int) | Handle request search a service item |
| 04 | public Product getProductInfo(String) | Handle request get information of a product |
| 05 | public void approveRequest(int) | Handle request approve a service item |
| 06 | public List getListStatus() | Handle request get list of statuses |
| 07 | public int getEndPage(String, String) | Handle request get last page when dividing list of orders into pages |

##### serviceController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

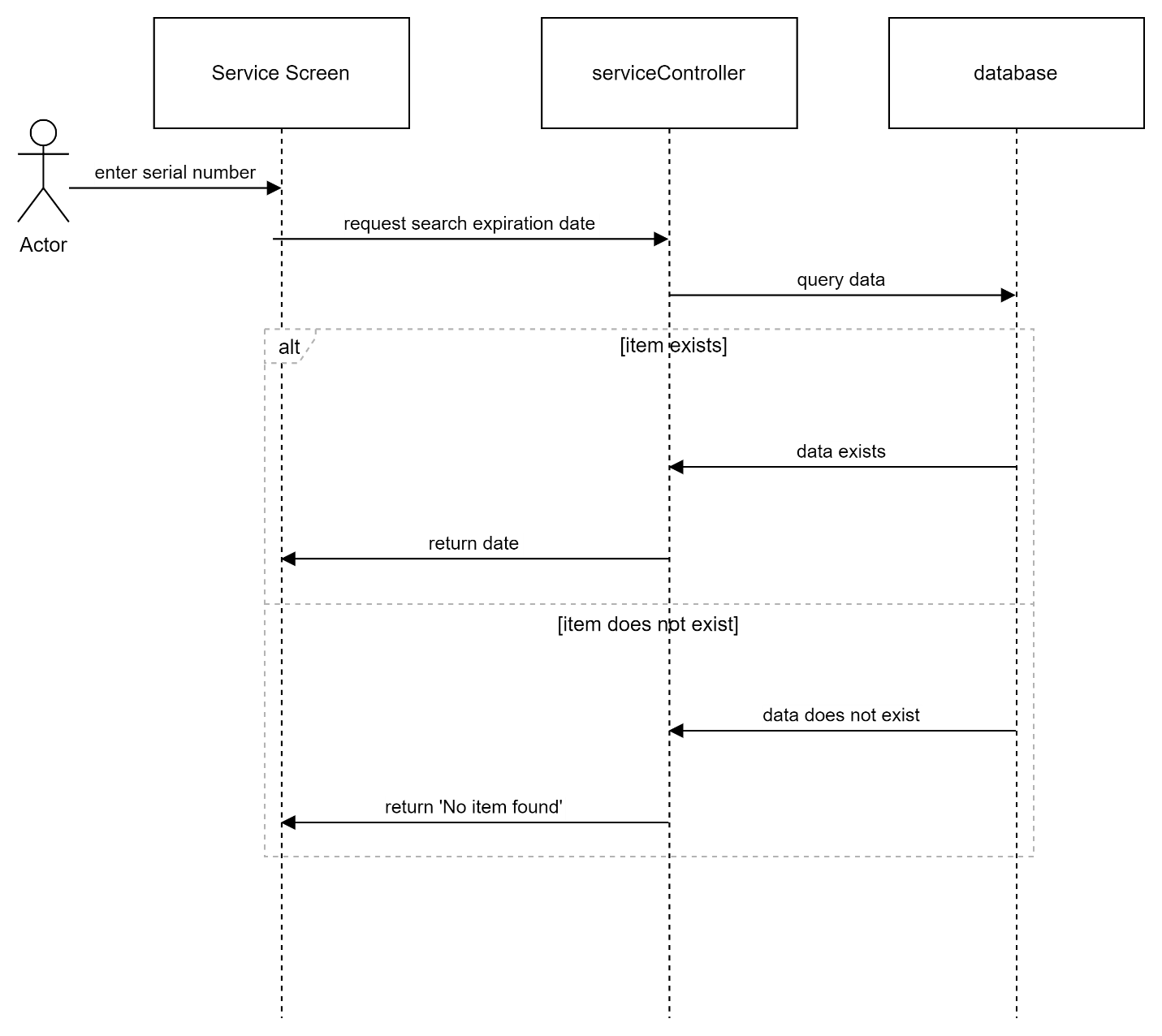
##### requestController

|  |  |  |
| --- | --- | --- |
| **No** | **Method** | **Description** |
| 01 | Protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in POST method |
| 02 | Protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws ServletException, IOException | Handle requests in GET method |

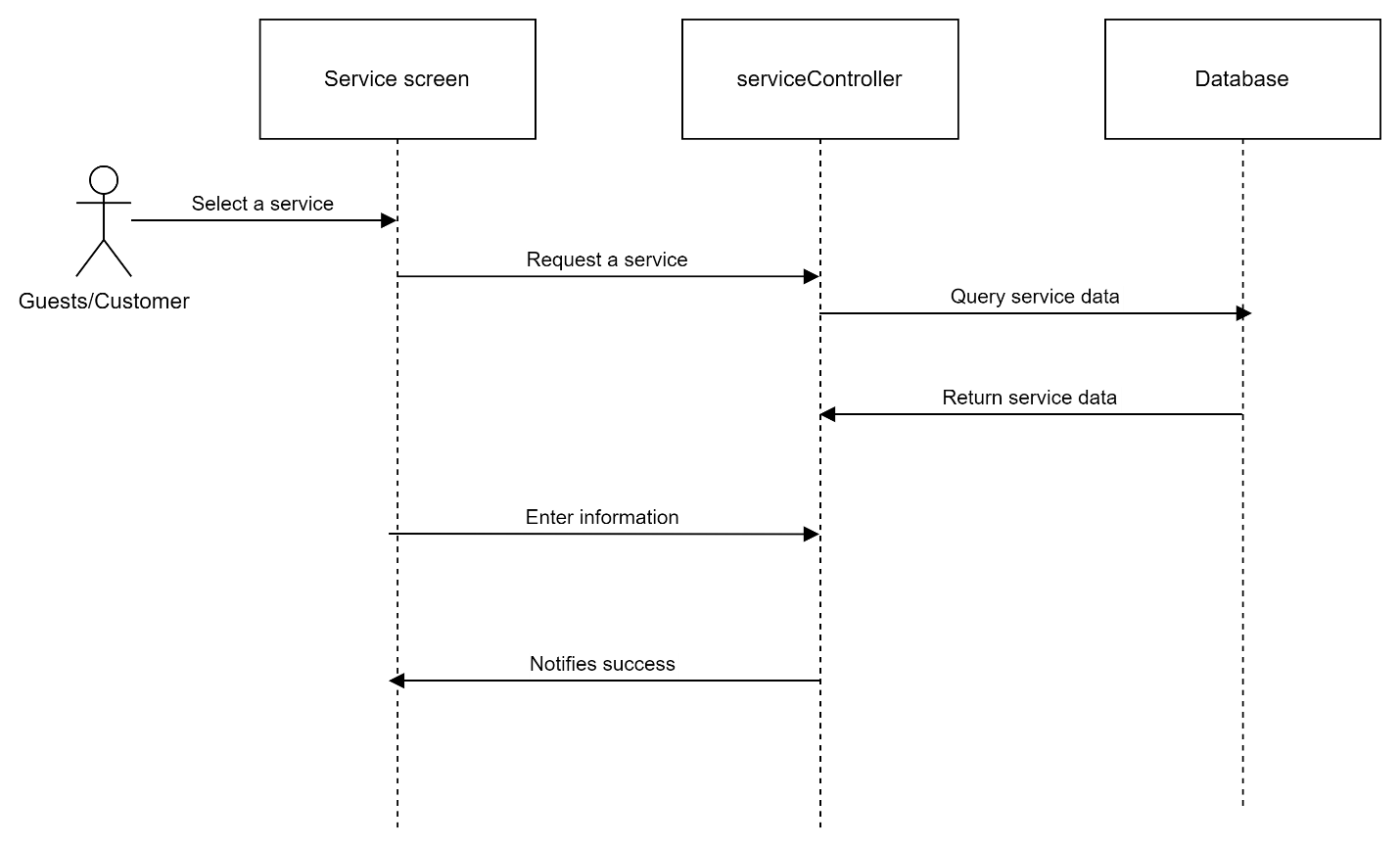
### c. Sequence Diagram(s)

#### Client

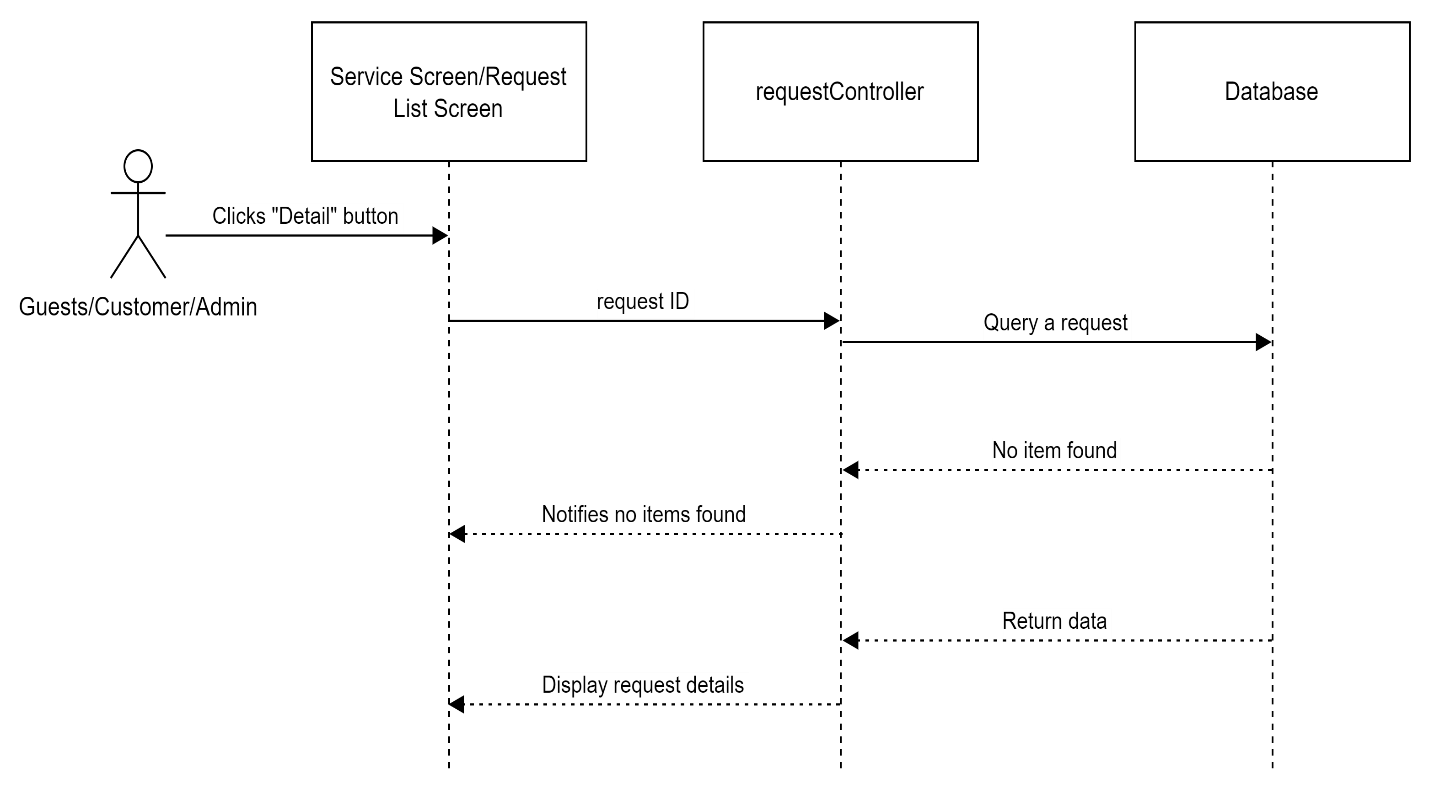
##### Search warranty expiration date



##### Request service

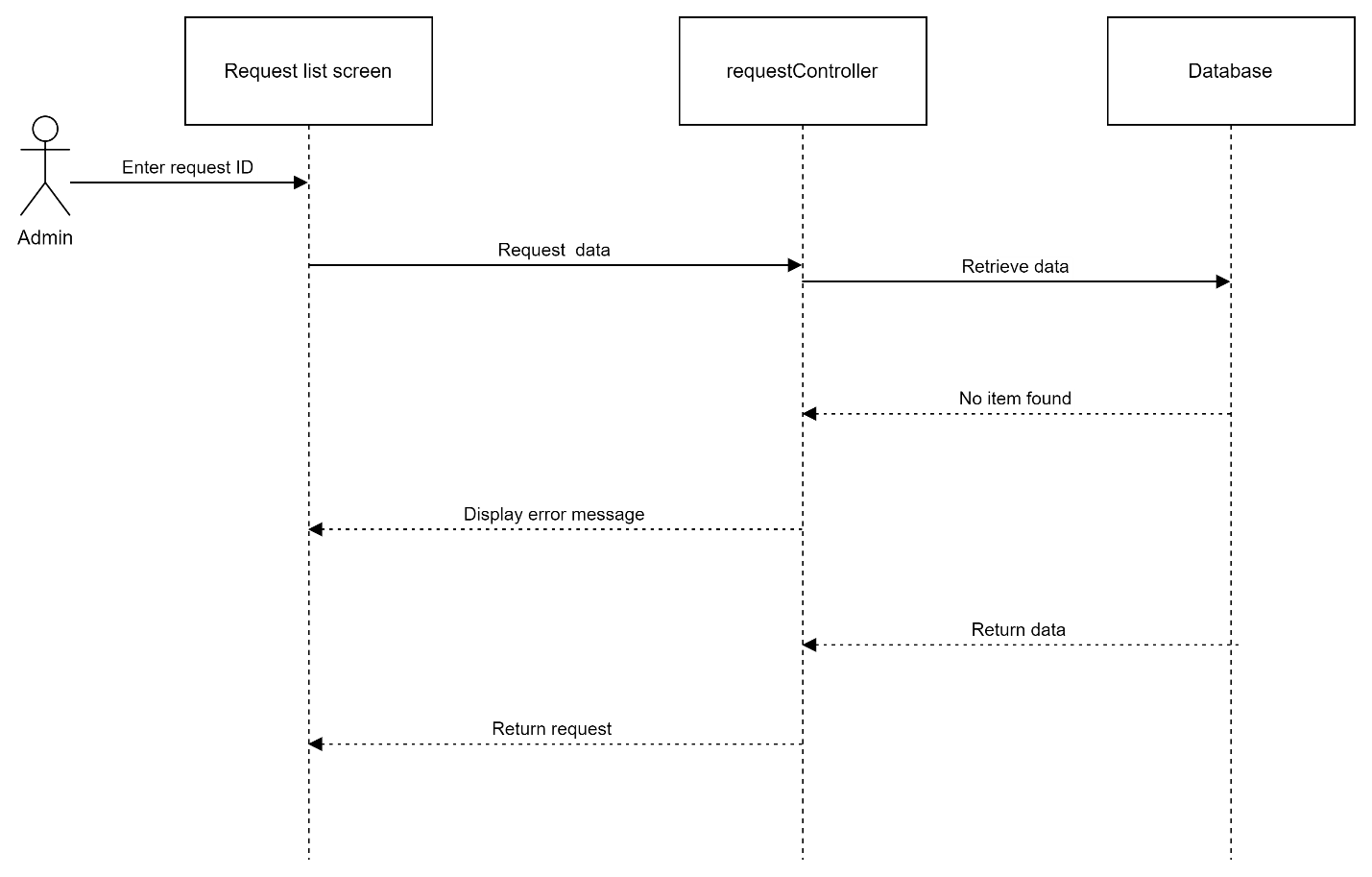


##### View service request detail

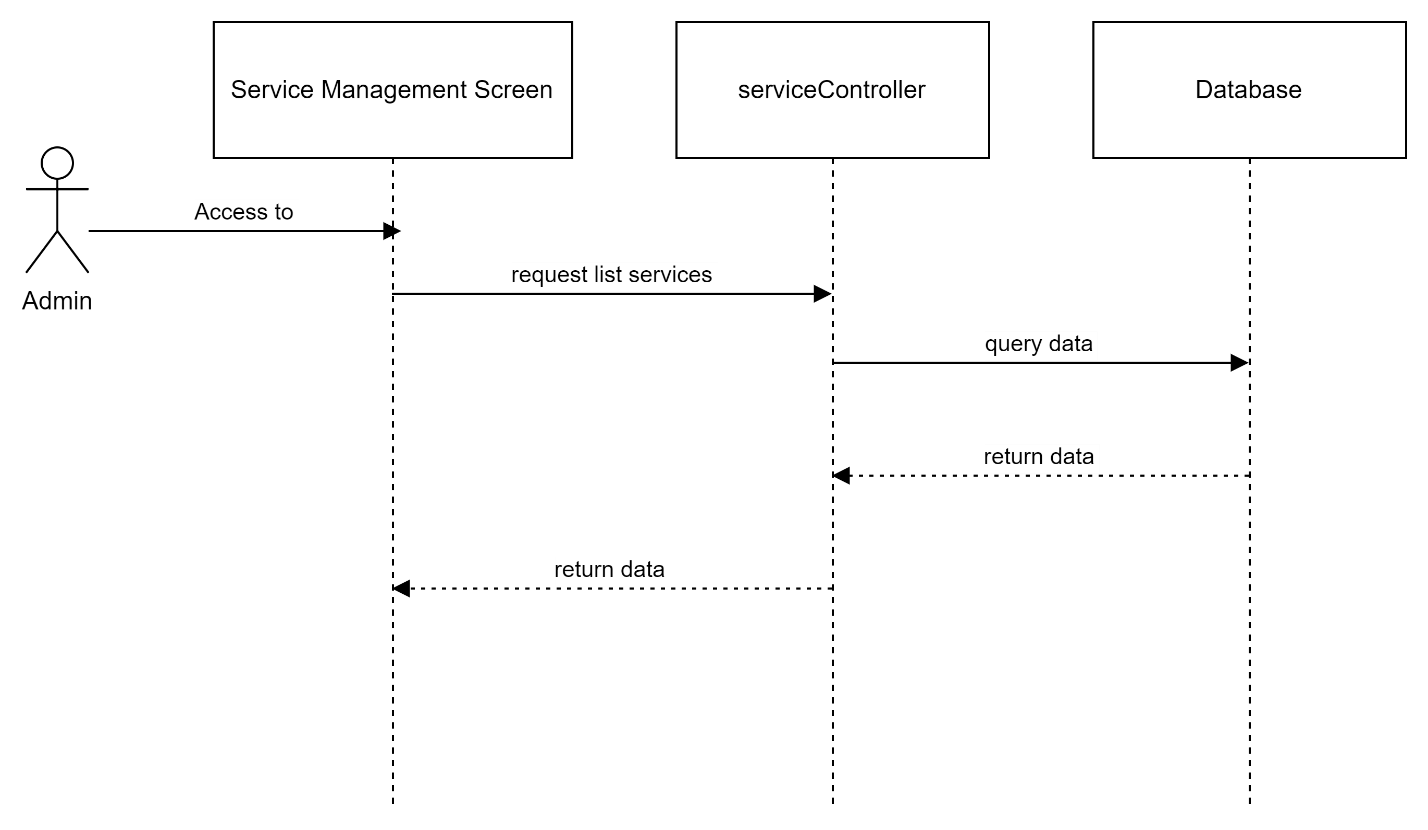


#### Admin

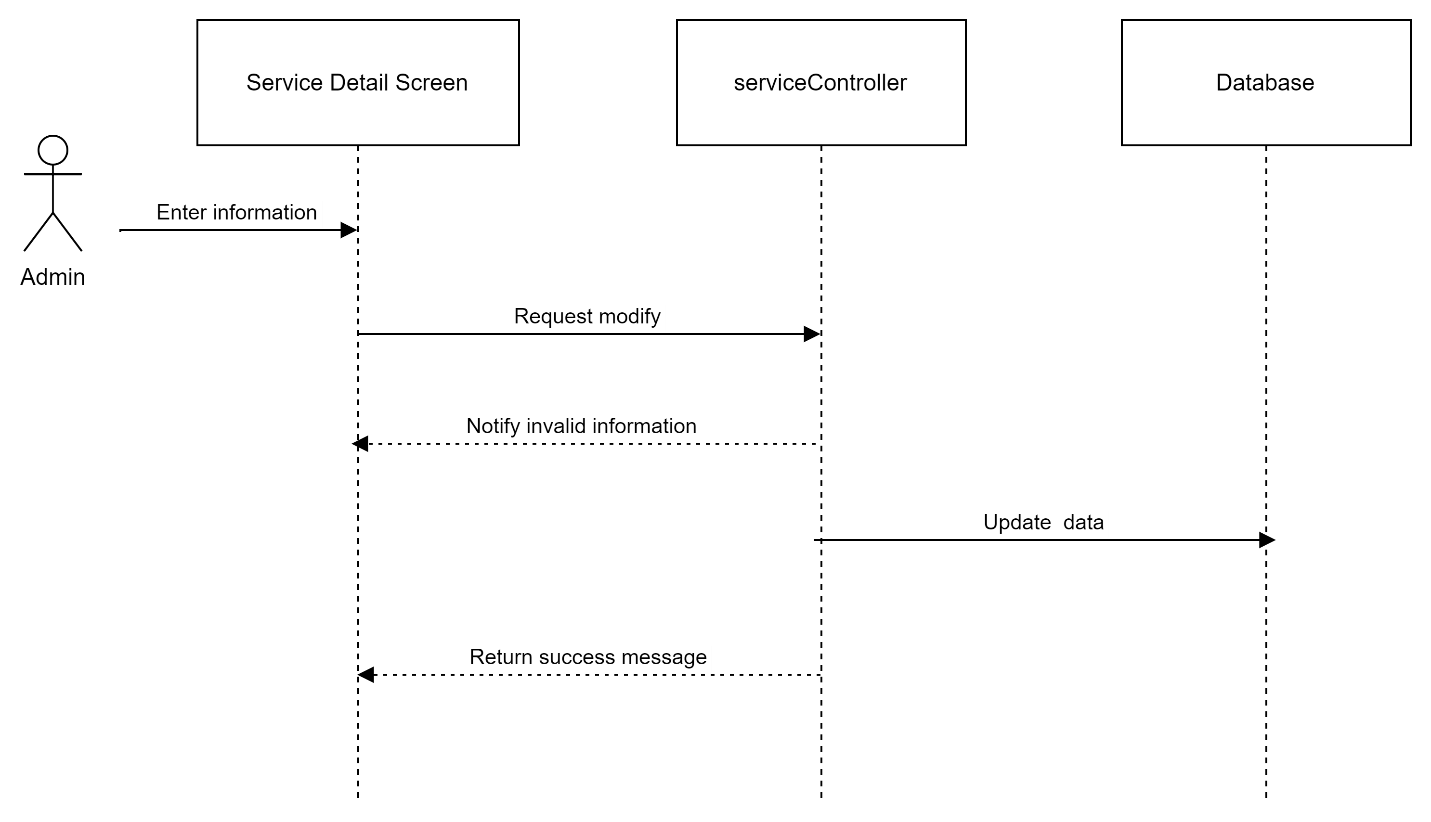
##### Search service request



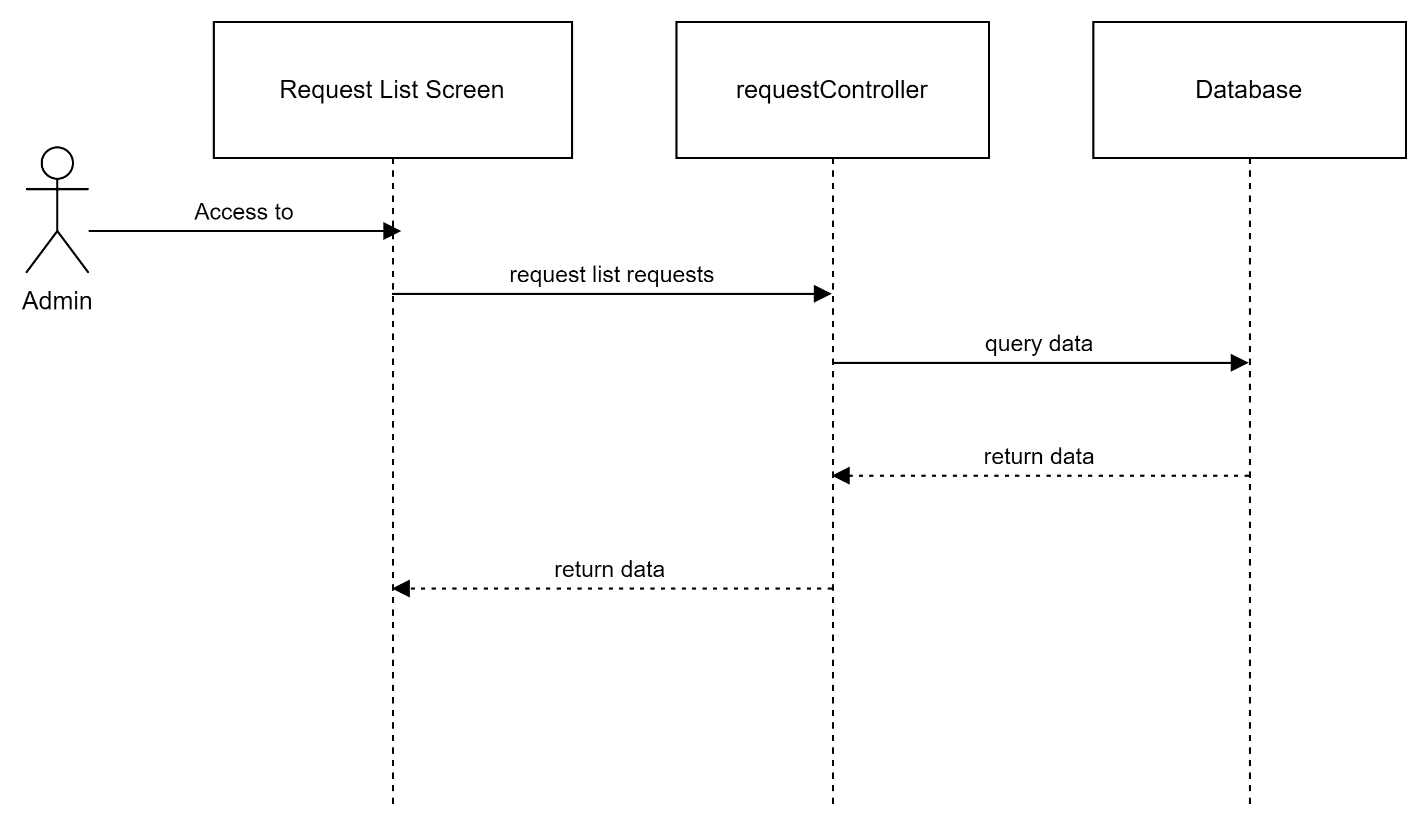
##### View list services



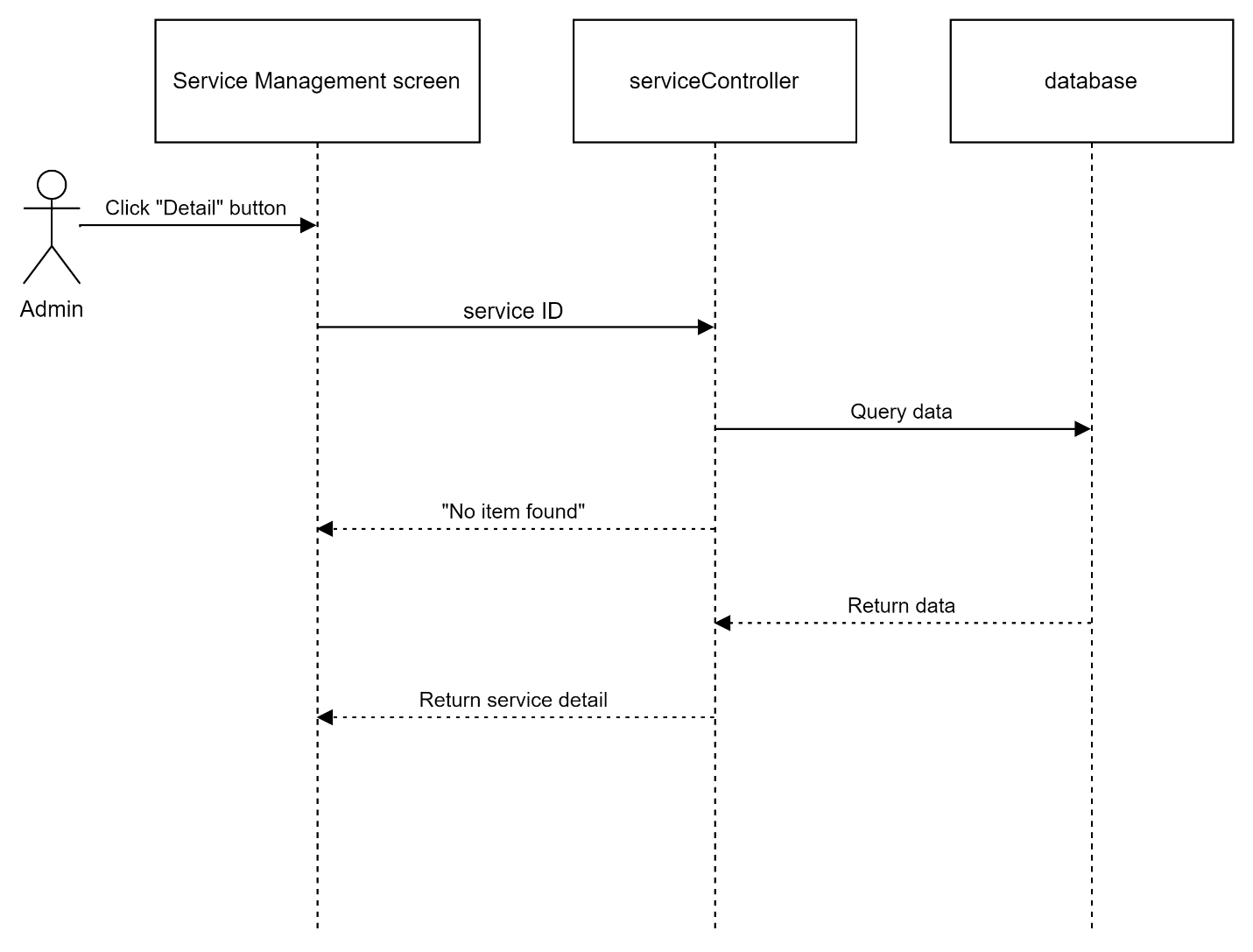
##### Modify service



##### View service request list



##### View service detail



##### Update status of service request

