

**Software Architecture and Design**

**Software Design Document**

**BirdCageShop**

**Sales Management System For Business Premises and Bird Cage Production**

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Table of Contents

[**I. Record of Changes**](#_hc7h8s43hb5c) **3**

[**II. Software Requirements Specification**](#_rl1pibprrl1s) **3**

[1. Overall Description](#_f8p888hsqhy3) 3

[1.1. Business Rules](#_tyel67zcyhcl) 3

[2. User Requirements](#_p1xqh2nqyqi9) 5

[2.1. System Actors](#_yotbe7qibvdp) 5

[2.2. Use Case Diagram](#_e87wt1qfitp1) 5

[2.2.1. Guest](#_f7m2pv3trllg) 6

[2.2.2. Customer](#_22alxqwkusq0) 7

[2.2.3. Staff and Manage](#_vy2z90455wyc) 8

[2.2.4. Admin](#_684un5hnxuly) 9

[2.3. Use Case List](#_n5tqpolzg0or) 9

[2.4. Use Case Specification](#_kqu4ydmmb0yb) 12

[2.4.1. Sign up](#_4whvj7ukynza) 12

[2.4.2. Login](#_slj4xzclgfim) 14

[2.4.3. View all product](#_8ybfjk2fucm3) 16

[2.4.4. View product detail](#_bqss1f3vkd03) 17

[2.4.5. Search product](#_rlmqgvo202k7) 19

[2.4.6. Add to cart](#_idzbixw6lo5b) 20

[2.4.7. Delete product from cart](#_prtq24k72eya) 23

[2.4.8. View profile](#_5xliicd0ejmi) 24

[2.4.9. Update profile](#_3gfhy1grtn0c) 26

[2.4.10. Create new order](#_9x9b69xfmf6t) 27

[2.4.11. Cancel order](#_kahivnywqgtd) 28

[2.4.12. View order status](#_jguakzk5lhbb) 30

[2.4.13. View order history](#_h3626oqipoy0) 32

[2.4.14. Create new product](#_rbw25z4ei0kl) 33

[2.4.15. Update product](#_tjl4agh46sgm) 35

[2.4.16. Delete product](#_fbr25zmp5qbo) 37

[2.4.17. Approve sale](#_y0hbke61u5bh) 38

[2.4.18. Approve customer’s order](#_eb01u7qxjpz) 39

[2.4.19. Cancel customer’s order](#_8k7jqe88454c) 41

[2.4.20. View order](#_q2apu33xf85f) 42

[2.4.21. View order detail](#_hmfw32rpr6i3) 43

[2.4.22. View dashboard](#_8je92rpfi7qa) 45

[2.4.23. Create new account](#_7ic9qic2rulx) 46

[2.4.24. Change account status](#_hyd9na11ia8i) 48

[2.4.25. Delete account](#_7ehmbpir2jz9) 49

[2.4.26. Search account](#_r4uu13mf0bgc) 51

[**III. Software Design Document**](#_aq72xu1gbtyt) **52**

[1. System Design](#_hf4v4d9i30po) 52

[1.1. System Architecture](#_akjis8m5grzf) 52

[1.2. Package Diagram](#_rydqekv5geiq) 52

[2. Database Design](#_mongiouapnrd) 54

[2.1. Class Diagram](#_eaf8hko6aten) 54

[2.2. Class Specification](#_b29c34q4hm7i) 55

[3. System Detailed Design](#_gm3vfaumqti1) 61

[3.1. Guest Register Feature](#_rgrl4wpnvmg8) 61

[3.2. Login Feature](#_vkuuegr1kf2d) 63

[3.3. Staff Manage Product Feature](#_ba2vt25jyups) 65

[3.4. Staff Manage Order Feature](#_iewzat6igxmq) 69

[3.5. Staff Manage Custom Order Feature](#_50zpmgdu4in2) 71

[3.6. User Create Order Feature](#_kaz2ub740h9e) 73

[3.7. User Manage Order Feature](#_m5j8w8uevfa6) 76

[3.8. User Create Custom Order Feature](#_38xeatf0rjug) 77

[3.9. User Manage Custom Order Feature](#_bkm57i6n5ze1) 79

[3.10. Admin Manage Account Feature](#_6e8rdwrjcyun) 80

# **Record of Changes**

# **Software Requirements Specification**

## **Overall Description**

### **Business Rules**

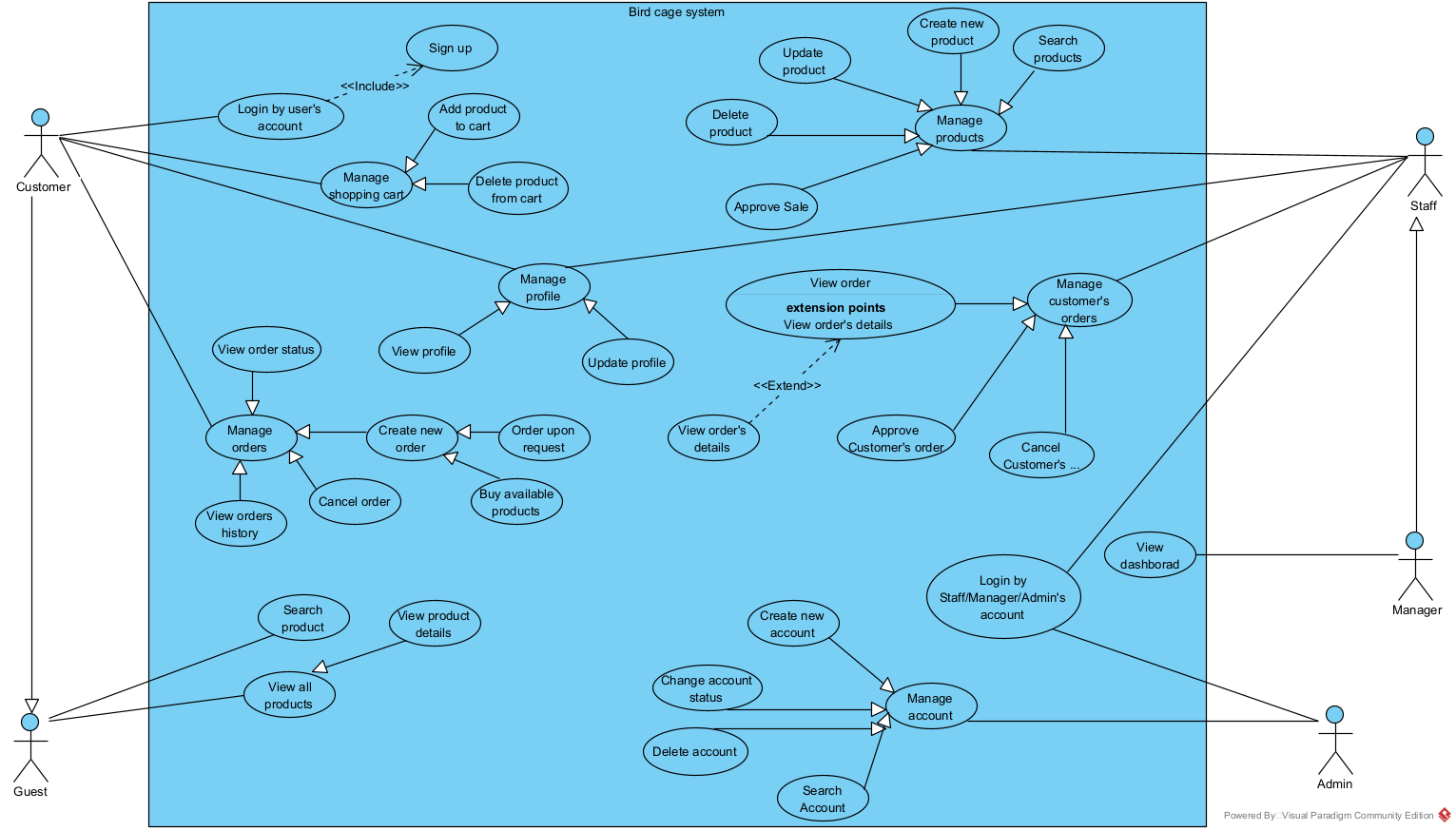
| ID | Rule Definition |
| --- | --- |
| BR-01 | Id will be generated by the system |
| BR-02 | Id is not changed when updated |
| BR-03 | Phone must be unique |
| BR-04 | Registered accounts must authenticate via email. |
| BR-05 | Email must be in standard email format |
| BR-06 | Phone number length must be 10 characters |
| BR-07 | If you forgot your password, you must authenticate via email and create a new password. |
| BR-08 | User can update their own profile, including their avatar, full name, phone number, gender |
| BR-09 | User can only update their profile |
| BR-10 | User can only change their password |
| BR-11 | Admin and Staff must log in before using the system |
| BR-12 | Admin and staff can buy the product |
| BR-13 | Admin and Staff have to login by admin and staff accounts. |
| BR-14 | Staff must provide a valid email to admin to create a staff account |
| BR-15 | Status default of new account is active |
| BR-16 | All account has two statuses: active and inactive |
| BR-17 | All account can view and update their profile |
| BR-18 | Admin creates an account for an Staff |
| BR-19 | Admin can updates the account status of Staff and Customer |
| BR-21 | Only staff updates order status |
| BR-22 | Staff can create product |
| BR-23 | Staff can update product |
| BR-24 | Order is created by Customer must be approved by the Staff |
| BR-25 | The Order has five status: Pending, Processing, Transporting, Return, Done and Cancel |
| BR-26 | To buy a product, the Customer must be logged in to the system |
| BR-27 | Customers can only buy as many items as they have available |
| BR-28 | Customers can only cancel orders when the order has not been approved |
| BR-29 | Custom orders are non-refundable |
| BR-30 | When the service is used, it cannot be deactivated |
| BR-31 | Staff can delete product |
| BR-32 | Only Manager can view dashboard |
| BR-33 | Only Admin can delete staff and customer account |
| BR-34 | Admin can only delete inactive account |
| BR-LG-01 | The login email need has 6 - 30 characters long |
| BR-LG-02 | The login password need has 6 - 10 characters long |
| BR-LG-03 | Username need has 5 - 100 characters long |
| BR-LG-04 | Username must be unique |
| BR-CP-01 | Product value need to be an integer bigger than 1000 |
| BR-CP-02 | Quantity must be a integer number that bigger than 0 |
| BR-CA-01 | The email create user must be valid |
| BR-CA-02 | The password create user must be have 6 -10 character |
| BR-CA-03 | User need role |
| BR-CA-05 | User need to be selected status |

## **User Requirements**

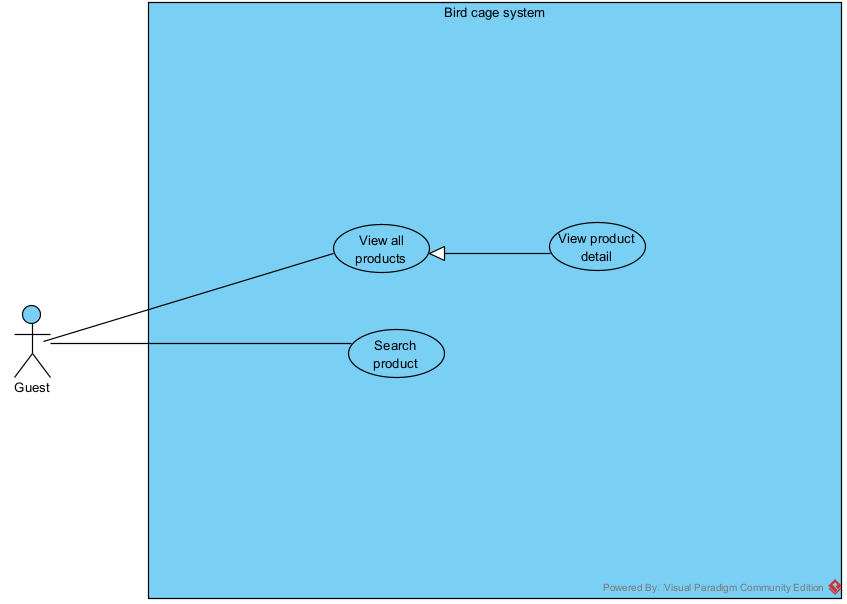
### **System Actors**

| **No** | **Actor** | **Description** |
| --- | --- | --- |
| 1 | Guest | Users who have not logged in the web application |
| 2 | Customer | Users who have logged in the web application |
| 3 | Staff | User who have managed product and order of user |
| 4 | Manager | User who have managed spending and revenue issues |
| 5 | Admin | User who have managed account of system |

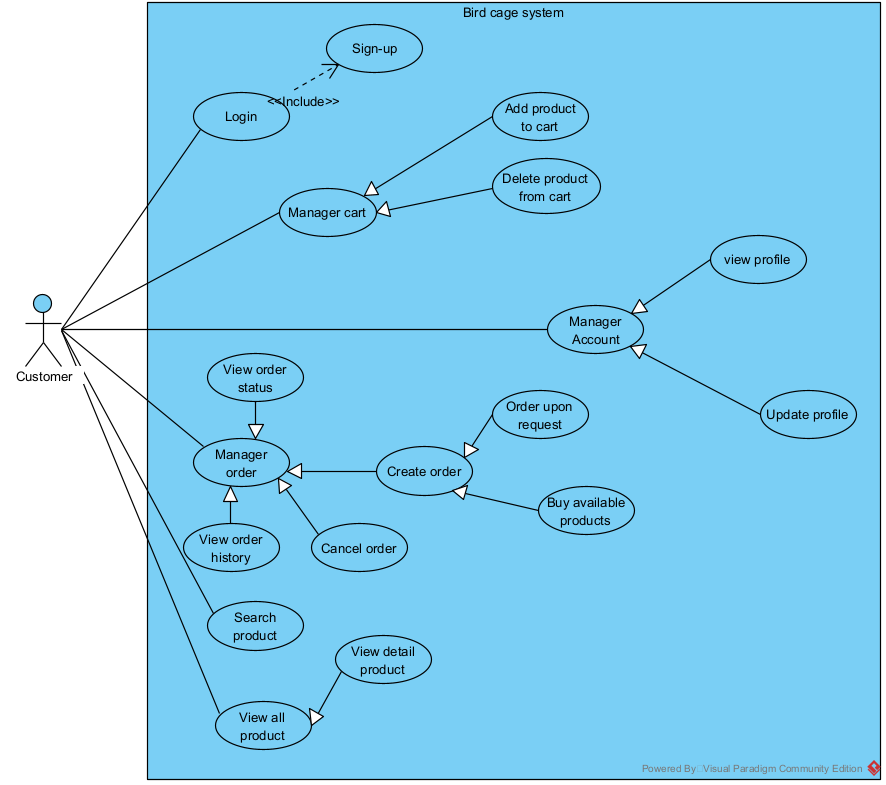
### **Use Case Diagram**

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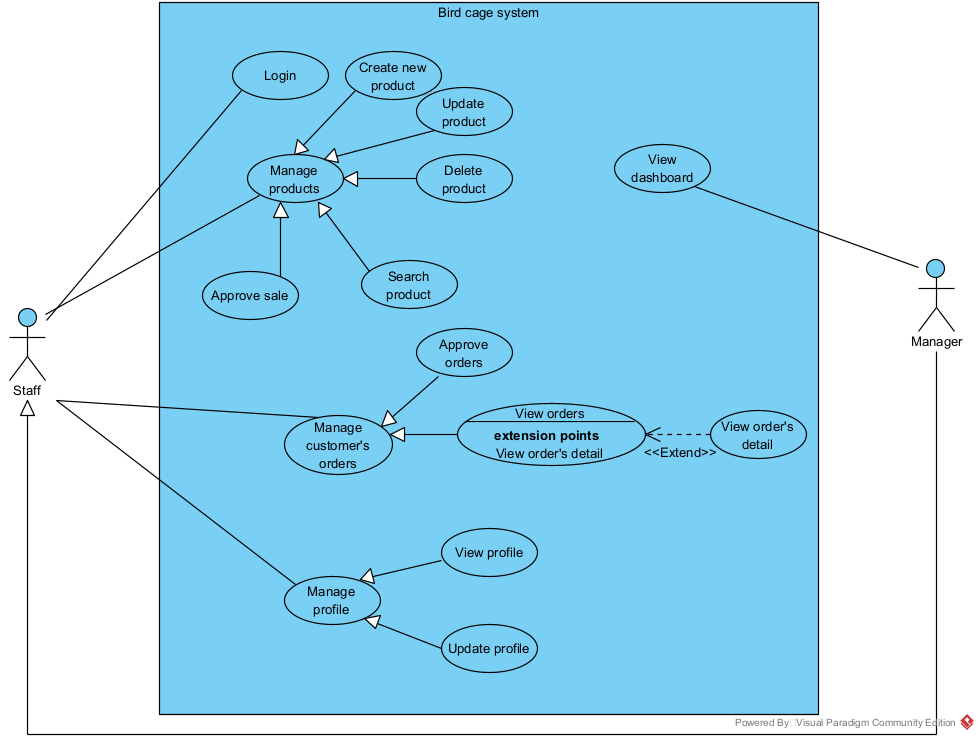
#### **Guest**

****

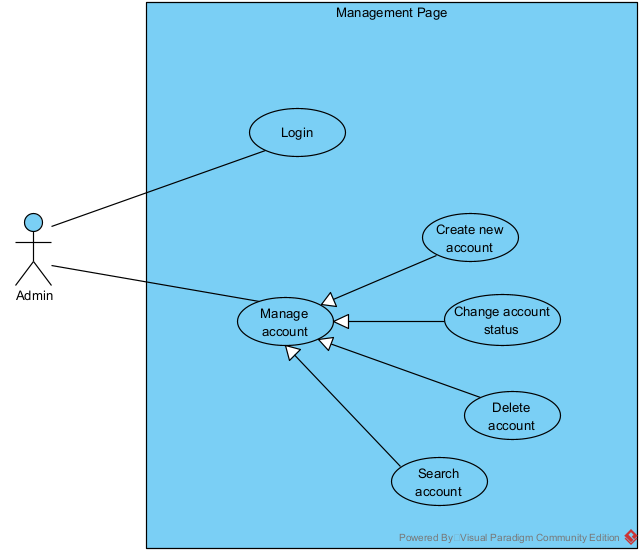
#### **Customer**

****

#### **Staff and Manage**

****

#### **Admin**

****

### 

### **Use Case List**

| **No.** | **Use Case** | **Primary Actors** | **Description** |
| --- | --- | --- | --- |
| UC-01 | Sign up | Guest | This feature helps users create an  account to log in to the web |
| UC-02 | Login | Customer | Unauthenticated User login to shop to  verify role, and give them access to more features in the system |
| UC-03 | View all product | Customer | This feature helps user view all product in  home page |
| UC-04 | View product detail | Customer | This feature helps user view detail of product |
| UC-05 | Search product | Customer | This feature helps user search product |
| UC-06 | Add to cart | Customer | This feature helps user add product to cart |
| UC-07 | Delete product from cart | Customer | This feature helps user delete product  From cart |
| UC-08 | View profile | Customer | This feature helps user view their profile |
| UC-09 | Update profile | Customer | This feature helps user update their profile |
| UC-10 | Create new order | Customer | This feature helps user create order |
| UC-11 | Cancel order | Customer | This feature helps user cancel order |
| UC-12 | View order history | Customer | This feature helps user view history of  order |
| UC-13 | View order status | Customer | This feature helps user view status of order |
| UC-14 | Create new product | Staff | This feature helps staff create new  product |
| UC-15 | Update product | Staff | This feature helps staff update product |
| UC-16 | Delete product | Staff | This feature helps staff delete product |
| UC-17 | Approve sale | Staff | This feature helps staff approve sale of  product |
| UC-18 | Approve customer’s order | Staff | This feature helps staff approve  customer’s product |
| UC-19 | Cancel customer’s order | Staff | This feature helps staff cancel customer’s product |
| UC-20 | View order | Staff | This feature helps staff view all order of customer |
| UC-21 | View order detail | Staff | This feature helps staff view detail order of customer |
| UC-22 | View dashboard | Manager | This feature helps manager view page  about economy |
| UC-23 | Create new account | Admin | This feature helps admin create new  account with role staff/manager for staff  and manager |
| UC-24 | Change account status | Admin | This feature helps the admin change the status of the account when staff/manager quit |
| UC-25 | Delete account | Admin | This feature helps admin delete account |
| UC-26 | Search account | Admin | This feature helps admin search account  to do something |

### Use Case Specification

#### **Sign up**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-01 | | | |
| **Use Case Name:** | Sign up | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Guest | | **Secondary Actors:** | N/A |
| **Trigger:** | Guests want to be able to order and pay for products in the shopping cart. | | | |
| **Description:** | Guests want to visit the sales website to order and pay for the products they like. | | | |
| **Preconditions:** | **PRE-1:**User is not already registered.  **PRE-2:**Mobile phone verification | | | |
| **Post–condition:** | **POST-1:**The guest's information will be saved to the data server.  **POST-2:**The system will output a successful or unsuccessful account creation message**.**  **POST-3:**The system will return to the login page. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | The guest will click on the registration signature in the homepage**.** | | The system will take guests to the registration page. (E1) |
| 2 | Guests will enter all required information in the registration form. (E2) | |  |
| 3 | Guest clicks the "Đăng ký" button. | | The system will issue an "Đăng ký thành công" notification and return it to the login page. (E3, E4) |
| **Alternative Flows:** | N/A | | | |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | The system does not take guests to the registration page. | | The system is still on the home page. |
| E2 | The guest fills in the wrong format. | | System informs “Bạn đã nhập sai định dạng. Vui lòng thử lại!” |
|  | E3 | The system does not respond to notifications. | | The system returns to the login page. |
|  | E4 | The system does not return to the login page. | | The system will issue an "Đăng ký thành công" notification. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | BR-LG-01, BR-LG-02, BR-LG-03, BR-LG-04, BR-03, BR-04, BR-05, BR-06 | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **Login**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-02 | | | |
| **Use Case Name:** | Log in | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | Admin, Manager, Staff |
| **Trigger:** | Guests want to be able to order and pay for products in the shopping cart. | | | |
| **Description:** | Guests want to visit the sales website to order and pay for the products they like. | | | |
| **Preconditions:** | **PRE-1:**User is already registered. | | | |
| **Post–condition:** | **POST-1:**Customers can place an order or pay for an order.  **POST-2:**The system records user login history. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | The customer will click on the login signature in the homepage. | | The system will take guests to the login page. (E1) |
| 2 | Customer will enter “tên đăng nhập” and “mật khẩu” fields in the login form. (E2) | |  |
| 3 | Guest clicks the "Đăng nhập" button. | | The system returns it to the home page. (E3) |
| **Alternative Flows:** | N/A | | | |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | The system does not take customers to the login page. | | The system is still on the home page. |
| E2 | The customer fills in the wrong “tên đăng nhập” and “mật khẩu”. | | System informs “tên đăng nhập hoặc mật khẩu không đúng. Vui lòng thử lại!” |
| E3 | The system does not return to the home page. | | The system is still on the login page. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | BR-LG-01, BR-LG-02, BR-LG-03, BR-11, BR-13 | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **View all product**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-03 | | | |
| **Use Case Name:** | View all product | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | Manager, Staff, Guest |
| **Trigger:** | When a user wants to see all products on the website. | | | |
| **Description:** | The website will show all products currently in the store's inventory. | | | |
| **Preconditions:** | **PRE-1:**The website must be posted to the server.  **PRE-2:**The website must be able to link to product data in the warehouse. | | | |
| **Post–condition:** | **POST-1:**The system shows all products. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | The user will click on the “trang chủ” in the homepage. (A1) | | The system will take the user to the page which shows all products. (E1,E2) |
| **Alternative Flows:** | **Step** | **Actor Action** | | **System Response** |
| A1 | The user will click on the logo in the homepage. | | The system will take the user to the page which shows all products. (E1,E2) |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | The system does not take users to the login page. | | The system is still on the home page. |
| E2 | The system does not show any product. | | The system show message “Lỗi kết nối hệ thống”. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | N/A | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **View product detail**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-04 | | | |
| **Use Case Name:** | View product detail | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | Manager, Staff, Guest |
| **Trigger:** | When a user wants to see details of products on the website. | | | |
| **Description:** | The website will show details of products currently in the store's inventory. | | | |
| **Preconditions:** | **PRE-1:**User is already on the page which shows all products.  **PRE-2:**The website must be able to link to product data in the warehouse.  **PRE-3:**Users must be on a page which shows all products. | | | |
| **Post–condition:** | **POST-1:**The system shows details of each product. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | The user will click on the “chi tiết” in this product. (A1) | | The system will take the user to show details of the product. (E1) |
| **Alternative Flows:** | **Step** | **Actor Action** | | **System Response** |
| A1 | The user will click on the picture in this product. | | The system will take the user to show details of the product. (E1) |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | The system does not show detailed products. | | The system show message “Mất kết nối máy chủ”. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | N/A | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **Search product**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-05 | | | |
| **Use Case Name:** | Search product | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | Manager, Staff, Guest |
| **Trigger:** | Users want to find the right product. | | | |
| **Description:** | Users can search for requests that suit their needs. | | | |
| **Preconditions:** | **PRE-1:**The website must be posted to the server**.** | | | |
| **Post–condition:** | **POST-1:**Find the right products according to your requirements. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | Users will enter the product name they want to search for and click on the "magnifying glass" icon. | | The system will display items whose names match the key word. (E1) |
| **Alternative Flows:** | N/A | | | |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | The system does not display items whose names match the key word. | | The system show message “Không tìm thấy sản phẩm”. |
| **Priority:** | Medium | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | N/A | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **Add to cart**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-06 | | | |
| **Use Case Name:** | Add to cart | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | N/A |
| **Trigger:** | User wants to add a product to the cart, which the user wants to buy. | | | |
| **Description:** | After finding the desired item, the user adds it to the cart to purchase. | | | |
| **Preconditions:** | **PRE-1:**User is already logged.  **PRE-2:**The product must be in stock.  **PRE-3:**Users must be on a page which shows all products. | | | |
| **Post–condition:** | **POST-1:**The product will be added to the cart. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | User clicks on the "Thêm giỏ hàng" button below the section of each product in page which show all products. (A1) | | The system will display the message "Đã thêm vào giỏ hàng". (E1,E2) |
| 2 |  | | The system will update the number on the cart icon. (E3) |
| **Alternative Flows:** | **Step** | **Actor Action** | | **System Response** |
| A1 | User clicks on the "Thêm giỏ hàng" button below the section of product in page which show detail product. | | The system will display the message "Đã thêm vào giỏ hàng". |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | Product does not exist | | The system show message “Sản phẩm không tồn tại”. |
| E2 | Product is no longer available. | | The system show message “Sản phẩm không đủ”. |
| E3 | Do not update the number of products in the cart. | | The system does not update the number on the cart icon. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually, | | | |
| **Business Rules:** | N/A | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **Delete product from cart**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-07 | | | |
| **Use Case Name:** | Delete product from cart | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | N/A |
| **Trigger:** | User wants to delete products from the cart. | | | |
| **Description:** | Users delete products after they change their mind. | | | |
| **Preconditions:** | **PRE-1:**User is already logged.  **PRE-2:**The cart must have products.  **PRE-3:**User must be in the cart page. | | | |
| **Post–condition:** | **POST-1:**The product will be deleted from cart. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | User clicks on the cart icon in the page which shows all products. | | The system takes the user to the shopping cart page. |
| 2 | User clicks on the trash icon on that product. | | The system will display the popup "bạn có muốn xóa khỏi giỏ hàng". |
| 3 | User clicks “Có”. (E1) | | The system will display the message " Đã xóa khỏi giỏ hàng ". |
| **Alternative Flows:** | N/A | | | |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | User click “Không”. | | The system takes the user to the shopping cart page. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | N/A | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **View profile**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-08 | | | |
| **Use Case Name:** | View Profile | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | Admin, Manager, Staff |
| **Trigger:** | User wants to see personal information. | | | |
| **Description:** | Users see all information in their profile. | | | |
| **Preconditions:** | **PRE-1:**User is already logged. | | | |
| **Post–condition:** | **POST-1:**The user will see all information about the user. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | User clicks on the avatar icon in navigation. | | The system will drop down the service list. |
| 2 | The user will click "Thông tin cá nhân" in that list. | | The system will take the user to the user's profile page. (E1) |
| **Alternative Flows:** | N/A | | | |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | Could not get data about user information | | The system show message “Lỗi kết nối hệ thống”. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | N/A | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **Update profile**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-09 | | | |
| **Use Case Name:** | Update Profile | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | Admin, Manager, Staff |
| **Trigger:** | User wants to update personal information. | | | |
| **Description:** | Users can update information in their profile. | | | |
| **Preconditions:** | **PRE-1:**User is already logged.  **PRE-2:**User must be in profile page. | | | |
| **Post–condition:** | **POST-1:**User information will be updated. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | The user fills in the fields that allow changes in personal information. | |  |
| 2 | The user clicks "Cập nhật" in that form. (E1) | | The system show message “Đã được cập nhật”. |
| **Alternative Flows:** | **N/A** | | | |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | Can not click “Cập nhật” | | The system show message “Sai định dạng của thông tin”. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | BR-08, BR-09, BR-10 | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **Create new order**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-10 | | | |
| **Use Case Name:** | Create new order | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | N/A |
| **Trigger:** | Create a request for the manufacturer to create the user's own product. | | | |
| **Description:** | Users will create a request for the store to create a product according to their wishes. | | | |
| **Preconditions:** | **PRE-1:**User is already logged. | | | |
| **Post–condition:** | **POST-1:**An order is sent to the store for the product. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | The user fills in the fields that allow changes in personal information. | |  |
| 2 | The user clicks "Cập nhật" in that form. (E1) | | The system show message “Đã được cập nhật”. |
| **Alternative Flows:** | N/A | | | |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | Can not click “Cập nhật” | | The system show message “Sai định dạng của thông tin”. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | BR-25, BR-26, BR-27 | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **Cancel order**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-11 | | | |
| **Use Case Name:** | Cancel order | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | N/A |
| **Trigger:** | The user wants to cancel the order they placed. | | | |
| **Description:** | User wants to cancel the order they placed because their design needs changed. | | | |
| **Preconditions:** | **PRE-1:**User is already logged.  **PRE-2:**Must have an order.  **PRE-3:**Order must be in pending “Chờ duyệt” status. | | | |
| **Post–condition:** | **POST-1:**The order status will be changed to "Đã hủy". | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | User clicks on the avatar icon in navigation. | | The system will drop down the service list. |
| 2 | The user will click "Lịch sử" in that list. | | The system will take the user to the user's history page. (E1) |
| 3 | The user will select the "Đơn đặt hàng" tab | | The system will display a table of orders. (E1) |
| 4 | The user clicks the "Hủy" button | | The system will display a popup "Bạn có muốn xóa đơn đặt hàng này không?" |
| 5 | The user clicks “Có” (E2) | | The system show message “Đơn hàng đã được hủy”. |
| 6 |  | | The system will reload, and the order status will also be updated |
| **Alternative Flows:** | N/A | | | |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | No data displayed | | The system show message “Không tìm thấy dữ liệu”. |
| E2 | The user clicks “Không” | | The system will reload. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | BR-28, BR-29 | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **View order status**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-12 | | | |
| **Use Case Name:** | View order status | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | N/A |
| **Trigger:** | The user wants to see the order status. | | | |
| **Description:** | User wants to check the order status they placed. | | | |
| **Preconditions:** | **PRE-1:**User is already logged.  **PRE-2:**Must have an order. | | | |
| **Post–condition:** | **POST-1:**The order status of each order will be shown. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | User clicks on the avatar icon in navigation. | | The system will drop down the service list. |
| 2 | The user will click "Lịch sử" in that list. | | The system will take the user to the user's history page. (E1) |
| 3 | The user will select the "tất cả" tab | | The system will display a table of orders. (E1) |
| **Alternative Flows:** | N/A | | | |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | No data displayed | | The system show message “Không tìm thấy dữ liệu”. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | BR-25 | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **View order history**

| **Use Case Specification** | | | | |
| --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-13 | | | |
| **Use Case Name:** | View order history | | | |
| **Created By:** | ThanhHG | | **Date Created:** | Sep 17, 2023 |
| **Primary Actor:** | Customer | | **Secondary Actors:** | N/A |
| **Trigger:** | The user wants to see the order’s history. | | | |
| **Description:** | User wants to check the order history they placed. | | | |
| **Preconditions:** | **PRE-1:**User is already logged.  **PRE-2:**Must have an order. | | | |
| **Post–condition:** | **POST-1:**The order’s history of each order will be shown. | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | **System Response** |
| 1 | User clicks on the avatar icon in navigation. | | The system will drop down the service list. |
| 2 | The user will click "Lịch sử" in that list. | | The system will take the user to the user's history page. (E1) |
| 3 | The user will select the "Đơn đặt hàng" tab | | The system will display a table of orders. (E1) |
| **Alternative Flows:** | N/A | | | |
| **Exceptions:** | **No** | **Cause** | | **System Response** |
| E1 | No data displayed | | The system show message “Không tìm thấy dữ liệu”. |
| **Priority:** | High | | | |
| **Frequency of Use:** | Usually | | | |
| **Business Rules:** | N/A | | | |
| **Other Information:** | N/A | | | |
| **Assumptions:** | N/A | | | |

#### **Create new product**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-14 | | | | |
| **Use Case Name:** | Create new product | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Staff | | **Secondary Actors:** | Manager | |
| **Trigger:** | The staff wants to add a new product. | | | | |
| **Description:** | This feature allows the staff to add a new product into the system. | | | | |
| **Preconditions:** | **PRE1:**The staff has logged in.  **PRE2:**The product hasn't been created yet | | | | |
| **Post–condition:** | **POST1:** System winforms “Thêm sản phẩm mới thành công”  **POST2:** system informs “Thêm sản phẩm mới không thành công” | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The staff accesses the Product Management then chooses the “ Thêm sản phẩm mới” button. | | | system redirects to the “Add Product” screen. |
| 2 | The staff fills in the product's information and clicks on the “Lưu” button. | | | system informs “Thêm sản phẩm mới thành công” |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | **No** | **Cause** | | | **System Response** |
| 1 | The staff clicks on the “Hủy” button. | | | system returns to Product Management screen |
| 2 | The staff doesn’t fill anything and submits. | | | system informs “Vui lòng nhập thông tin sản phẩm!” |
| **Priority:** | High | | | | |
| **Frequency of Use:** | Usually | | | | |
| **Business Rules:** | BR-22, BR-23, BR-CP-01, BR-CP-02 | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **Update product**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-15 | | | | |
| **Use Case Name:** | Update product | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Staff | | **Secondary Actors:** | Manager | |
| **Trigger:** | The staff wants to update the product. | | | | |
| **Description:** | This feature allows the staff to edit the product’s detailed information. | | | | |
| **Preconditions:** | **PRE1:**The staff has logged in.  **PRE2:**The product has been created yet | | | | |
| **Post–condition:** | **POST1:** System informs “Cập nhật sản phẩm thành công”  **POST2:** system informs “Cập nhật sản phẩm không thành công” | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The staff accesses the Product Management then chooses the “ Cập nhật sản phẩm ” button. | | | system redirects to the Update Product screen. |
| 2 | The staff changes the product's information and clicks on the “Lưu” button. | | | system informs “Cập nhật sản phẩm thành công” |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | **No** | **Cause** | | | **System Response** |
| 1 | The staff clicks on the “Hủy” button. | | | system returns to “Product Management” screen |
| **Priority:** | Medium | | | | |
| **Frequency of Use:** | Sometime | | | | |
| **Business Rules:** | BR-21 | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **Delete product**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-16 | | | | |
| **Use Case Name:** | Delete product | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Staff | | **Secondary Actors:** | Manager | |
| **Trigger:** | The staff wants to delete the product. | | | | |
| **Description:** | This feature allows the staff to remove the product from the system. | | | | |
| **Preconditions:** | **PRE1:**The staff has logged in.  **PRE2:**The product has been created yet | | | | |
| **Post–condition:** | **POST1:** System informs “Sản phẩm đã xóa thành công”  **POST2:** System informs “Xóa sản phẩm không thành công” | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The staff accesses the Product Management then chooses the “Xóa sản phẩm” button. | | | system informs “Bạn có chắc chắn muốn xóa sản phẩm này”. |
| 2 | The staff clicks on the “Có” button. | | | system informs “Sản phẩm đã xóa thành công” |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | **No** | **Cause** | | | **System Response** |
| 1 | The staff clicks on the “Không” button. | | | system returns to “Product Management” screen |
| **Priority:** | Medium | | | | |
| **Frequency of Use:** | Sometime | | | | |
| **Business Rules:** | BR-31 | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **Approve sale**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-17 | | | | |
| **Use Case Name:** | Approve sale | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Staff | | **Secondary Actors:** | Manager | |
| **Trigger:** | The staff wants to sell off the product. | | | | |
| **Description:** | This feature allows staff to discount the products. | | | | |
| **Preconditions:** | **PRE1:**The staff has logged in.  **PRE2:**The product has been created yet | | | | |
| **Post–condition:** | **POST1:** system informs “Giảm giá đơn hàng thành công”  **POST2:** system informs “Giảm giá đơn hàng chưa thành công” | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The staff accesses the Product Management and clicks on “Giảm giá” button | | | system redirects to Approve Sale screen. |
| 2 | The staff fills in the product's sale information and clicks on the “Lưu” button. | | | system informs “Giảm giá đơn hàng thành công” |
| **Alternative Flows:** | N/A | | | | |
|
|
| **Exceptions:** | N/A | | | | |
|
| **Priority:** | High | | | | |
| **Frequency of Use:** | Usually | | | | |
| **Business Rules:** | N/A | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **Approve customer’s order**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-18 | | | | |
| **Use Case Name:** | Approve customer's order | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Staff | | **Secondary Actors:** | Manager | |
| **Trigger:** | The staff wants to accept an order. | | | | |
| **Description:** | This feature allows staff to approve customer orders | | | | |
| **Preconditions:** | **PRE1:**The staff has logged in.  **PRE2:**The order has been created yet | | | | |
| **Post–condition:** | **POST1:** System informs “Phê duyệt đơn hàng thành công”  **POST2:** System informs “Phê duyệt đơn hàng chưa thành công” | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The staff accesses the Order Management and clicks on tab “Chờ duyệt” | | | system redirects to Approve Order Management screen. |
| 2 | The staff clicks on the “Duyệt” button. | | | system informs “Phê duyệt đơn hàng thành công” and the customer’s order redirects to “Đang xử lý ” tab. |
| **Alternative Flows:** | N/A | | | | |
|
|
| **Exceptions:** | N/A | | | | |
|
| **Priority:** | High | | | | |
| **Frequency of Use:** | Usually | | | | |
| **Business Rules:** | BR-24 | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **Cancel customer’s order**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-19 | | | | |
| **Use Case Name:** | Cancel Customer's order | | | | |
| **Created By:** | Staff | | **Secondary Actors:** | Manager | |
| **Primary Actor:** | The staff wants to cancel an order. | | | | |
| **Trigger:** | This feature allows staff to cancel customer orders | | | | |
| **Description:** | **PRE1:**The staff has logged in.  **PRE2:**The order has been created yet | | | | |
| **Preconditions:** | **POST1:** System informs “Từ chối đơn hàng thành công”.  **POST2:** System informs “Từ chối đơn hàng chưa thành công”. | | | | |
| **Post–condition:** | **Step** | **Actor Action** | | | **System Response** |
| **Normal Flow:** | 1 | The staff accesses the Approve Order Management then chooses the “Từ chối” button. | | | system informs “Nhập lý do từ chối” |
| 2 | The staff fills in the reason and clicks on the “Lưu'' button. | | | system informs “Từ chối đơn hàng thành công”. |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | N/A | | | | |
|
| **Priority:** | High | | | | |
| **Frequency of Use:** | Usually | | | | |
| **Business Rules:** | BR-28 | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **View order**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-20 | | | | |
| **Use Case Name:** | View order | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Staff | | **Secondary Actors:** | Manager | |
| **Trigger:** | The staff wants to view all orders. | | | | |
| **Description:** | This feature allows staff to view all customer orders | | | | |
| **Preconditions:** | **PRE1:**The staff has logged in.  **PRE2:**The order has been created yet | | | | |
| **Post–condition:** | **POST1:** System displays all available orders. | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The staff accesses the Order Management then chooses the “Tất cả” button. | | | The system displays all available orders. |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | N/A | | | | |
| **Priority:** | High | | | | |
| **Frequency of Use:** | Usually | | | | |
| **Business Rules:** | N/A | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **View order detail**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-21 | | | | |
| **Use Case Name:** | View order’s details | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Staff | | **Secondary Actors:** | Manager | |
| **Trigger:** | The staff wants to view the order's detailed information. | | | | |
| **Description:** | This feature allows staff to view customer’s orders detail information | | | | |
| **Preconditions:** | **PRE1:**The staff has logged in.  **PRE2:**The order has been created yet | | | | |
| **Post–condition:** | **POST1:** System displays customer’s order detail information. | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The staff accesses the Order Management then chooses the “Tất cả” button. | | | The system displays all available orders. |
| 2 | The staff clicks on the “Xem chi tiết” button. | | | System displays customer’s order detail information. |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | N/A | | | | |
|
| **Priority:** | High | | | | |
| **Frequency of Use:** | Usually | | | | |
| **Business Rules:** | N/A | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **View dashboard**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-22 | | | | |
| **Use Case Name:** | View dashboard | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Manager | | **Secondary Actors:** | N/A | |
| **Trigger:** | The manager wants to view the dashboard. | | | | |
| **Description:** | This feature allows the manager to view the dashboard. | | | | |
| **Preconditions:** | **PRE1:**The manager has logged in. | | | | |
| **Post–condition:** | **POST1:** System displays dashboard. | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The manager accesses the Dashboard | | | System displays a dashboard. |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | N/A | | | | |
|
| **Priority:** | High | | | | |
| **Frequency of Use:** | Usually | | | | |
| **Business Rules:** | BR-32 | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **Create new account**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-23 | | | | |
| **Use Case Name:** | Create new account | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Admin | | **Secondary Actors:** | N/A | |
| **Trigger:** | The admin wants to create a new account. | | | | |
| **Description:** | This feature allows the admin to create a new account for staff/manager. | | | | |
| **Preconditions:** | **PRE1:**The admin has logged in.  **PRE1:**The account hasn't been created yet. | | | | |
| **Post–condition:** | **POST1:** The account has been added successfully.  **POST2:** system inform “Tạo tài khoản không thành công”. | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The admin accesses the Account Management then chooses the “ Thêm tài khoản” button. | | | system redirects to Add Account screen. |
| 2 | The admin fills in the account's information and clicks on the “Lưu” button. | | | system inform “Thêm tài khoản mới thành công” |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | **No** | **Cause** | | | **System Response** |
| 1 | The admin clicks on the “Hủy” button. | | | system return to Account Management screen |
| 2 | The admin fills information in the wrong format. | | | The system gives a warning to enter the correct value. |
| 3 | The admin doesn’t fill anything and submit. | | | The system issues a warning to enter required fields. |
| **Priority:** | High | | | | |
| **Frequency of Use:** | Usually | | | | |
| **Business Rules:** | BR-CA-01, BR-CA-02, BR-CA-03, BR-CA-05, BR-15,BR-16, BR-18 | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **Change account status**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-24 | | | | |
| **Use Case Name:** | Change account’s status | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Admin | | **Secondary Actors:** | N/A | |
| **Trigger:** | The admin wants to change the account status. | | | | |
| **Description:** | This feature allows the admin to change the account's status. | | | | |
| **Preconditions:** | **PRE1:**The admin has logged in and the account still exists. | | | | |
| **Post–condition:** | **POST1:** The account status has been changed successfully. | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The admin accesses the Account Management then clicks on the change account’s status button. | | | system automatically changes the account status. |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | N/A | | | | |
|
| **Priority:** | Low | | | | |
| **Frequency of Use:** | Sometime | | | | |
| **Business Rules:** | BR-19 | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

#### **Delete account**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-25 | | | | |
| **Use Case Name:** | Delete account | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Admin | | **Secondary Actors:** | N/A | |
| **Trigger:** | The admin wants to delete an account. | | | | |
| **Description:** | This feature allows the admin to remove the account from the system. | | | | |
| **Preconditions:** | **PRE1:**The admin has logged in.  **PRE2:**The account has been created yet | | | | |
| **Post–condition:** | **POST1:** System informs “Tài khoản đã xóa thành công”  **POST2:** system informs “Xóa tài khoản không thành công” | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The admin accesses the Account Management then chooses the “Xóa tài khoản” button. | | | system informs “Bạn có chắc chắn muốn xóa tài khoản này”. |
| 2 | The admin clicks on the “Có” button. | | | System informs “Tài khoản đã xóa thành công” |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | **No** | **Cause** | | | **System Response** |
| 1 | The admin clicks on the “Không” button. | | | system returns to “Account Management” screen |
| 2 |  | | |  |
| **Priority:** | Low | | | | |
| **Frequency of Use:** | Sometime | | | | |
| **Business Rules:** | BR-33, BR-34 | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

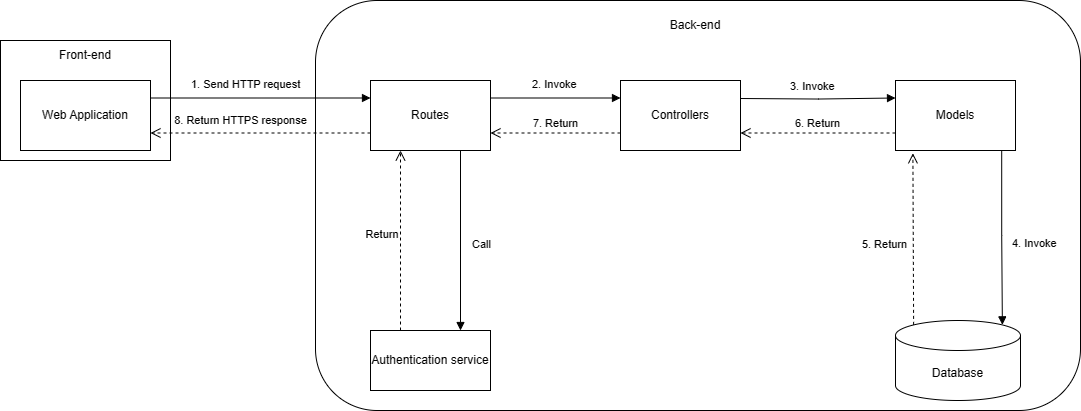
#### **Search account**

| **Use Case Specification** | | | | | |
| --- | --- | --- | --- | --- | --- |
| **Use Case No.:** | UC-26 | | | | |
| **Use Case Name:** | Search account | | | | |
| **Created By:** | Trang | | **Date Created:** | September 16. 2023 | |
| **Primary Actor:** | Admin | | **Secondary Actors:** | N/A | |
| **Trigger:** | The admin wants to search the account. | | | | |
| **Description:** | This feature allows the admin to search the account from the systerm | | | | |
| **Preconditions:** | **PRE1:**The admin has logged in.  **PRE2:**The account has been created yet | | | | |
| **Post–condition:** | **POST1:** The system displays the search results. | | | | |
| **Normal Flow:** | **Step** | **Actor Action** | | | **System Response** |
| 1 | The admin accesses the Account Management then enter information in the search box | | | The system displays the search results. |
| **Alternative Flows:** | N/A | | | | |
| **Exceptions:** | N/A | | | | |
|
| **Priority:** | High | | | | |
| **Frequency of Use:** | Usually | | | | |
| **Business Rules:** | N/A | | | | |
| **Other Information:** | N/A | | | | |
| **Assumptions:** | N/A | | | | |

# **Software Design Document**

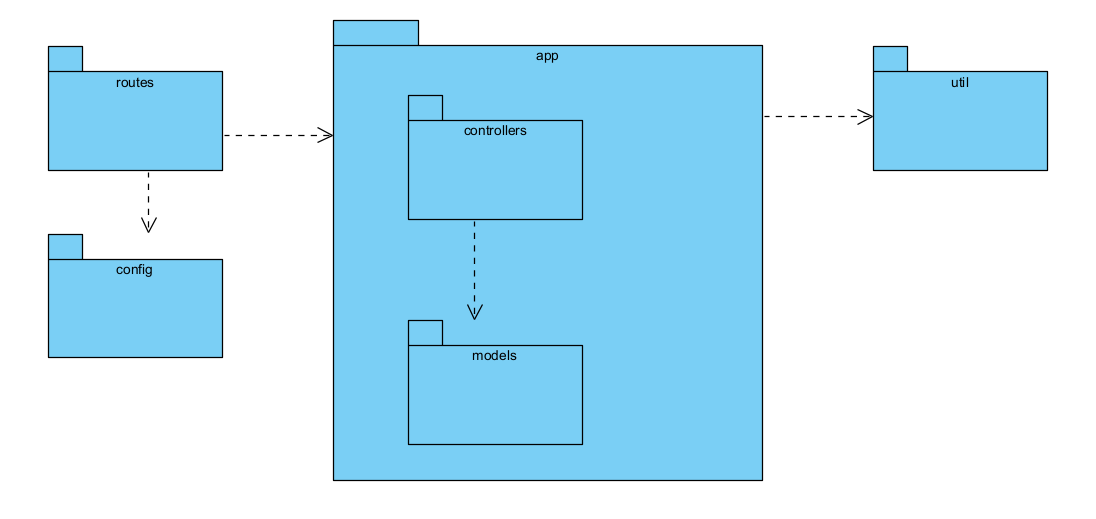
## **System Design**

### **System Architecture**

****

### **Package Diagram**

* + 1. **Package Diagram**

****

Package Diagram

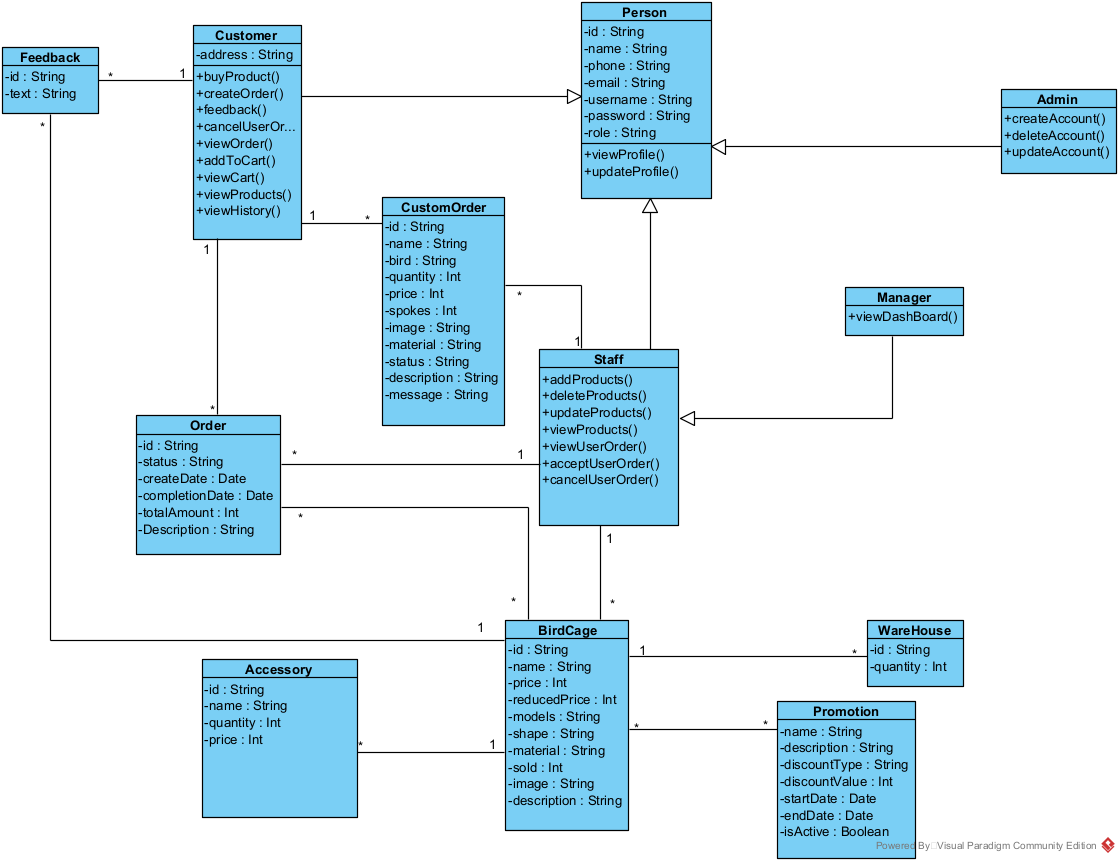
* + 1. **Package Diagram Description**

| **No.** | **Package** | **Description** |
| --- | --- | --- |
| 1 | routes | This package contains the paths and methods of the function |
| 2 | config | This package contains authorization and authentication files and database connections |
| 3 | app | This package contains logical processing files and filed files contain  fields to receive data from the database |
| 4 | controllers | This package contains logical processing files called from the routes package |
| 5 | models | This package contains files that store fields of 1  object taken from the database |
| 6 | util | This Package contains multiObject and Object converters; And  handle functions as required |

Package Diagram Description

## **Database Design**

### **Class Diagram**

****

### **Class Specification**

* + 1. **Person class**

| **No** | **Attribute** | **Data Type** | **Visibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | id | String | Private | Unique define of user |
| 2 | name | String | Private | Name of user |
| 3 | phone | String | Private | Phone number of user |
| 4 | email | String | Private | Email of user |
| 5 | username | String | Private | Username for login |
| 6 | password | String | Private | Password for login |
| 7 | role | String | Private | Define role of user |

Person Class Attribute

| **No** | **Method** | **Return Type** | **Accessibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | viewProfile**()** | JSON | Public | View profile of user |
| 2 | updateProfile() | JSON | Public | Update profile of user |

Person Class Method

* + 1. **Customer class**

| **No** | **Attribute** | **Data Type** | **Visibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | address | String | Private | Address of user and shipping |

Customer Class Attribute

| **No** | **Method** | **Return Type** | **Accessibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | buyProduct() | JSON | Public | Buy product of user |
| 2 | createOrder() | JSON | Public | Create order |
| 3 | feedback() | JSON | Public | Feedback product |
| 4 | cancelUserOrder() | JSON | Public | Cancel order |
| 5 | viewOrder() | JSON | Public | View all order of user |
| 6 | addToCart() | JSON | Public | Add product to cart |
| 7 | viewCart() | JSON | Public | View all product on cart |
| 8 | viewProducts() | JSON | Public | View all product |
| 9 | viewHistory() | JSON | Public | History order of user |

Customer Class Method

* + 1. **Admin class**

| **No** | **Method** | **Return Type** | **Accessibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | createAccount() | JSON | Public | Create account for staff |
| 2 | updateAccount() | JSON | Public | Update account for staff |
| 3 | deleteAccount() | JSON | Public | Delete account for staff |

Admin Class Method

* + 1. **Staff class**

| **No** | **Method** | **Return Type** | **Accessibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | addProduct() | JSON | Public | Create account for staff |
| 2 | updateProduct() | JSON | Public | Update account for staff |
| 3 | deleteAccount() | JSON | Public | Delete account for staff |
| 4 | viewProduct() | JSON | Public | View product in home |
| 5 | viewUserOrder() | JSON | Public | View order of user |
| 6 | acceptUserOrder() | JSON | Public | Accept order |
| 7 | cancelUserOrder() | JSON | Public | Cancel order |

Staff Class Method

* + 1. **Manager class**

| **No** | **Method** | **Return Type** | **Accessibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | viewDashboard() | JSON | Public | Dashboard about economy |

Manager Class Method

* + 1. **BirdCage class**

| **No** | **Attribute** | **Data Type** | **Visibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | id | String | Private | Unique define of product |
| 2 | name | String | Private | Name of product |
| 3 | price | Int | Private | Price of product |
| 4 | reducedPrice | Int | Private | Price after apply discount |
| 5 | models | String | Private | Model of product |
| 6 | shape | String | Private | Shape for product |
| 7 | material | String | Private | Material build product |
| 8 | sold | Int | Private | Products sold |
| 9 | image | String | Private | Image of product |
| 10 | description | String | Private | More about the product |

Person Class Attribute

* + 1. **Promotion class**

| **No** | **Attribute** | **Data Type** | **Visibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | name | String | Private | Name of promotion |
| 2 | description | String | Private | Description of promotion |
| 3 | discountType | String | Private | Type of discount |
| 4 | discountValue | Int | Private | Value of discount |
| 5 | startDate | Date | Private | Date start discount |
| 6 | endDate | Date | Private | Date end discount |
| 7 | isActive | Boolean | Private | Status of discount |

Promotion Class Attribute

* + 1. **WareHouse class**

| **No** | **Attribute** | **Data Type** | **Visibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | id | String | Private | Unique define of warehouse |
| 2 | quantity | Int | Private | Residual quantity of product |

Warehouse Class Attribute

* + 1. **Accessory class**

| **No** | **Attribute** | **Data Type** | **Visibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | id | String | Private | Unique define of accessory |
| 2 | name | String | Private | Name of accessory |
| 3 | quantity | Int | Private | Residual quantity of accessory |
| 4 | price | Int | Private | Price of accessory |

Accessory Class Attribute

* + 1. **Order class**

| **No** | **Attribute** | **Data Type** | **Visibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | id | String | Private | Unique define of order |
| 2 | status | String | Private | Status of order |
| 3 | createDate | Date | Private | Date create order by user |
| 4 | comDate | Date | Private | Date completion the order |
| 5 | totalAmount | Int | Private | Cost of order |
| 6 | description | String | Private | Description of order |

Order Class Attribute

* + 1. **CustomOrder class**

| **No** | **Attribute** | **Data Type** | **Visibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | id | String | Private | Unique define of custom order |
| 2 | name | String | Private | Name of custom order |
| 3 | bird | String | Private | Bird for bird cage |
| 4 | quantity | Int | Private | Number of product to custom |
| 5 | price | Int | Private | Cost of order |
| 6 | spokes | Int | Private | Number of spokes of cage |
| 7 | image | String | Private | Illustrations image |
| 8 | material | String | Private | Material of cage |
| 9 | status | String | Private | Status of order |
| 10 | description | String | Private | More about the product |
| 11 | message | String | Private | Message from customer |

Custom Order Class Attribute

* + 1. **Feedback class**

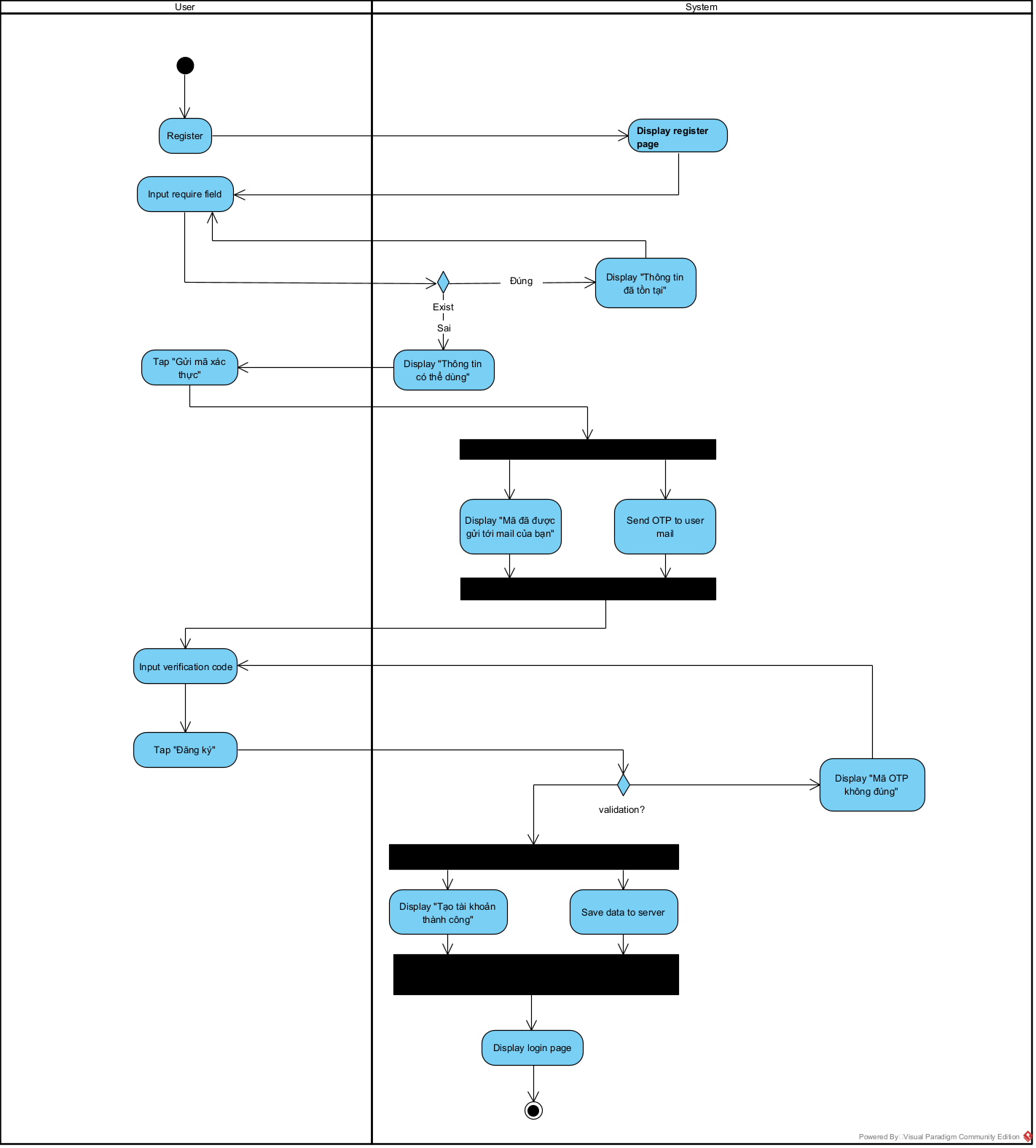
| **No** | **Attribute** | **Data Type** | **Visibility** | **Description** |
| --- | --- | --- | --- | --- |
| 1 | id | String | Private | Unique define of feedback |
| 2 | text | String | Private | Customer feedback |

Feedback Class Attribute

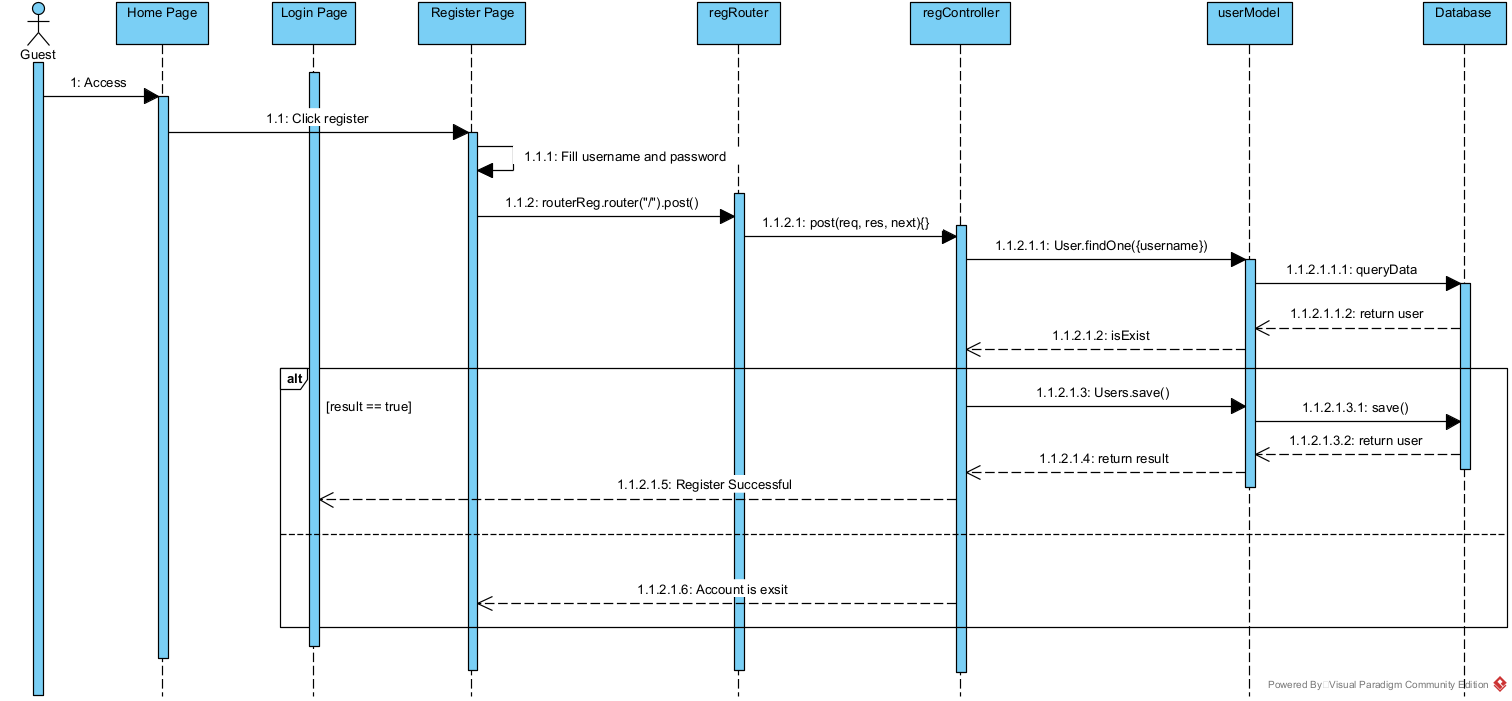
## **System Detailed Design**

### **Guest Register Feature**

* + 1. **Guest Register Activity Diagram**

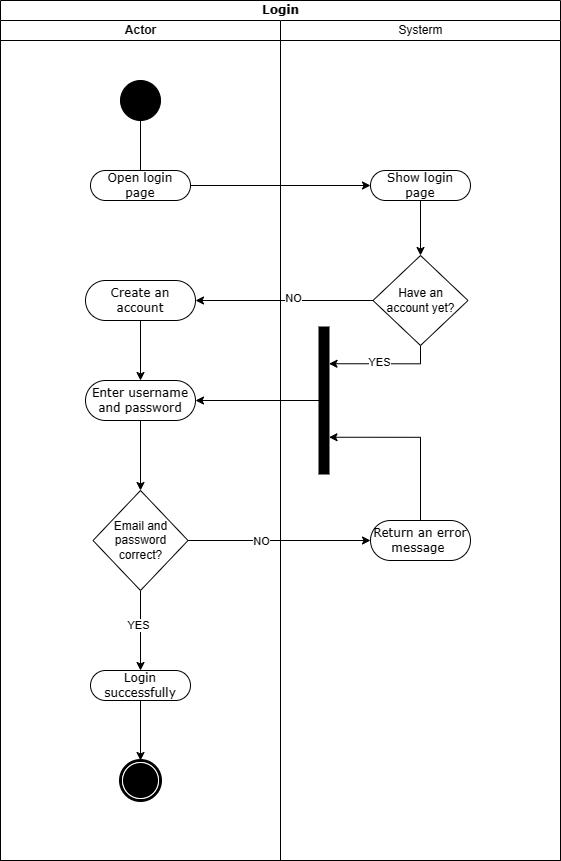
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* + 1. **Guest Register Sequence Diagram**

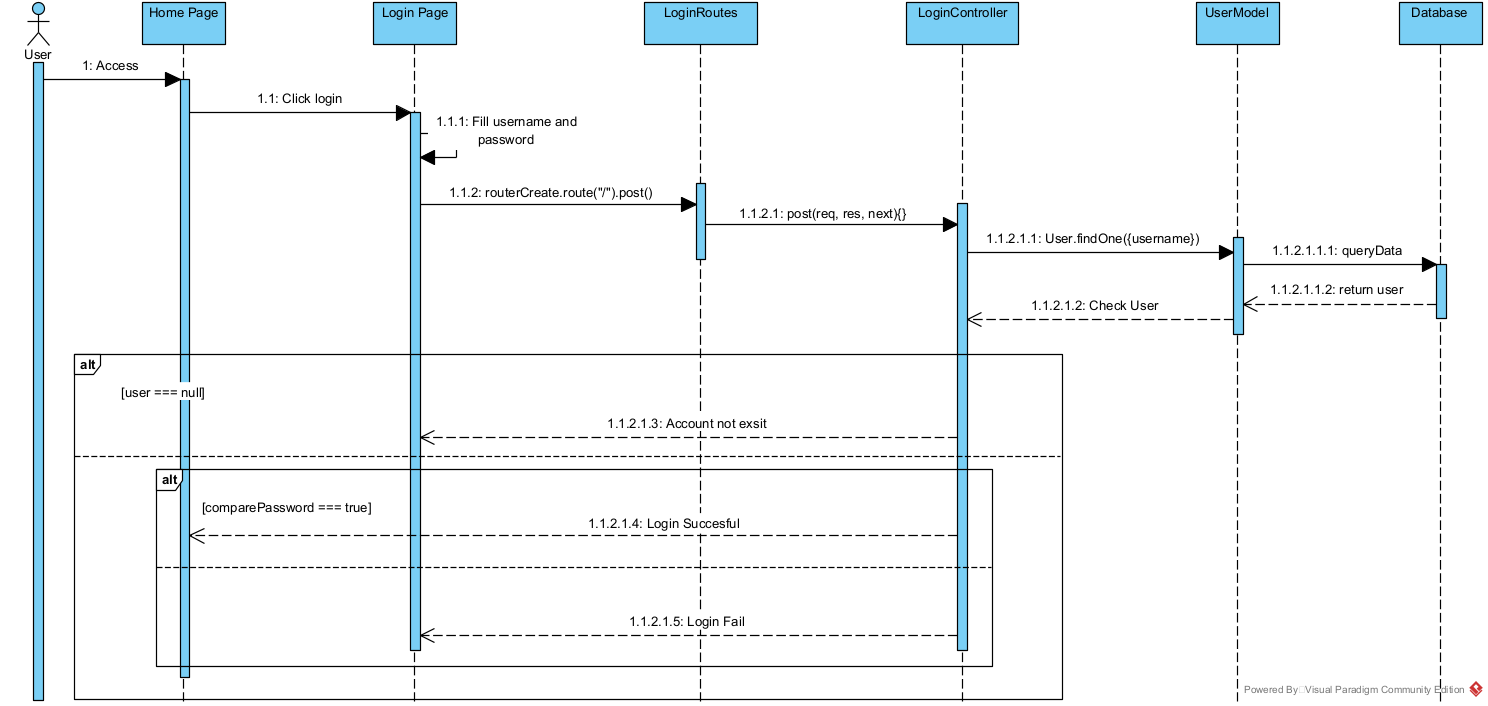
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### **Login Feature**

* + 1. **Login Activity Diagram**

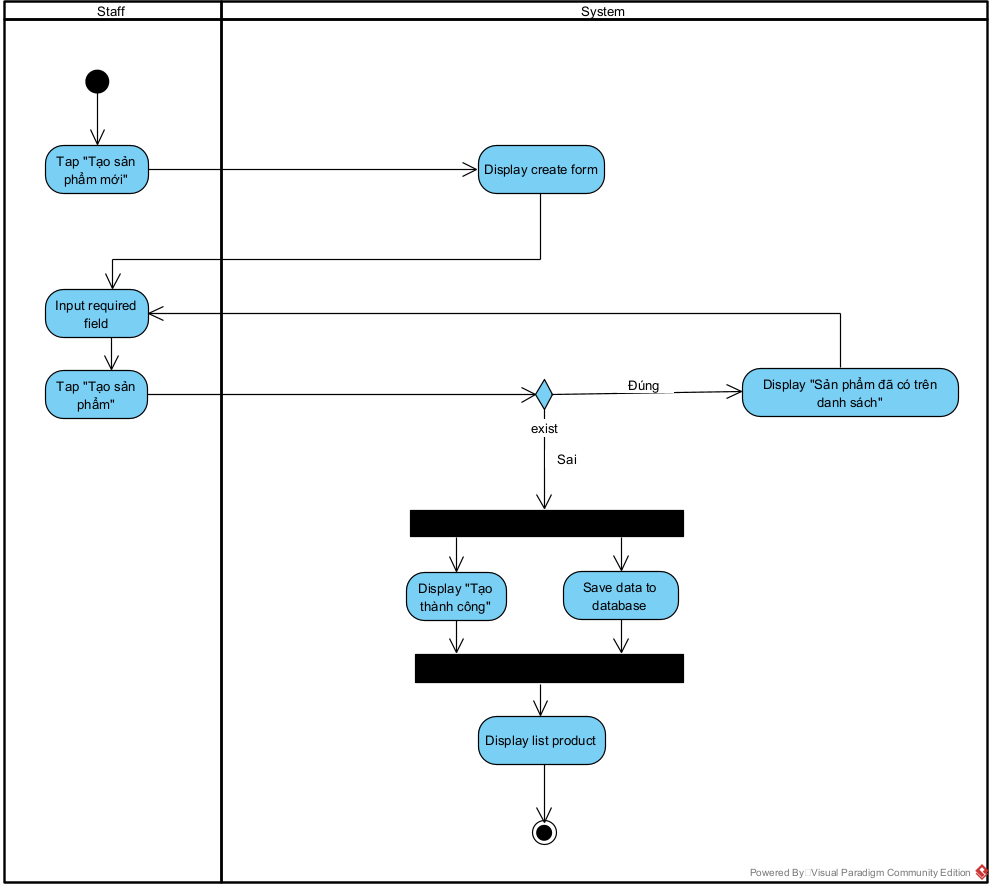
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* + 1. **Login Sequence Diagram**

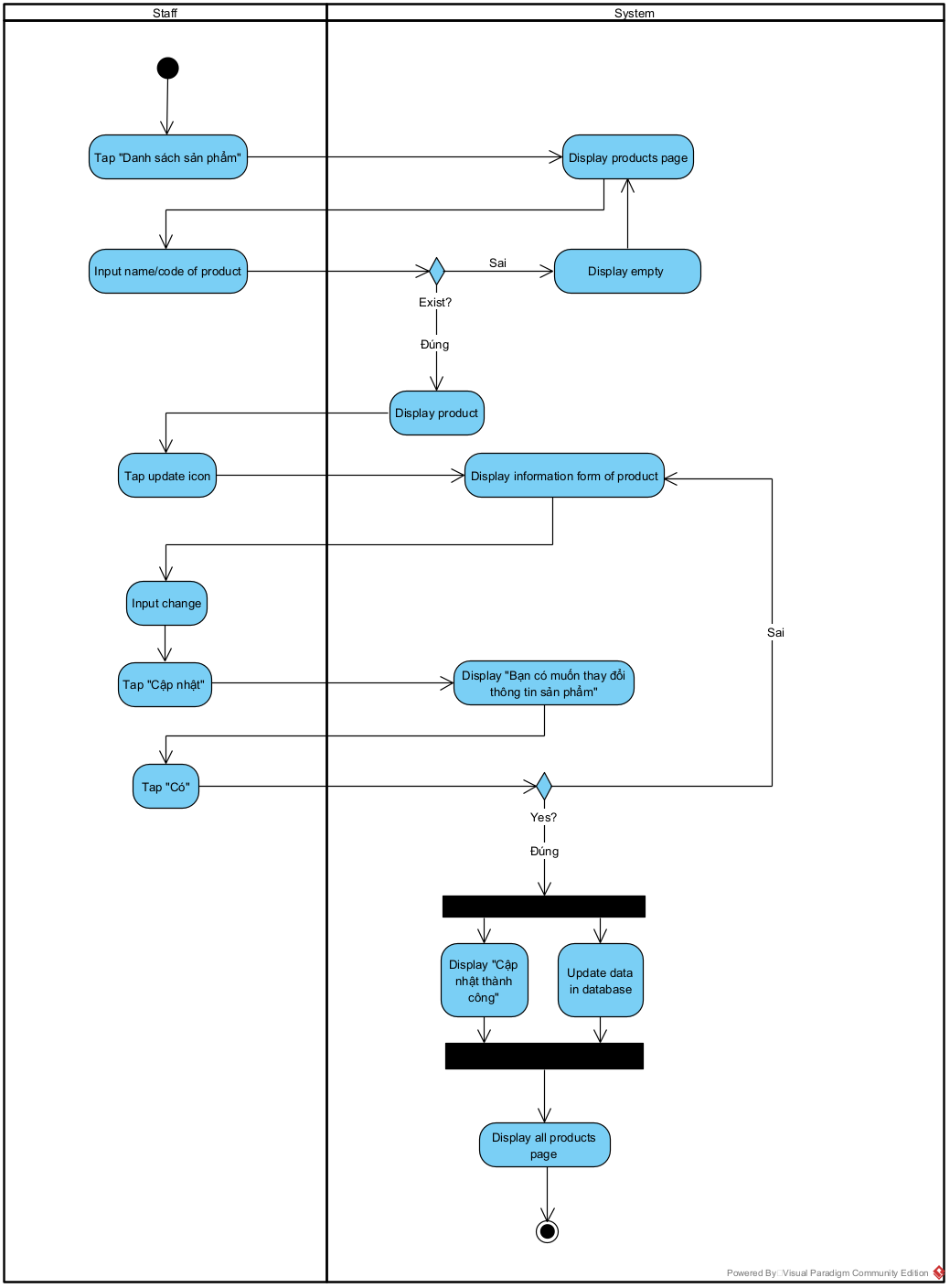
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### **Staff Manage Product Feature**

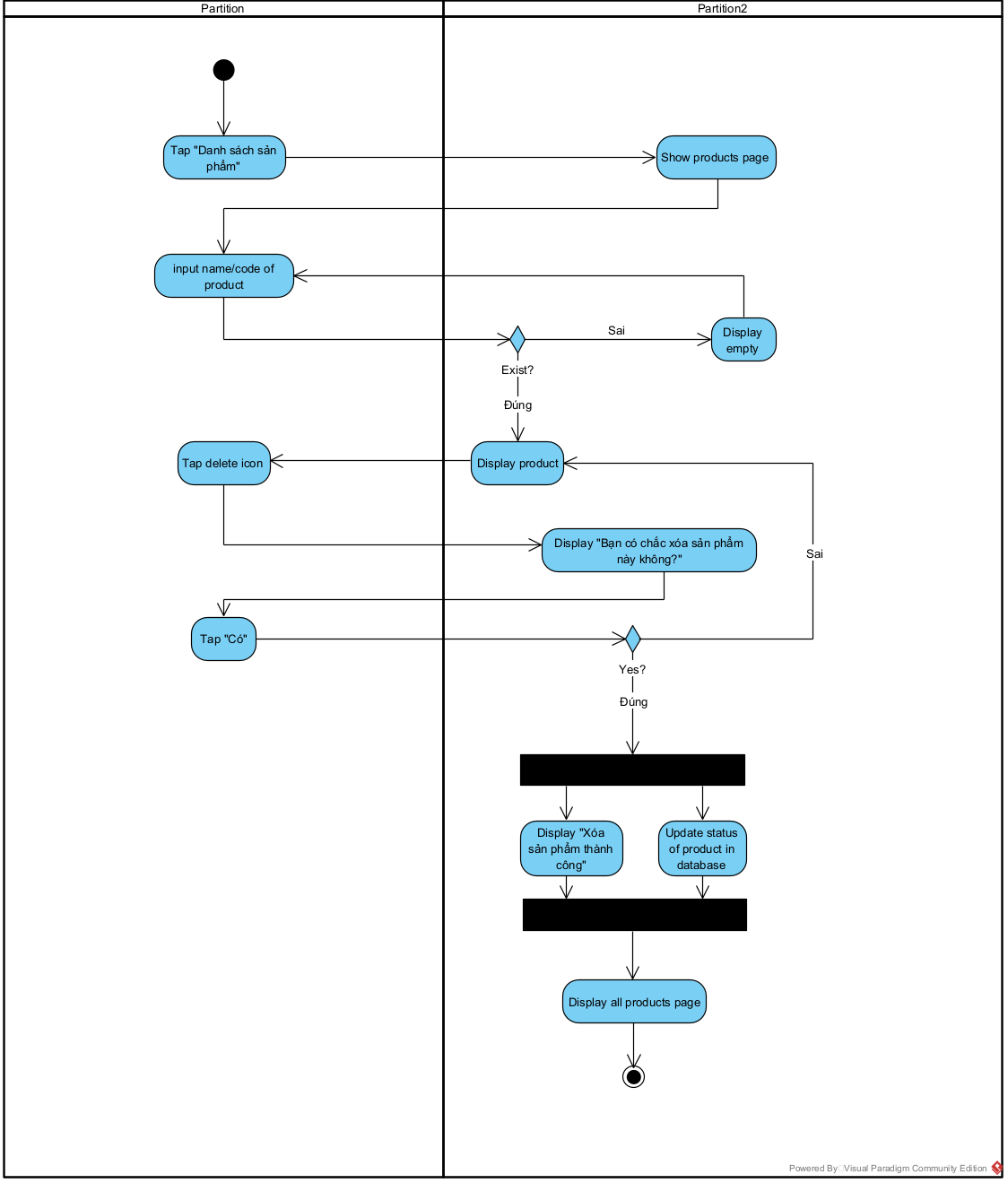
* + 1. **Staff Manage Product Activity Diagram**
       1. **Staff Create Product Activity Diagram**

****

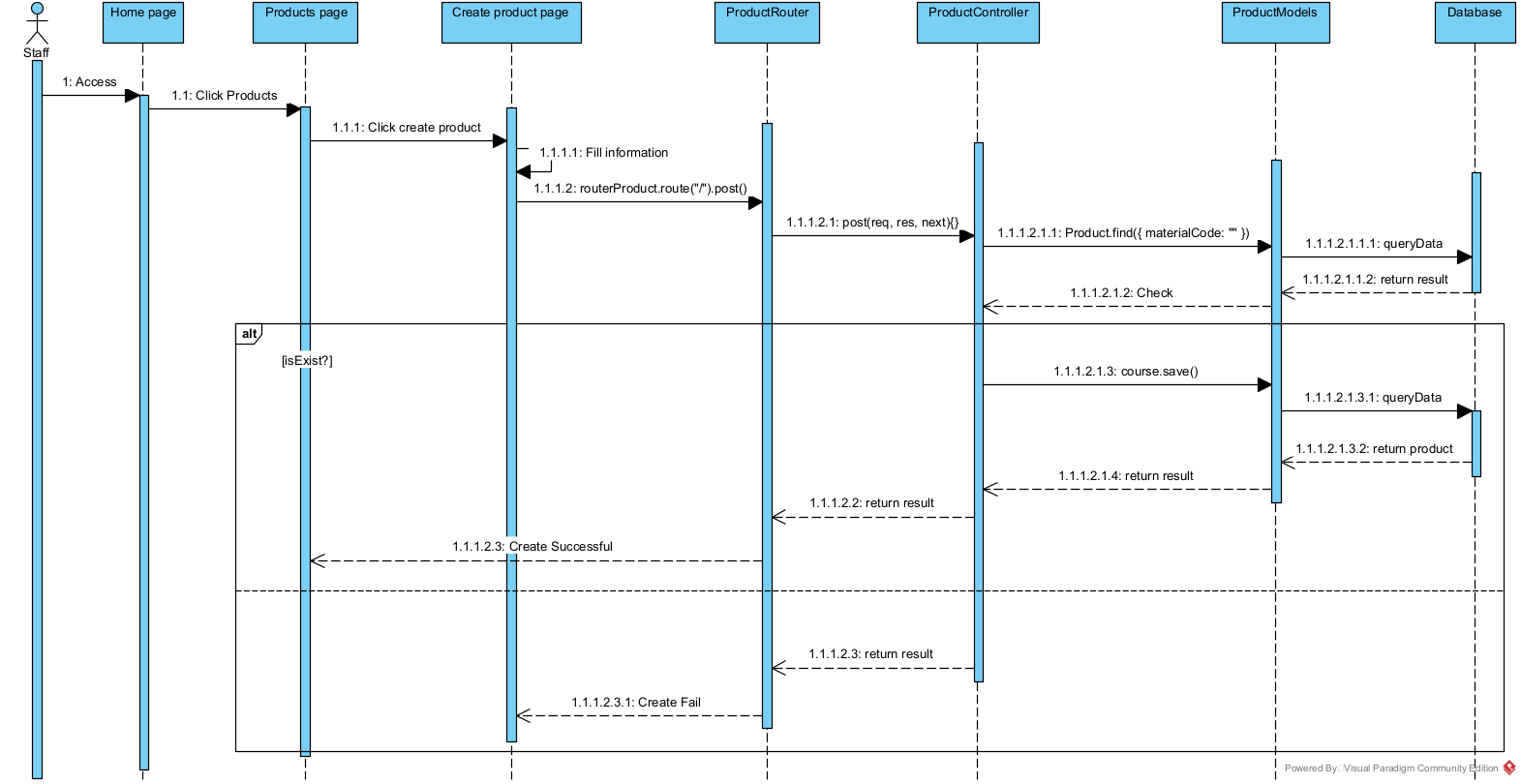
* + - 1. **Staff Update Product Activity Diagram**

****

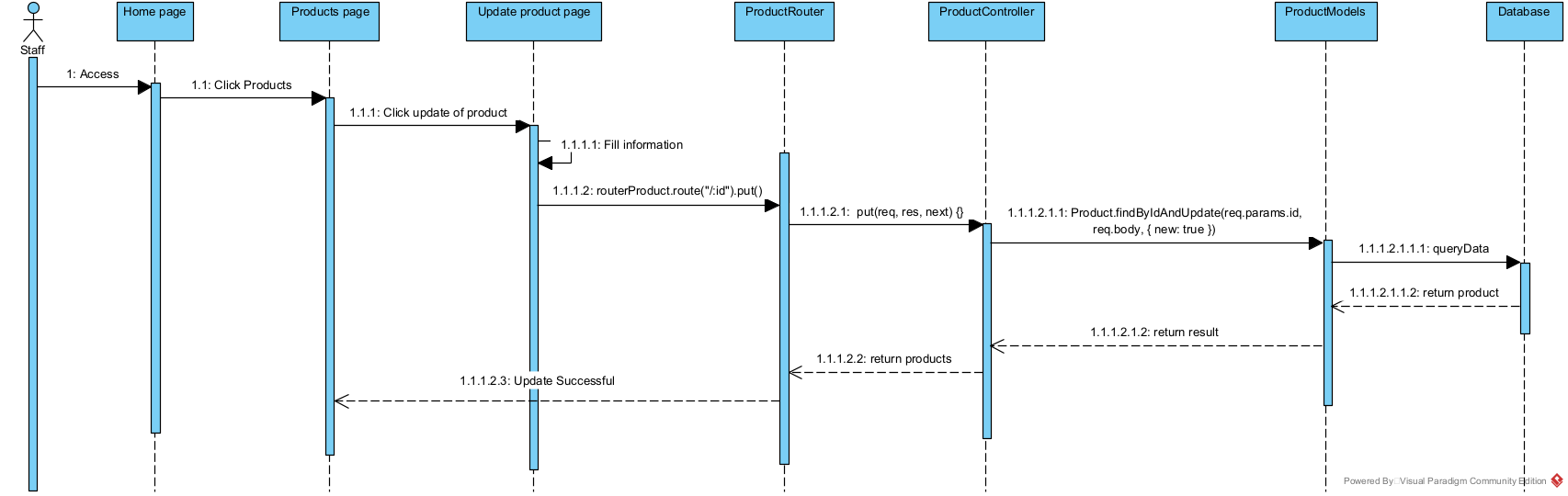
* + - 1. **Staff Delete Product Activity Diagram**

****

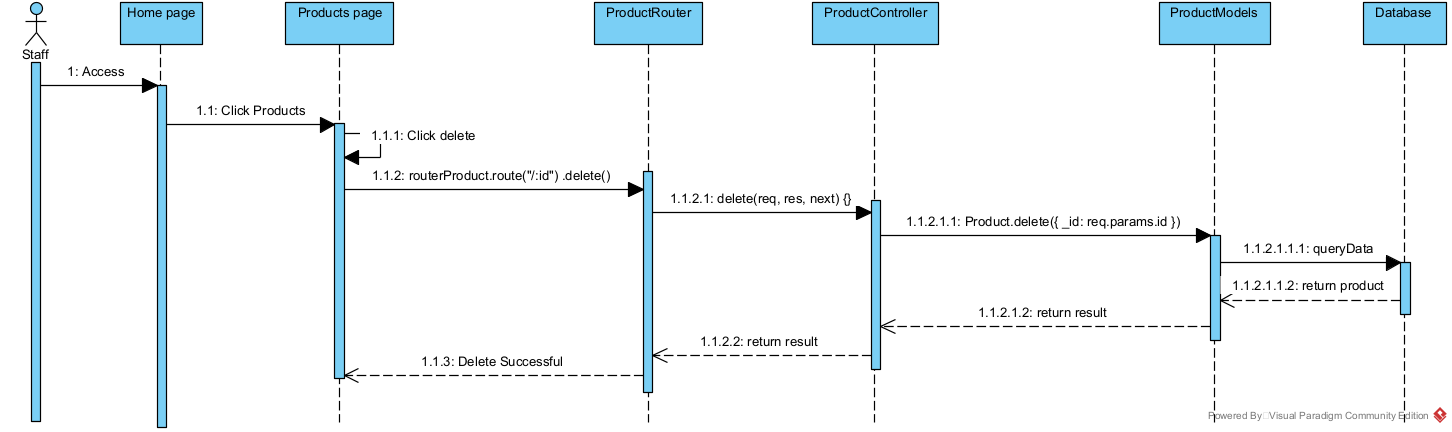
* + 1. **Staff Manage Product Sequence Diagram**
       1. **Staff Create Product Sequence Diagram**

****

* + - 1. **Staff Update Product Sequence Diagram**

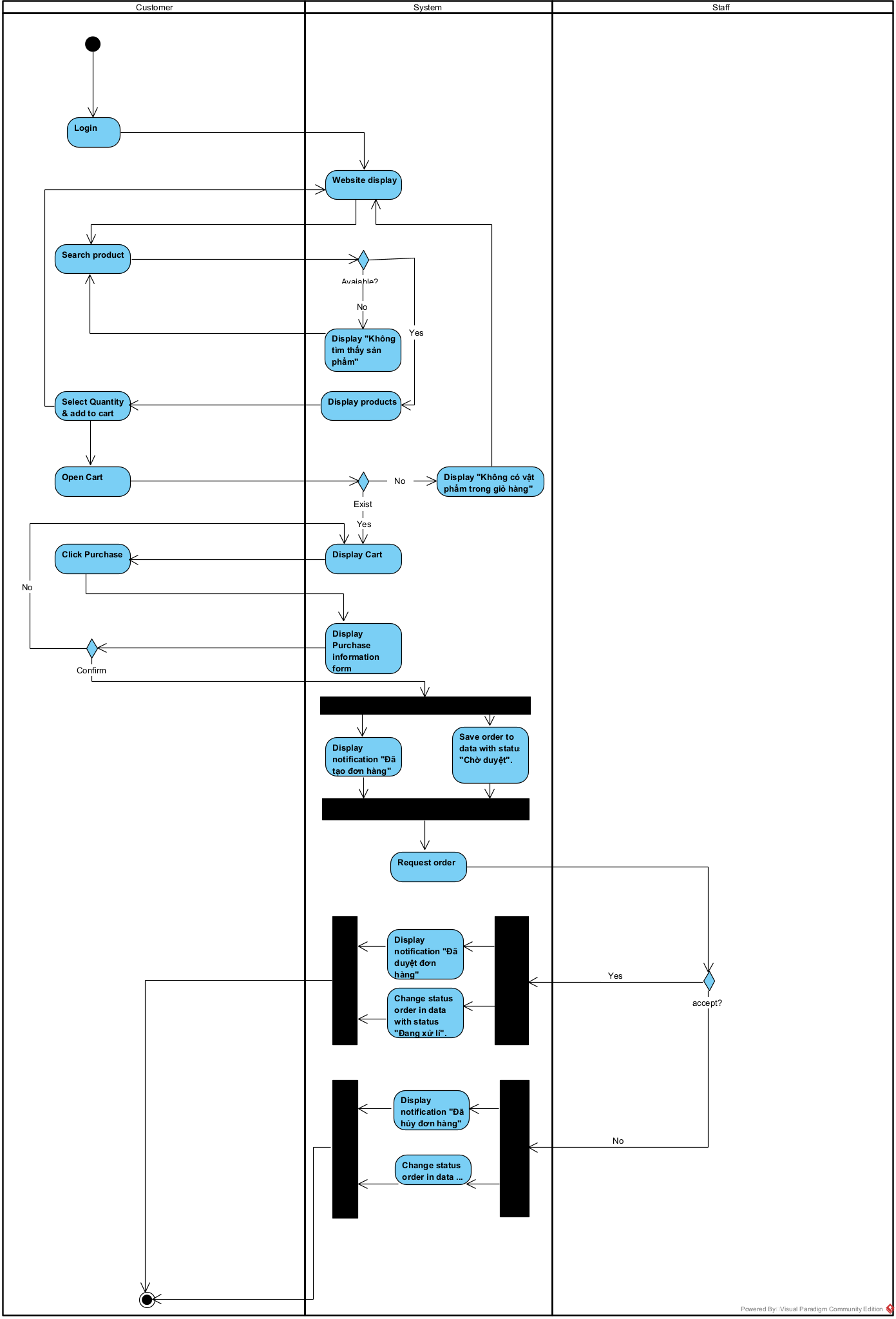
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* + - 1. **Staff Delete Product Sequence Diagram**

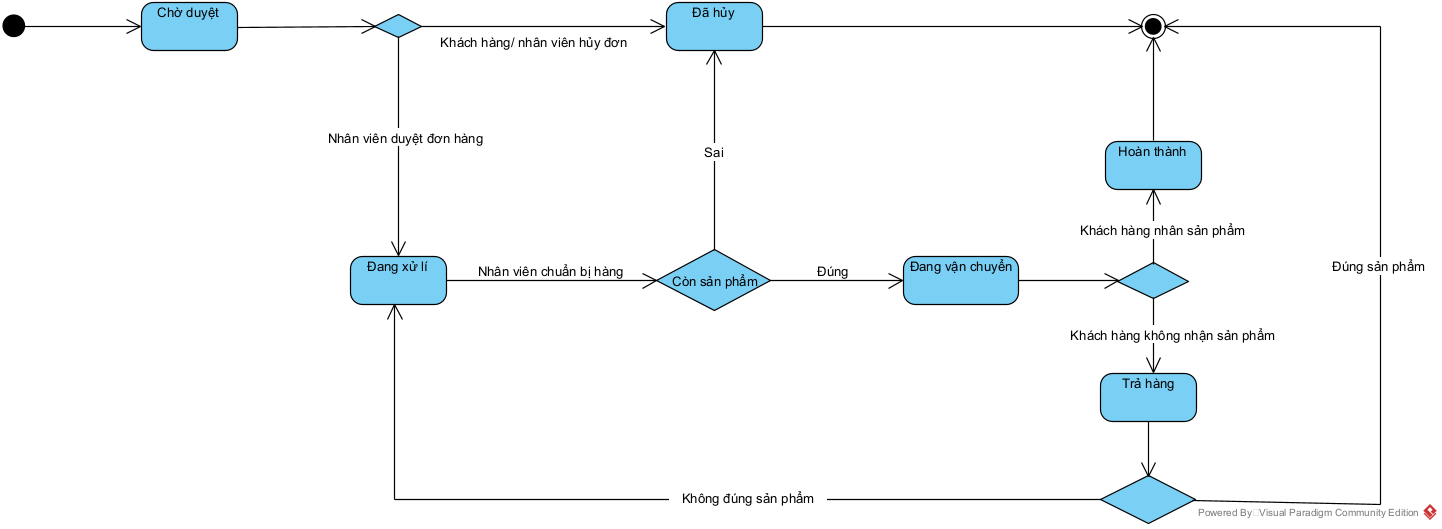
****

### **Staff Manage Order Feature**

* + 1. **Staff Manage Order Activity Diagram**
       1. **Staff Change Status of Order Activity Diagram**

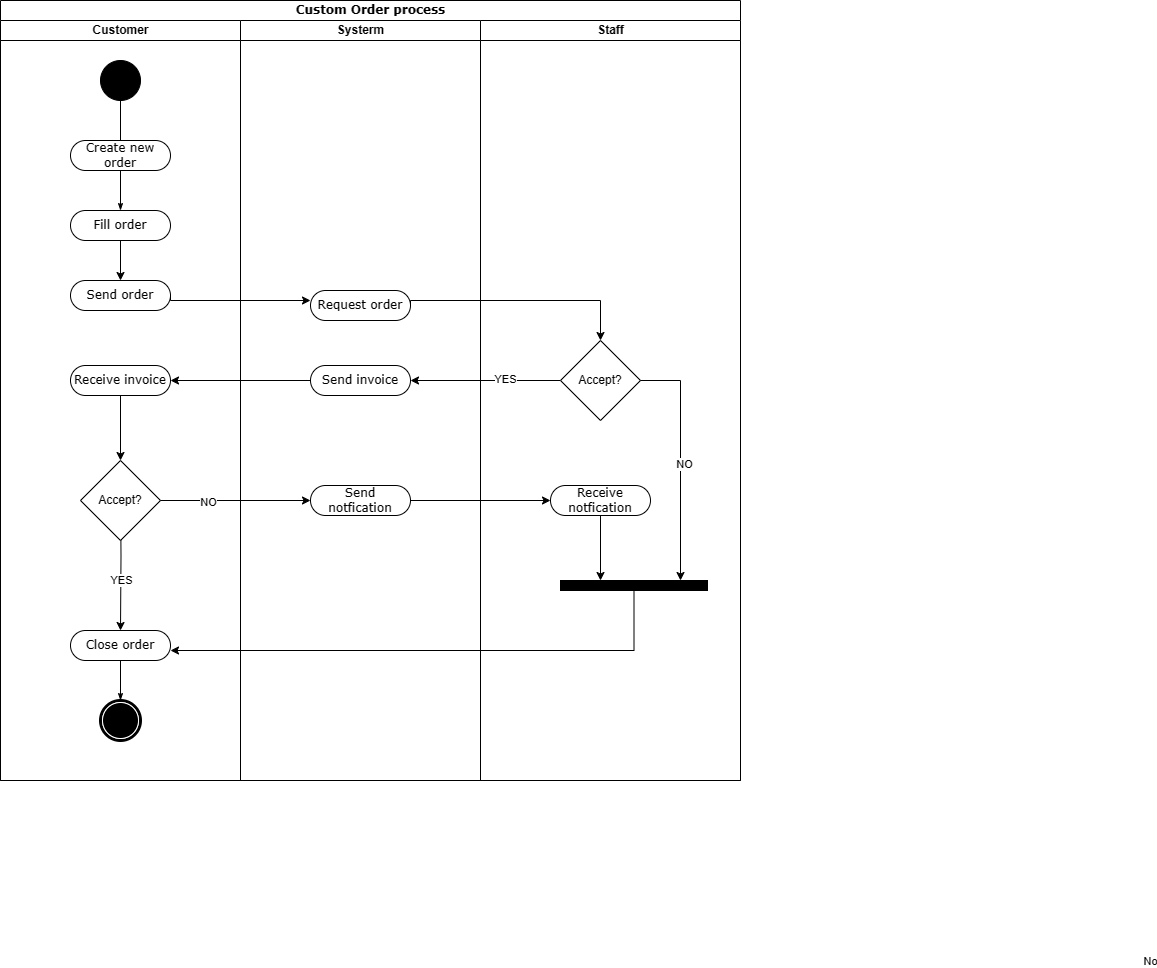
****

* + 1. **Staff Manage Order State Machine Diagram**
       1. **Staff Change Status of Order State Machine Diagram**

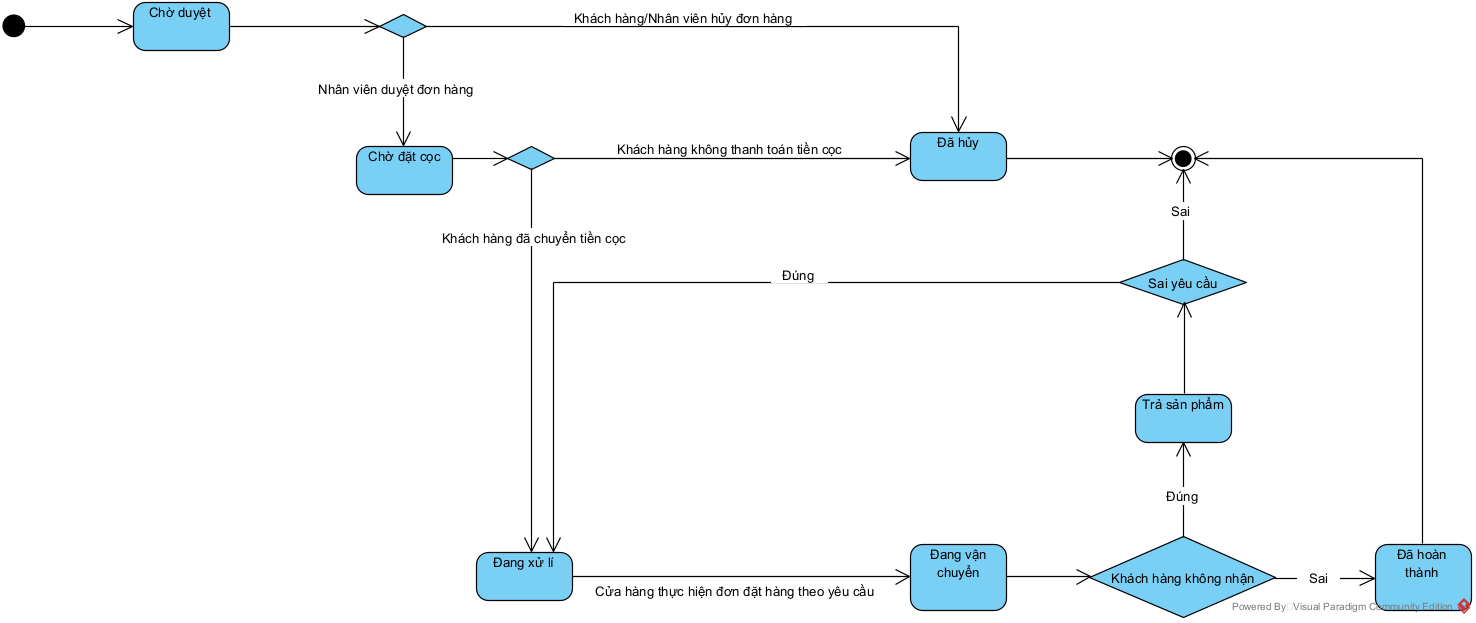
****

### **Staff Manage Custom Order Feature**

* + 1. **Staff Manage Custom Order Activity Diagram**
       1. **Staff Change Status of Custom Order Activity Diagram**

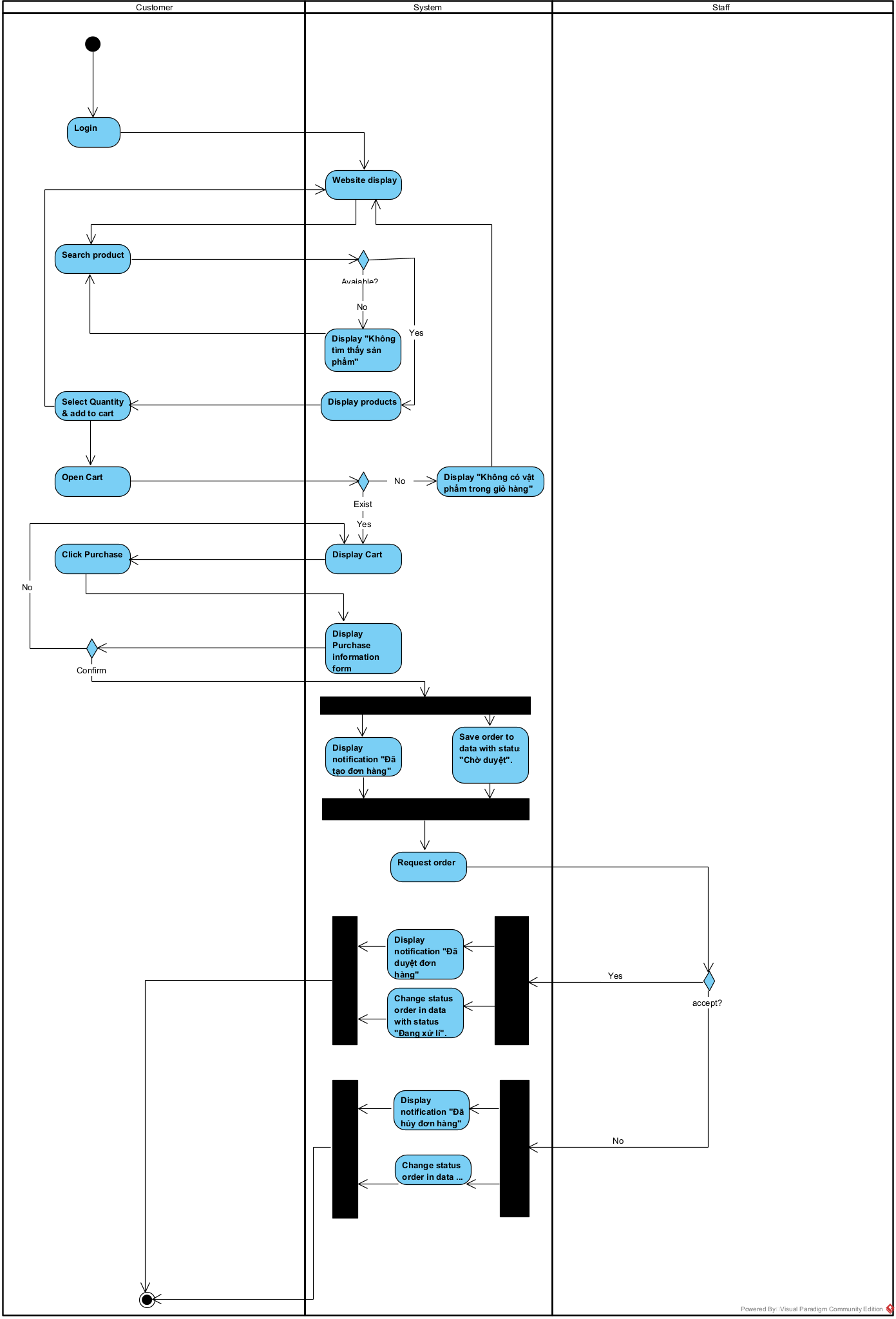
****

* + 1. **Staff Manage Custom Order State Machine Diagram**
       1. **Staff Change Status of Custom Order State Machine Diagram**

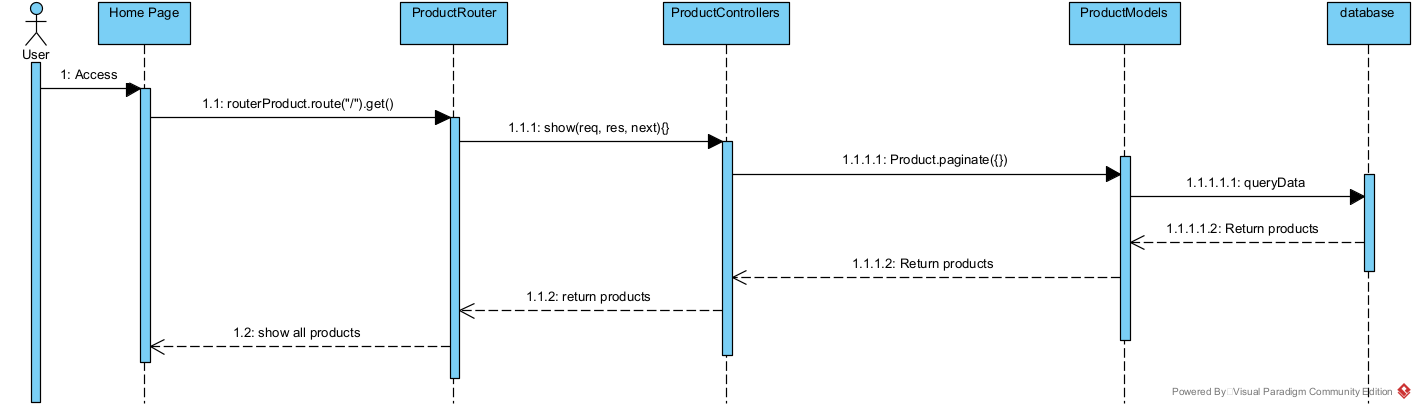
****

### **User Create Order Feature**

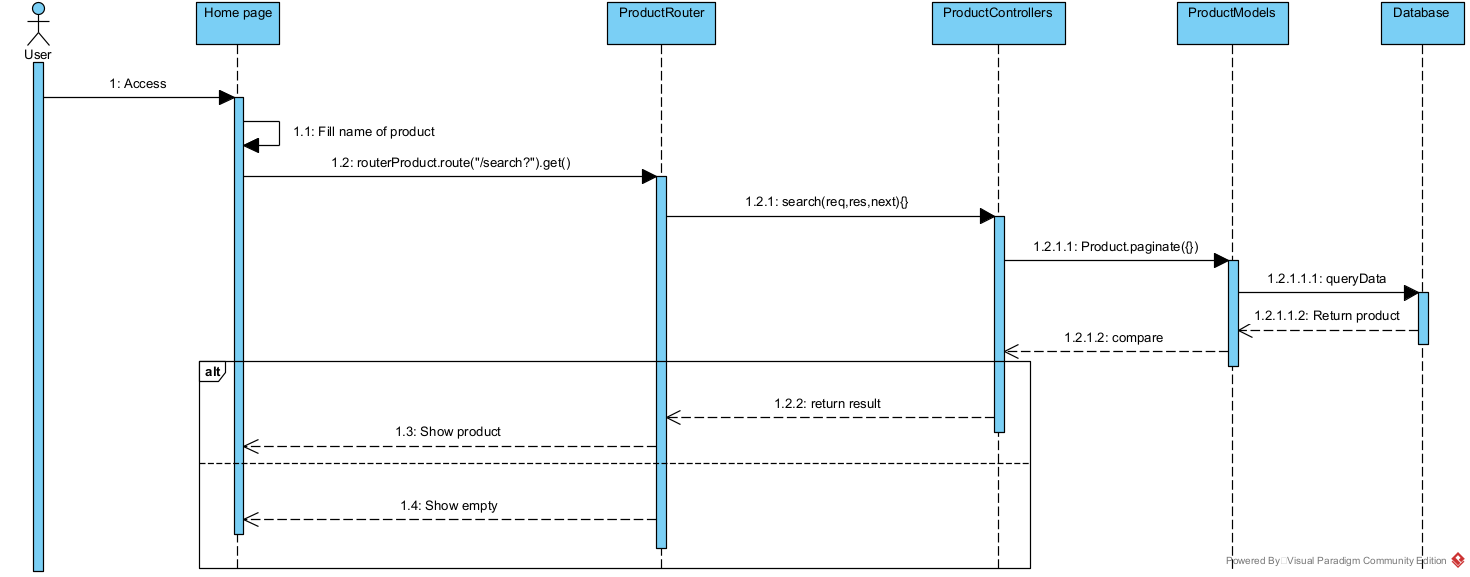
* + 1. **User Create Order Activity Diagram**

****

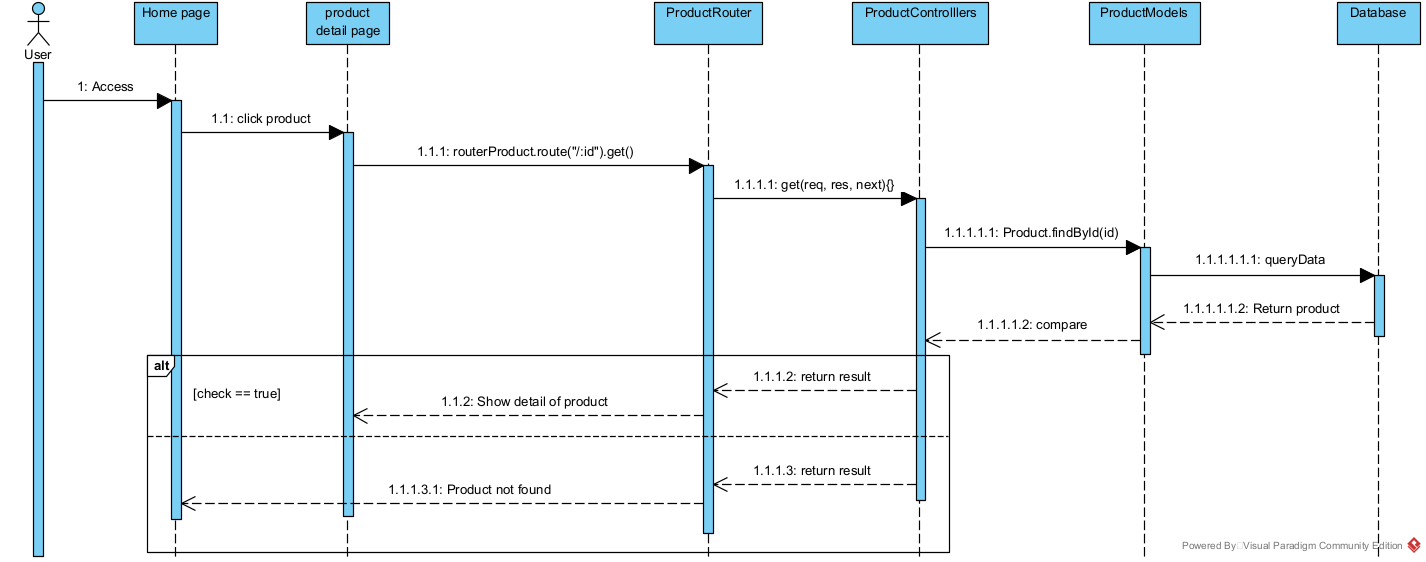
* + 1. **User Create Order Sequence Diagram**
       1. **User View All Product Sequence Diagram**

****

* + - 1. **User Search Product Sequence Diagram**

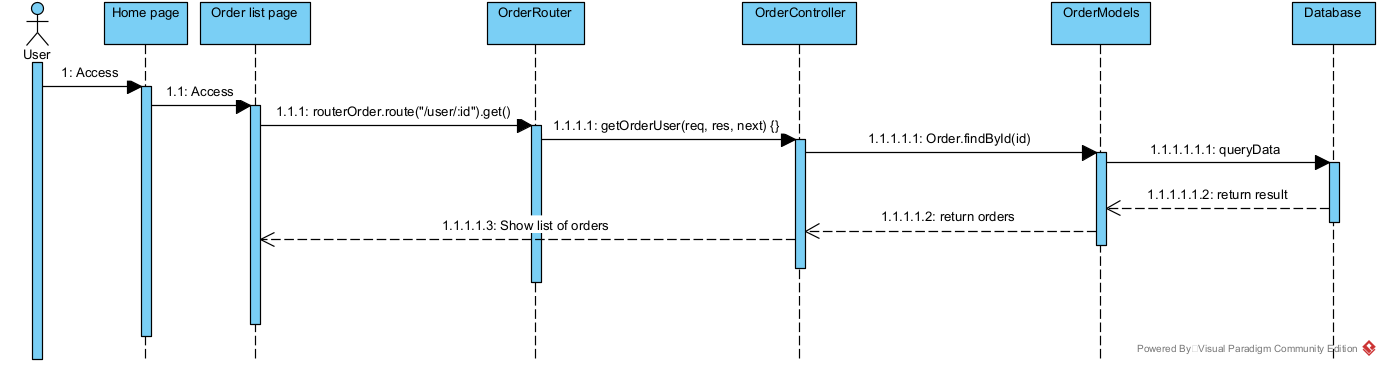
****

* + - 1. **User View Detail Product Sequence Diagram**

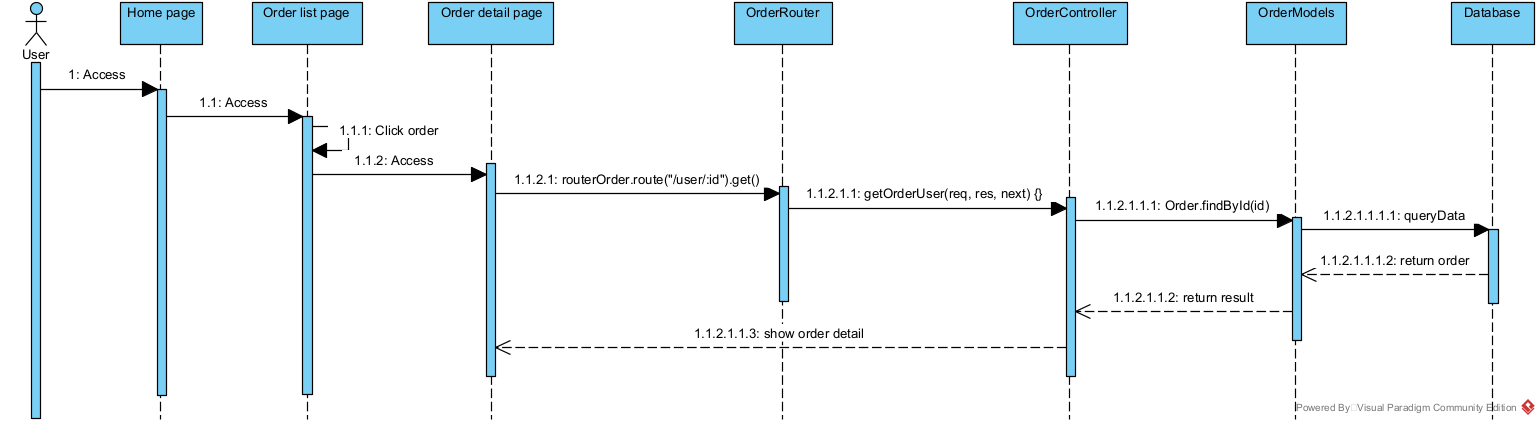
****

### **User Manage Order Feature**

* + 1. **User Manage Order Sequence Diagram**
       1. **User View All Order Sequence Diagram**

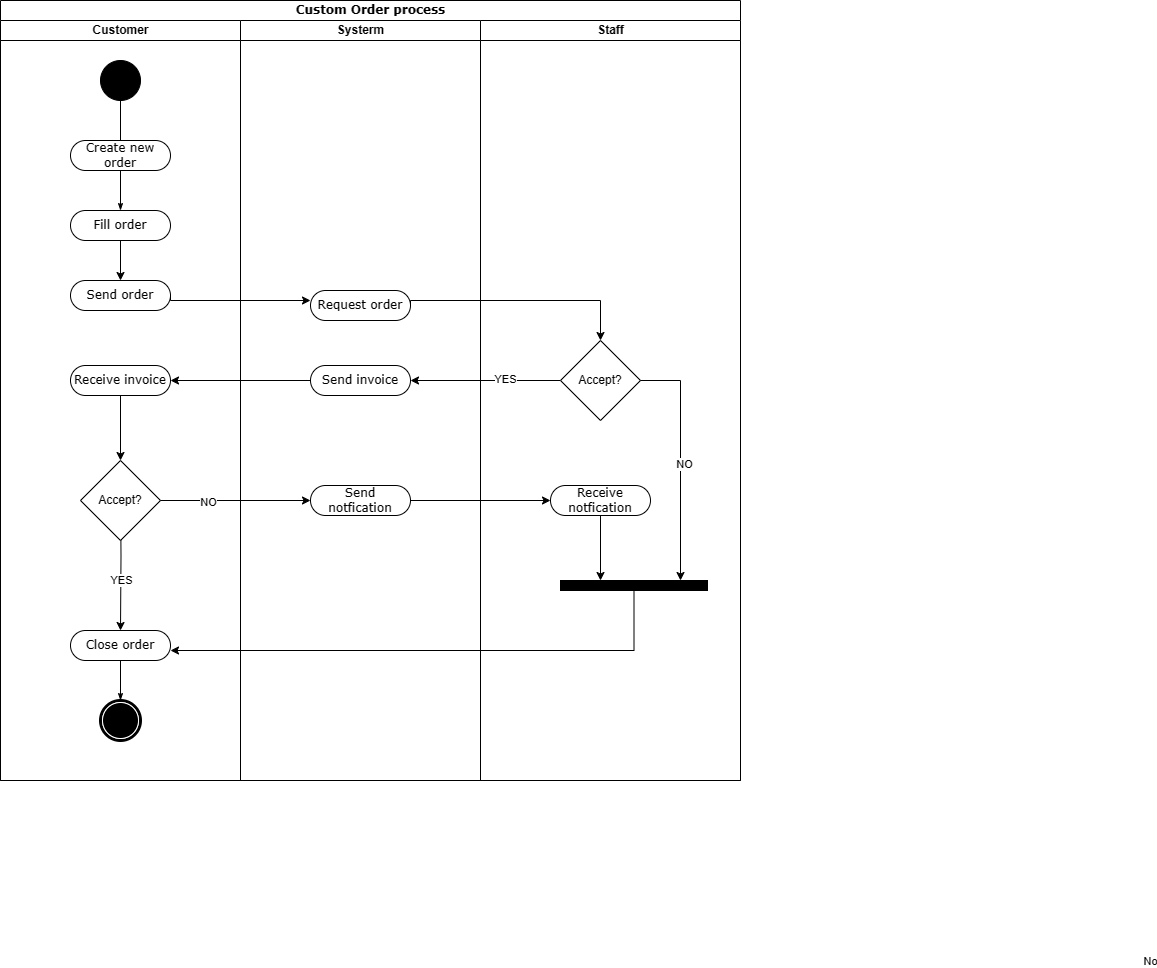
****

* + - 1. **User View Detail Order Sequence Diagram**

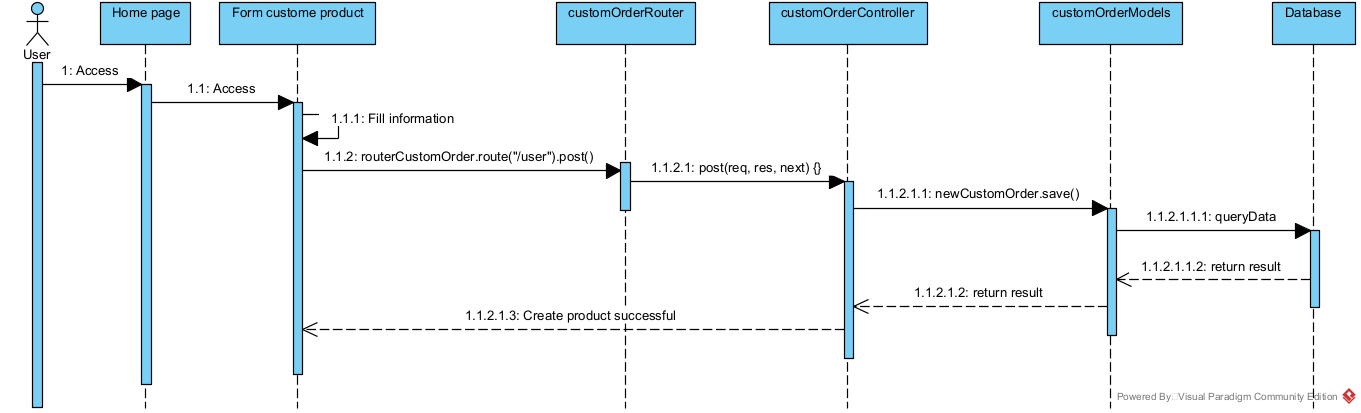
****

### **User Create Custom Order Feature**

* + 1. **User Create Custom order Activity Diagram**

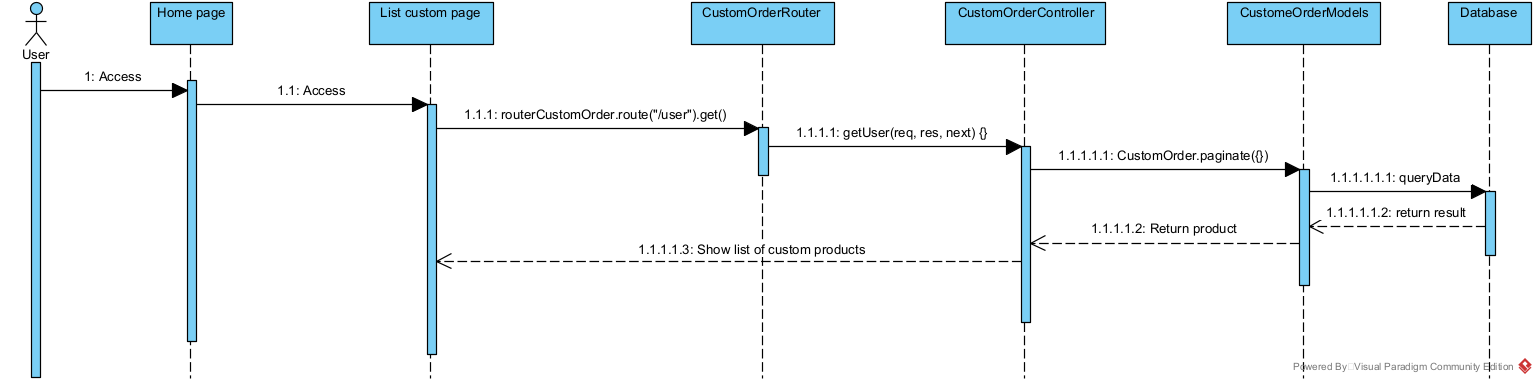
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* + 1. **User Create Custom Order Sequence Diagram**

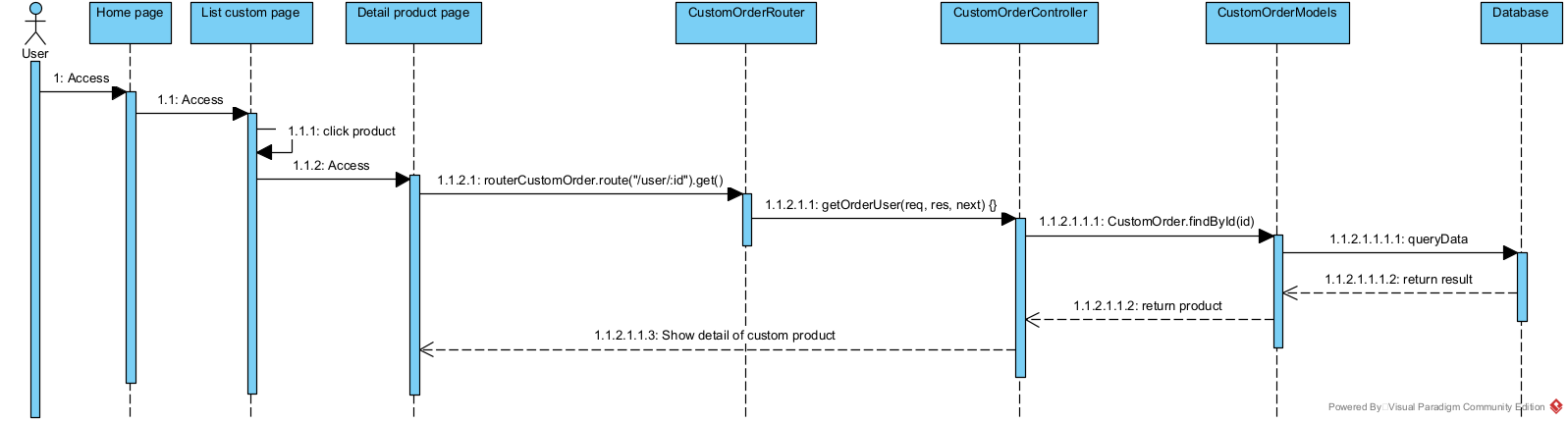
****

### **User Manage Custom Order Feature**

* + 1. **User Manage Custom Order Sequence Diagram**
       1. **User View All Custom Order Sequence Diagram**

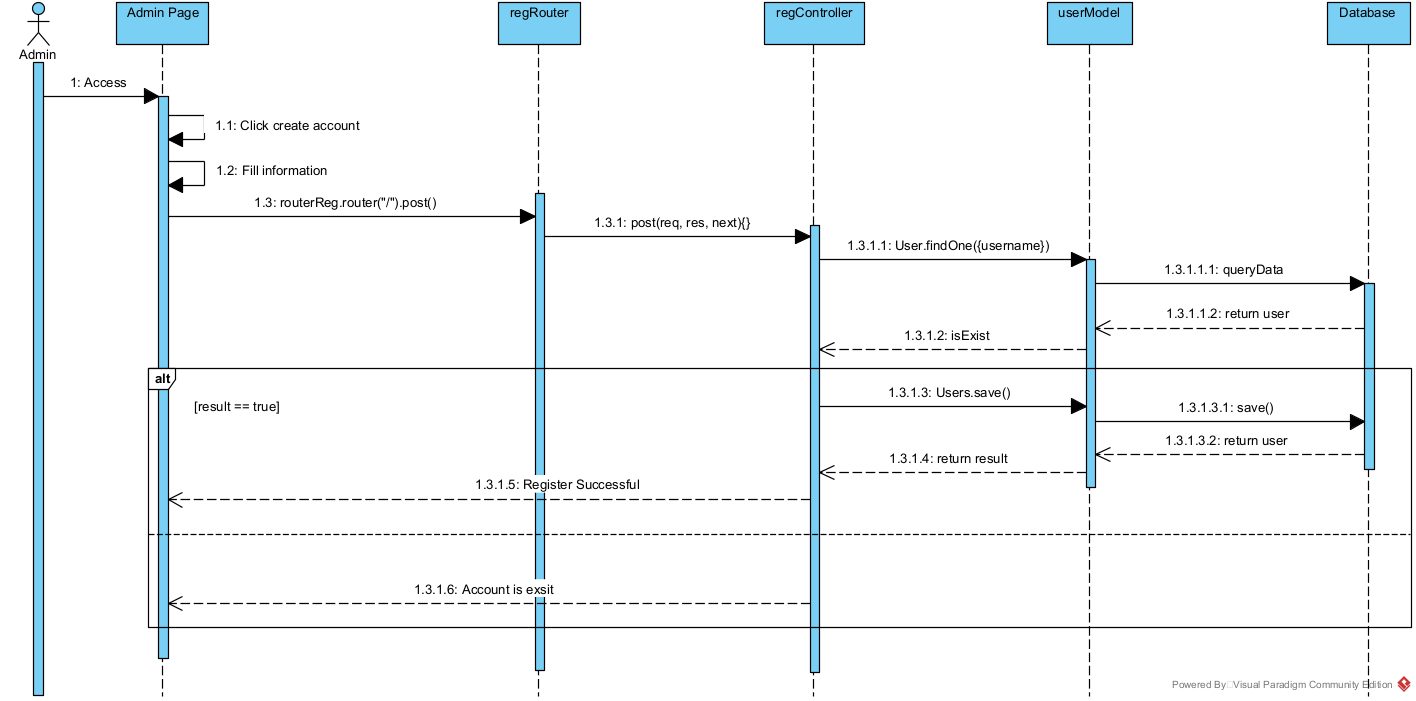
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* + - 1. **User View Detail Custom Order Sequence Diagram**

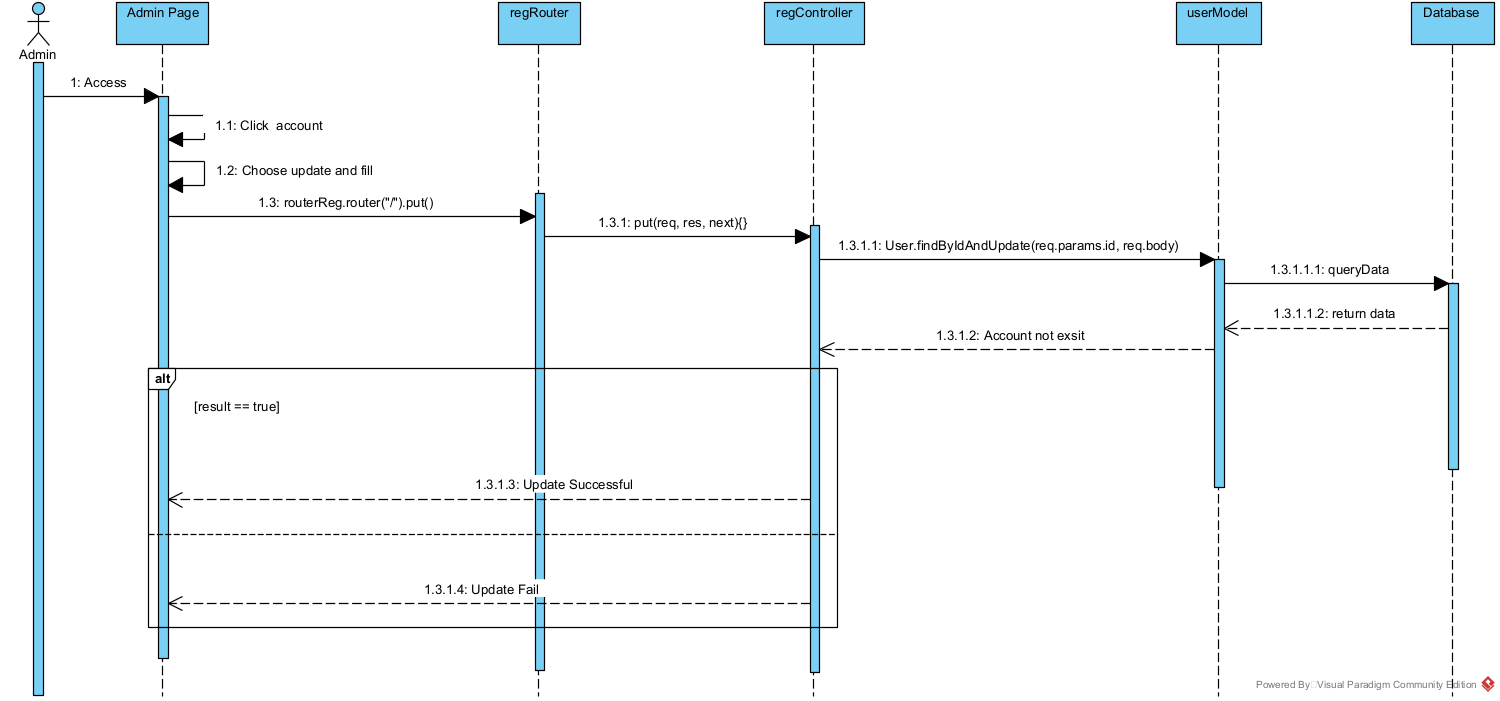
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### **Admin Manage Account Feature**

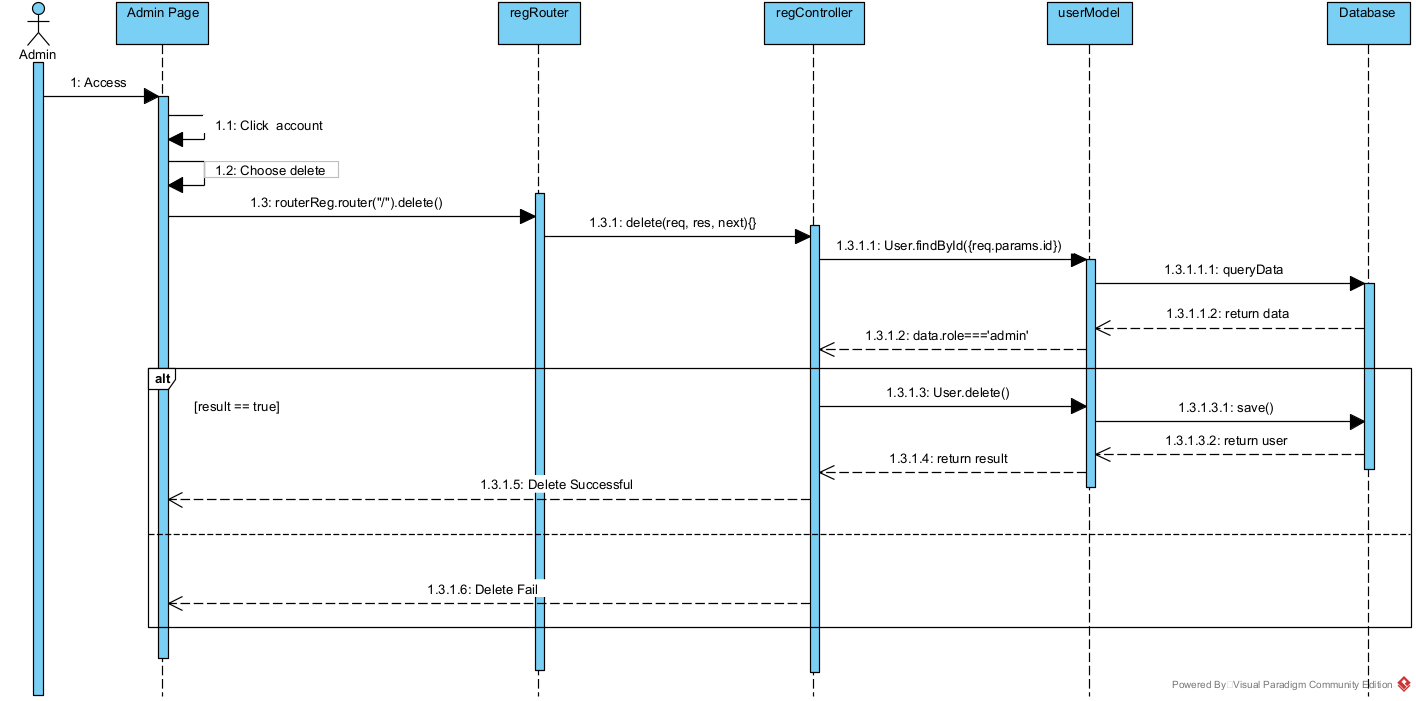
* + 1. **Admin Manage Account Sequence Diagram**
       1. **Admin Create Account Sequence Diagram**

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* + - 1. **Admin Update Account Sequence Diagram**

****

* + - 1. **Admin Delete Account Sequence Diagram**

****