** MINISTRY OF EDUCATION AND TRAINING**

**FPT UNIVERSITY**

Capstone Project Document

Student Finance Management

|  |  |
| --- | --- |
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-Ho Chi Minh City, 09/2015-*This page is intentionally left blank*

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# Definitions, Acronyms, and Abbreviations

|  |  |
| --- | --- |
|  |  |

# Software Requirement Specification

## User Requirement Specification

### Student Requirement

Sinh viên là người sử dụng dịch vụ của hệ thống. Trong hệ thống hiện tại có 3 loại sinh viên là :

* Sinh viên thông thường
* Sinh viên vay vốn tín dụng
* Sinh viên thuộc dạng “Cùng bạn đầu tư”

Tất các các sinh viên đều có thể sử dụng một số chức năng dưới đây :

* Xem quá trình học tập
  + Xem các học kỳ đã học
  + Xem danh sách các môn học chưa hoàn thành (bao gồm các môn đang nợ hoặc các môn chưa đủ điều kiện để học nếu có)
* Xem tình trạng tài chính
* Xem tình trang nộp học phí của các kỳ đã học
* Xem tính trạng nộp học phí của các môn nợ (nếu có)
* Xem và cập nhật thông tin cá nhân

### Staff Requirement

Staff is the person who manages markets and products. Staff can use these functions:

* Manage market.
* Manage product.

### Manager Requirement

Member is guest who uses his account to login to the system. Member can use additional functions, such as:

* Update product price.
* Save product history.

### Admin Requirement

Admin is the person who manages the system. Admin can use these functions:

* Configure system.
* Make statistics.
* Manage user.

## System Requirement Specification

### External Interface Requirement

#### User Interface

* + The interface of website is clear, do not annoy customer.
  + The interface of mobile app must be clear, compatible with touch screen. The size of controls must be big enough to touch on smartphone.
  + The error, warning messages must be make clear, easy to understand. Error warning does not disturb customer.

#### Hardware Interface

* + The system will use the standard hardware and data communications resources of a standard computer.

#### Software Interface

* + Firefox Browser, Chromes with Resolution (1280\*800) or bigger and support JavaScript and HTML5
  + Smartphone with Android 4.1 or above. Screen size (70 x 120 mm) or bigger.

#### Communication Protocol

* Website using HTTP protocol for communication between the web browser and the web server.
* Mobile app using HTTP protocol for communicating between app and web service.

### System Overview Use Case



Figure 1: System Overview Use Case

### List of Use Case

#### <Admin> Overview Use Cases

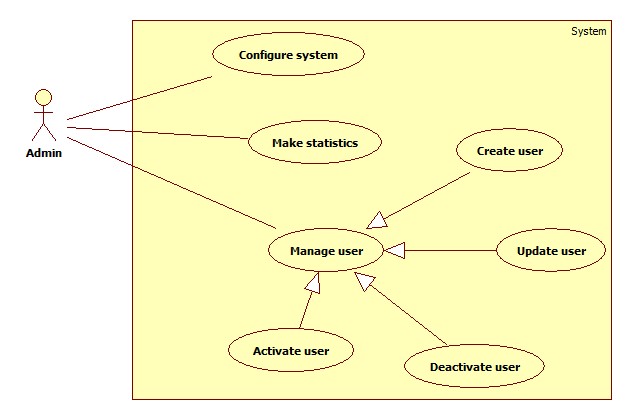


Figure 2: <Admin> Overview use case

##### <Admin> Configure System

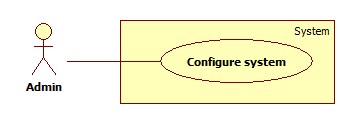


Figure 3: <Admin> Configure System

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB001** | | | |
| **Use Case No.** | SB001 | **Use Case Version** | 2.0 |
| **Use Case Name** | Configure system | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 15/02/2014 | **Priority** | High |
| **Actor:**   * Admin   **Summary:**   * This use case allows admin to configure the system.   **Goal:**   * System parameters will be configured by admin.   **Triggers:**   * Admin wants to change system parameter, such as epsilon number or parse time. * To go to “System Configuration” screen, admin clicks at “System configuration” menu.   **Preconditions:**   * User must log in the system with the admin role.   **Post Conditions:**   * **Success:** New parameter will be saved to configuration file. * **Fail:** Nothing is saved to configuration file.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click at “System Configuration” link in the menu. | Show “System Configuration” page which contains:   * Epsilon: textbox, min length: 1, max length: 3, type: integer number, min value: 1, max value: 100, required. * Thời gian parse: time picker, min value: 0:00, max value: 23:59, required. * Lưu: button. | | 2 | Admin changes system parameters. |  | | 3 | Click on “Lưu” button.  [Exception 1, 2, 3] | * Save data to configuration file. * Show success message. |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Epsilon value out of range. | Show error message: “Epsilon phải lớn hơn 0 và nhỏ hơn hoặc bằng 100!” | | 2 | Epsilon is not a number. | Show error message: “Epsilon phải là số!” | | 3 | Time format is not correct. | Show error message: “Thời gian phải đúng định dạng!” |   **Relationships:** N/A  **Business Rules:** N/A | | | |

Table 1: <Admin> Configure System

##### <Admin> Make Statistics

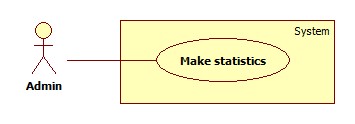


Figure 4: <Admin> Make Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB002** | | | |
| **Use Case No.** | SB002 | **Use Case Version** | 2.0 |
| **Use Case Name** | Make statistics | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 15/02/2014 | **Priority** | Normal |
| **Actor:** Admin  **Summary:**  **Goal:**  **Triggers:**  **Preconditions:**   * User must log in the system with admin role.   **Post Conditions:**   * **Success:** * **Fail:**   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 |  |  |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 |  |  |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 |  |  |   **Relationships:**  **Business Rules:** | | | |

Table 2: <Admin> Make Statistics

##### <Admin> Create User

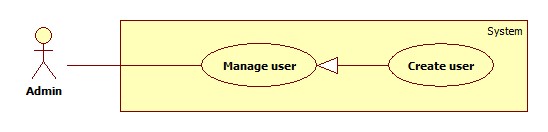


Figure 5: <Admin> Create User

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB003** | | | |
| **Use Case No.** | SB003 | **Use Case Version** | 2.0 |
| **Use Case Name** | Create user | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 15/02/2014 | **Priority** | Normal |
| **Actor:**   * Admin   **Summary:**   * This user case allows admin to create new user account for the system.   **Goal:**   * New user account will be added to the system.   **Triggers:**   * Admin wants to create new user account. * Navigate to “Quản lý tài khoản” and click “Tạo tài khoản” button.   **Preconditions:**   * User must log in the system with admin role.   **Post Conditions:**   * **Success:** New user account will be added to the database. * **Fail:** Nothing is added to the database.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Admin clicks “Tạo tài khoản” link. | Navigate to “Tạo tài khoản” page which contains:   * Username: textbox, min length: 6, max length: 30, required. * Password: textbox, min length: 6, max length: 20, required. * Role: drop down list, required. * Tạo tài khoản: button. * Xóa trắng: button. | | 2 | Admin fills data to the form. |  | | 3 | Admin clicks “Tạo tài khoản” button. [Alternative 1], [Exception 1, 2, 3, 4] | Insert new user account to the database and redirect to “Quản lý tài khoản” page. |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Admin clicks “Xóa trắng button”. | Clear all input data. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Length of username is not in range. | Show error message: “Độ dài username phải từ 6-30 ký tự!” | | 2 | Length of password is not in range. | Show error message: “Độ dài password phải từ 6-20 ký tự!” | | 3 | Role is not specified. | Show error message: “Phải phân quyền cho user!” | | 4 | Username’s existed already. | Show error message: “Trùng tên đăng nhập! Vui lòng chọn tên khác!” |   **Relationships:** Manage user  **Business Rules:**   * Each created account must be in active state when insert to database. | | | |

Table 3: <Admin> Create User

##### <Admin> Update User

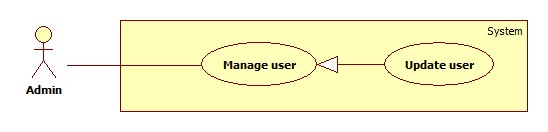


Figure 6: <Admin> Update User

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB004** | | | |
| **Use Case No.** | SB004 | **Use Case Version** | 2.0 |
| **Use Case Name** | Update user | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 16/02/2014 | **Priority** | Normal |
| **Actor:**   * Admin   **Summary:**   * This use case allows admin to update information for user accounts.   **Goal:**   * New information will be updated to the database.   **Triggers:**   * Admin wants to change some information of members or staffs.   **Preconditions:**   * User must log in system with admin role.   **Post Conditions:**   * **Success:** New information will be updated to the database. * **Fail:** Nothing is updated.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click menu item “Quản lý tài khoản”. | Navigate to “Quản lý tài khoản” page which contains:   * A table with 4 columns:   + Số thứ tự.   + Tên đăng nhập.   + Trạng thái.   + Hành động. * Tạo tài khoản: button. | | 2 | Click at username. | Navigate to “Thông tin tài khoản” page, which contains:   * Username: textbox, min length: 6, max length: 30, disabled. * Password: textbox, min length: 6, max length: 20, required. * Email: textbox, min length: 0, max length: 100, regular expression: ^[a-zA-Z0-9.!#$%&'\*+/=?^\_`{|}~-]+@[a-zA-Z0-9](?:[a-zA-Z0-9-]{0,61}[a-zA-Z0-9])?(?:\.[a-zA-Z0-9](?:[a-zA-Z0-9-]{0,61}[a-zA-Z0-9])?)\*$, required. * Role: drop down list, required. * Cập nhật: button. | | 3 | Admin updates information. |  | | 4 | Click “Cập nhật” button. | New information will be updated to the database. |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Length of password is not in range. | Show error message: “Độ dài password phải từ 6-20 ký tự!” | | 2 | Role is not specified. | Show error message: “Phải phân quyền cho user!” | | 3 | Invalid email format. | Show error message: “Email phải đúng định dạng!” |   **Relationships:** Manage User  **Business Rules:**   * Editing username is forbidden. | | | |

Table 4: <Admin> Update User

##### <Admin> Activate User

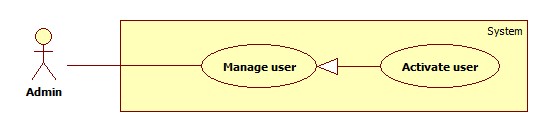


Figure 7: <Admin> Active User

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB005** | | | |
| **Use Case No.** | SB005 | **Use Case Version** | 2.0 |
| **Use Case Name** | Activate User | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 16/02/2014 | **Priority** | Normal |
| **Actor:**   * Admin   **Summary:**   * This user case allows admin to activate a user account.   **Goal:**   * Deactivated accounts will be activated again.   **Triggers:**   * Admin wants to activate an account so that it can be used to log in the system again.   **Preconditions:**   * User must log in the system with admin role.   **Post Conditions:**   * **Success:** The selected account will be activated. * **Fail:** No account is activated.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click menu item “Quản lý tài khoản”. | Navigate to “Quản lý tài khoản” page which contains:   * A table with 4 column:   + Số thứ tự.   + Tên đăng nhập.   + Trạng thái. * Tạo tài khoản: button. | | 2 | Check the checkbox in “Trạng thái” cell of a deactivated account. | Selected account is activated again. [Exception 1] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Cannot activate the account due to database connection. | Show error message: “Không thể kích hoạt! Vui lòng thử lại sau.” |   **Relationships:** Manage User  **Business Rules:**   * Admins can’t activate/deactivate account of themselves or other admins. | | | |

Table 5: <Admin> Activate User

##### <Admin> Deactivate User

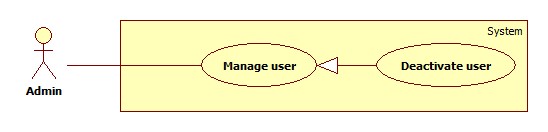


Figure 8: <Admin> Deactivate User

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB006** | | | |
| **Use Case No.** | SB006 | **Use Case Version** | 2.0 |
| **Use Case Name** | Deactivate User | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 16/02/2014 | **Priority** | Normal |
| **Actor:**   * Admin   **Summary:**   * This user case allows admin to deactivate an account.   **Goal:**   * An active account will be deactivated.   **Triggers:**   * In our system, when we do not want a user to login, we deactivate his/her account. That account can be activated later.   **Preconditions:**   * User must log in the system with admin role.   **Post Conditions:**   * **Success:** The selected account will be deactivated. * **Fail:** No account is deactivated.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click menu item “Quản lý tài khoản”. | Navigate to “Quản lý tài khoản” page which contains:   * A table with 4 column:   + Số thứ tự.   + Tên đăng nhập.   + Trạng thái. * Tạo tài khoản: button. | | 2 | Uncheck the checkbox in “Trạng thái” cell of an active account. | The selected account will be deactivated.  [Exception 1] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Cannot deactivate the account due to database connection. | Show error message: “Không thể kích hoạt! Vui lòng thử lại sau.” |   **Relationships:** Manage Account  **Business Rules:**   * Admins can’t activate/deactivate account of themselves or other admins. | | | |

Table 6: <Admin> Deactivate User

##### <Admin> Force Parse Data

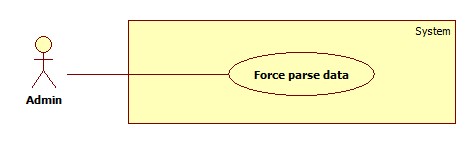


Figure 9: <Admin> Force Parse Data

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB007** | | | |
| **Use Case No.** | SB007 | **Use Case Version** | 2.0 |
| **Use Case Name** | Force Parse Data | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 16/02/2014 | **Priority** | High |
| **Actor:**   * Admin.   **Summary:**   * Admin can force system to parse data at any time.   **Goal:**   * Get data from many websites.   **Triggers:**   * Admin wants to run the parser at that time. * Admin clicks “Parse” button.   **Preconditions:**   * User logged in with “Admin” role.   **Post Conditions:**   * **Success:** New data is inserted to database. Log file is generated. * **Fail:** Nothing is changed in the database. Log file is generated.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff clicks “Parse” button. | * Disable “Parse” button. Change its text into “Parsing…” * Send request to the parsed link. * Fetch data from the response based on the inputted XPaths. * Validate data [Exception 1]. * If data is valid, insert to database [Alternative 1]. * Generate log file. * Enable “Parse” button. Change its text into “Parse”. |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff clicks “Parse” button. | * If fetched product is already in the database, update its information. * Generate log file. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Data is not valid. | * Don’t insert to database. * Generate log file. |   **Relationships:** N/A  **Business Rules:**   * Refer to “Auto Parse Data” use case. | | | |

Table 7: <Admin> Force Parse Data

#### <System> Overview Use Case

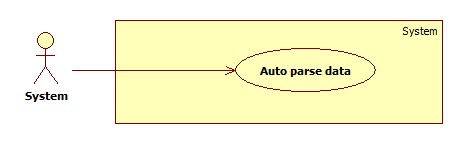


Figure 10: <System> Overview Use Case

##### <System> Auto Parse Data

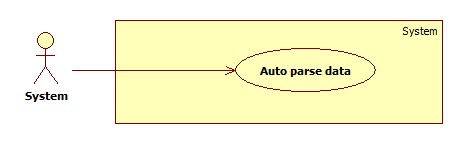


Figure 11: <System> Auto Parse Data

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB008** | | | |
| **Use Case No.** | SB008 | **Use Case Version** | 2.0 |
| **Use Case Name** | Auto Parse Data | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 16/02/2014 | **Priority** | High |
| **Actor:**   * System.   **Summary:**   * System can parse data automatically from many websites at specified time.   **Goal:**   * Get data from many websites.   **Triggers:**   * The time hits configured time.   **Preconditions:**   * Parse time has been configured.   **Post Conditions:**   * **Success:** New data is inserted to database. Log file is generated. * **Fail:** Nothing is changed in the database. Log file is generated.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Server checks the current time. If it hits configured time, parse process starts. | * Send request to the parsed link. * Fetch data from the response based on the inputted XPaths. * Validate data [Exception 1]. * If data is valid, insert to database [Alternative 1]. * Generate log file. |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Server checks the current time. If it hits configured time, parse process starts. | * If fetched product is already in the database, update its information. * Generate log file. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Data is invalid. | * Don’t insert to database. * Generate log file. |   **Relationships:** N/A  **Business Rules:**   * If price is negative or not a number, consider it invalid. * Log file structure:   SMART BUY LOG FILE  Tạo file lúc: {Created date}, {Created time}   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | STT | Link | Thời gian parse | Dạng dữ liệu | Tổng sản phẩm | Insert thành công | Insert thất bại | |  |  |  |  |  |  |  | |  |  |  |  |  |  |  |   Tổng thời gian parse dạng {Data type}: {Elapsed time}  Tổng thời gian parse: {Total elapsed time}  Tổng sản phẩm parse được: {Total parsed product} | | | |

Table 8: <System> Auto Parse Data

#### <Staff >Overview Use Case

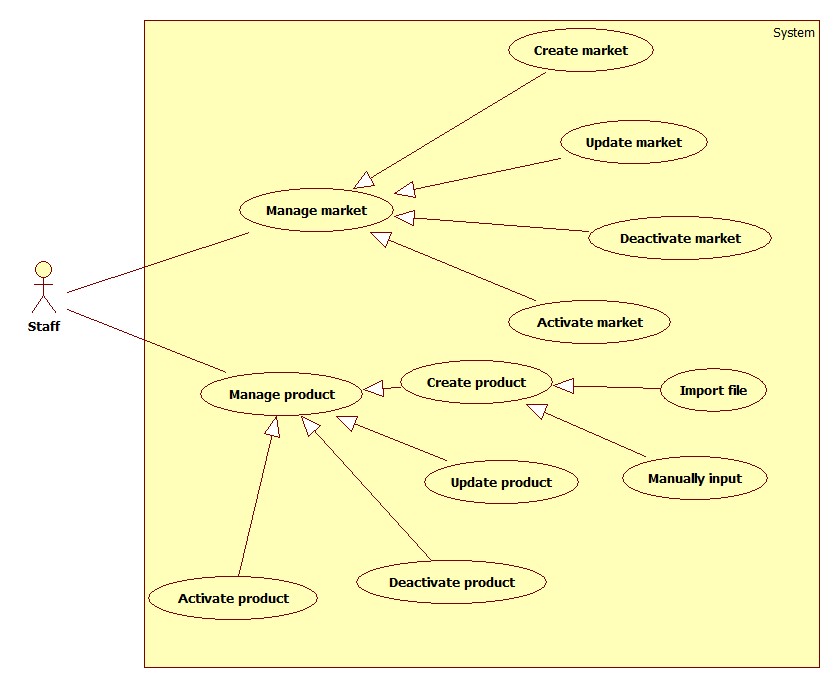


Figure 12: <Staff> Overview Use Case

##### <Staff> Create Market

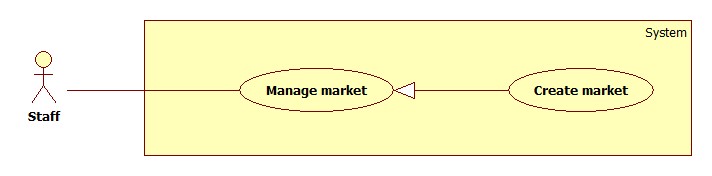


Figure 13: <Staff> Create Market

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB009** | | | |
| **Use Case No.** | SB009 | **Use Case Version** | 2.0 |
| **Use Case Name** | Create Market | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 19/02/2014 | **Priority** | Normal |
| **Actor:**   * Staff.   **Summary:**   * This use case allows staff to create a new market.   **Goal:**   * A new market added to the database.   **Triggers:**   * Staff wants to create a new market. * To create new market, staff must do the following steps:   + Click “Quản lý chợ” on the menu.   + Click “Tạo chợ mới” button.   **Preconditions:**   * User must log in the system with staff role.   **Post Conditions:**   * **Success**: New market will be added to the database. * **Fail:** Nothing is added to the database. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click “Quản lý chợ” in menu bar. | Navigate to “Quản lý chợ” page which contains:   * A table has 4 columns:   + Số thứ tự   + Tên chợ   + Địa chỉ   + Trạng thái * Tạo chợ mới: button | | 2 | Click “Tạo chợ mới” button. | Navigate to “Tạo chợ mới” page, which contains:   * Tên chợ: textbox, min length: 6, max length: 50, required. * Địa chỉ: textbox, min length: 6, max length: 100. * Vĩ độ: textbox, decimal number only, min value: -90, max value: 90, min length: 1, max length: 10 * Kinh độ: textbox, decimal number only, min value: -180, max value: 180, min lengh: 1, max length: 11. * Tạo mới: button * Xóa trắng: button | | 3 | Input market information, click “Tạo mới” button. [Alternative 1] | Add new market to the database. Redirect to “Quản lý chợ” page.  [Exception 1, 2, 3, 4, 5, 6, 7, 8, 9] |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click “Xóa trắng” button | Clear all input fields. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Duplicate “Tên chợ”. | Show error message: “Tên này đã có trong hệ thống. Vui lòng chọn tên khác!” | | 2 | Length of “Tên chợ” is not in range. | Show error message: “Tên chợ phải từ 6 đến 50 ký tự!” | | 3 | Length of “Địa chỉ” is not in range. | Show error message: “Địa chỉ phải từ 6 đến 100 ký tự!” | | 4 | “Vĩ độ” is not a number. | Show error message: “Vĩ độ phải là số!” | | 5 | Length of “Vĩ độ” is not in range. | Show error message: “Vĩ độ có độ dài từ 1 đến 10 ký tự!” | | 6 | Value of “Vĩ độ” is not in range. | Show error message: “Giá trị của vĩ độ phải từ 0 đến 90!” | | 7 | “Kinh độ” is not a number. | Show error message: “Kinh độ phải là số!” | | 8 | Length of “Kinh độ” is not in range. | Show error message: “Kinh độ có độ dài từ 1 đến 11 ký tự!” | | 9 | Value of “Kinh độ” is not in range. | Show error message: “Giá trị của kinh độ phải từ -180 đến 180!” |   **Relationships:** Manage market.  **Business Rules:**   * We should apply Google Map auto complete to “Địa chỉ” textbox. * User can only input “Địa chỉ” or “Vĩ độ”, “Kinh độ” pair, not both. | | | |

Table 9: <Staff> Create Market

##### <Staff> Update Market

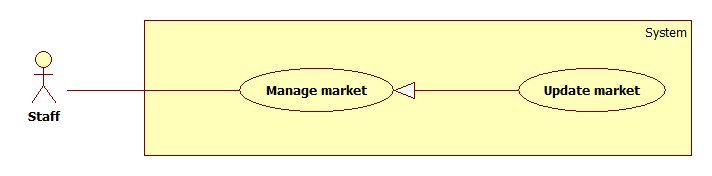


Figure 14: <Staff> Update Market

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB010** | | | |
| **Use Case No.** | SB010 | **Use Case Version** | 2.0 |
| **Use Case Name** | Update Market | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 19/02/2014 | **Priority** | Normal |
| **Actor:**   * Staff.   **Summary:**   * This use case allows staff to update market information.   **Goal:**   * Update new information to the market.   **Triggers:**   * Staff wants to update information of markets. * To update information of markets, staff must do the following steps:   + Click “Quản lý chợ” in the menu.   + Click at the name of the market which staff wants to change information.   **Preconditions:**   * User must log in the system with staff role.   **Post Conditions:**   * **Success**: Market information will be updated. * **Fail:** Nothing is updated. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click “Quản lý chợ” in menu bar. | Navigate to “Quản lý chợ” page which contains:   * A table has 4 columns:   + Số thứ tự   + Tên chợ   + Địa chỉ   + Trạng thái * Tạo chợ mới: button | | 2 | Click at the market name. | Navigate to “Thông tin chợ” page, which contains:   * Tên chợ: textbox, min length: 6, max length: 50, required. * Địa chỉ: textbox, min length: 6, max length: 100. * Vĩ độ: textbox, decimal number only, min value: -90, max value: 90, min length: 1, max length: 10 * Kinh độ: textbox, decimal number only, min value: -180, max value: 180, min lengh: 1, max length: 11. * Cập nhật: button | | 3 | Edit market information, click “Cập nhật” button. | The system will update new market information to the database. Redirect to “Quản lý chợ” page.  [Exception 1, 2, 3, 4, 5, 6, 7, 8, 9] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Duplicate “Tên chợ”. | Show error message: “Tên này đã có trong hệ thống. Vui lòng chọn tên khác!” | | 2 | Length of “Tên chợ” is not in range. | Show error message: “Tên chợ phải từ 6 đến 50 ký tự!” | | 3 | Length of “Địa chỉ” is not in range. | Show error message: “Địa chỉ phải từ 6 đến 100 ký tự!” | | 4 | “Vĩ độ” is not a number. | Show error message: “Vĩ độ phải là số!” | | 5 | Length of “Vĩ độ” is not in range. | Show error message: “Vĩ độ có độ dài từ 1 đến 10 ký tự!” | | 6 | Value of “Vĩ độ” is not in range. | Show error message: “Giá trị của vĩ độ phải từ 0 đến 90!” | | 7 | “Kinh độ” is not a number. | Show error message: “Kinh độ phải là số!” | | 8 | Length of “Kinh độ” is not in range. | Show error message: “Kinh độ có độ dài từ 1 đến 11 ký tự!” | | 9 | Value of “Kinh độ” is not in range. | Show error message: “Giá trị của kinh độ phải từ -180 đến 180!” |   **Relationships:** Manage market.  **Business Rules:**   * We should apply Google Map auto complete to “Địa chỉ” textbox. * User can only input “Địa chỉ” or “Vĩ độ”, “Kinh độ” pair, not both. | | | |

Table 10: <Staff> Update Market

##### <Staff> Deactivate Market

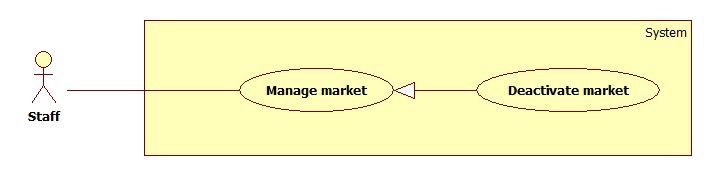


Figure 15: <Staff> Deactivate Market

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB011** | | | |
| **Use Case No.** | SU011 | **Use Case Version** | 2.0 |
| **Use Case Name** | Deactivate Market | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Staff.   **Summary:**   * This use case allows staff to deactivate market in the system.   **Goal:**   * Markets will be deactivated.   **Triggers:**   * Staff wants to deactivate a market so that it is no longer available in the system. * To deactivate a market, staff must do the following steps:   + Click “Quản lý chợ” item in the menu.   + Uncheck the status checkbox of each active market.   **Preconditions:**   * User must log in the system with staff role.   **Post Conditions:**   * **Success**: The selected market will be deactivated. * **Fail:** Nothing is changed. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click “Quản lý chợ” in menu bar. | Navigate to “Quản lý chợ” page which contains:   * A table has 4 columns:   + Số thứ tự   + Tên chợ   + Địa chỉ   + Trạng thái   Tạo chợ mới: button | | 2 | Uncheck the checkbox in “Trạng thái” cell of an active market. | The selected market will be deactivated. [Exception 1]  Show success message: “Thao tác thành công!” |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Cannot deactivate the market due to database connection problem. | Show error message: “Thao tác không thể thực hiện. Vui lòng thử lại sau!” |   **Relationships:** Manage Market.  **Business Rules:**   * Cannot deactivate virtual market. | | | |

Table 11: <Staff> Deactivate Market

##### <Staff> Activate Market

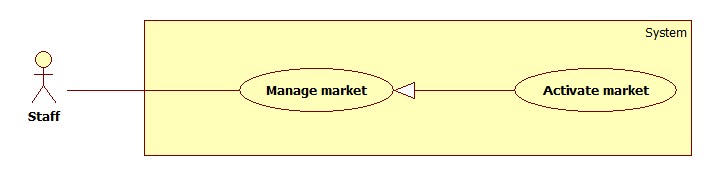


Figure 16: <Staff> Activate Market

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB012** | | | |
| **Use Case No.** | SB012 | **Use Case Version** | 2.0 |
| **Use Case Name** | Activate Market | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Staff.   **Summary:**   * This use case allows staff to activate the market.   **Goal:**   * Selected market will be activated.   **Triggers:**   * Staff wants to activate a market so that it can be accessed from the system again. * To activate the market, staff must do the following steps:   + Click “Quản lý chợ” item in the menu.   + Check the status checkbox of each deactivated market   **Preconditions:**   * User must log in the system with staff role.   **Post Conditions:**   * **Success**: Market will be activated again. * **Fail:** Nothing is changed. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click “Quản lý chợ” in menu bar. | Navigate to “Quản lý chợ” page which contains:   * A table has 4 columns:   + Số thứ tự   + Tên chợ   + Địa chỉ   + Trạng thái   Tạo chợ mới: button | | 2 | Check the checkbox in “Trạng thái” cell of an deactivated market. | The selected market will be deactivated. [Exception 1]  Show success message: “Thao tác thành công!” |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Cannot activate the market due to database connection problem. | Show error message: “Thao tác không thể thực hiện. Vui lòng thử lại sau!” |   **Relationships:** Manage Market.  **Business Rules:** N/A | | | |

Table 12: <Staff> Activate Market

##### <Staff> Import File

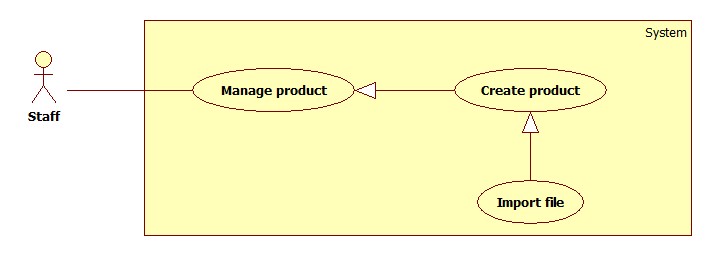


Figure 17: <Staff> Import File

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB013** | | | |
| **Use Case No.** | SB013 | **Use Case Version** | 2.0 |
| **Use Case Name** | Import File | | |
| **Author** | Tran Trung Dung | | |
| **Date** | 20/02/2014 | **Priority** | High |
| **Actor:**   * Staff   **Summary:**   * This use case allows staff to import data from excel files.   **Goal:**   * Create many products from imported files.   **Triggers:**   * Staff wants to create many products by importing excel files. * To import a file, staff must do the following steps:   + Click “Nhập từ excel” menu.   + Choose the file, click “Tải lên” button.   **Preconditions:**   * User must log in the system with staff role.   **Post Conditions:**   * **Success**: Products will be added to the database. Show success message. * **Fail:** Nothing is saved to the database. Show error list.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | From the staff’s page, staff clicks “Nhập từ Excel” link. | Show “Nhập từ excel” page with 2 buttons:   * “Chọn file” button. * “Tải lên” button. | | 2 | From “Nhập từ excel” page, staff clicks “Chọn file” button, then clicks “Mở”. | System will get file path and show on text box. | | 3 | Staff clicks “Tải lên” button | File is uploaded to server, then redirect back to “Nhập từ excel” page, contains:   * A 4-columns table show detail of product in excel file. Column header includes:   + “STT” label.   + “Tên sản phẩm” label.   + “Tên chợ” label.   + “Giá (Ngàn đồng)” label. * “Lưu” button. * “Hủy” button.   [Exception 1, 2, 3, 4] | | 5 | Staff clicks “Lưu” button to save product. [Alternative 1] | Save products to database. [Exception 5] |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click on “Hủy” button to finish. | No product is added. System will return back to “Nhập từ excel” page. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Product input is wrong format | Display error message: “File không đúng định dạng”. | | 2 | Product name is not in range [5, 20]. | Display error message: “Tên sản phẩm phải từ 5 đến 20 ký tự”. | | 3 | Market name is not in range [5, 20]. | Display error message: “Tên chợ phải từ 5 đến 20 ký tự”. | | 4 | Price is not in range [1, 10000]. | Display error message: “Giá sản phẩm phải từ 1 đến 10000”. | | 5 | Fail to insert to database. | Display error message: “Có lỗi xảy ra. Vui lòng thử lại sau”. |   **Relationships:** Manage Product, Create Product.  **Business Rules:**   * Valid file format :      * Format file is excel (.xlsx) * File has less than 5 errors. * File has more than 5 errors. Display list error rows. | | | |

Table 13: <Staff> Import File

##### <Staff> Manually Input

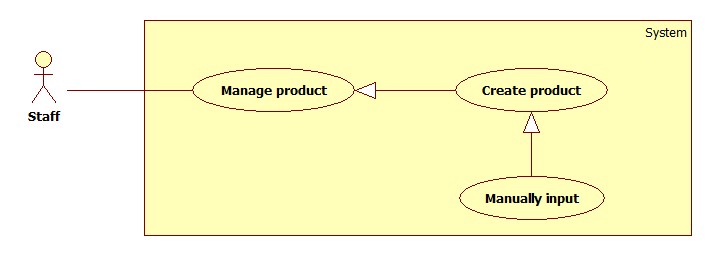


Figure 18: <Staff> Manually Input

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB014** | | | |
| **Use Case No.** | SB014 | **Use Case Version** | 2.0 |
| **Use Case Name** | Manually Input | | |
| **Author** | Tran Trung Dung | | |
| **Date** | 20/02/2014 | **Priority** | High |
| **Actor:**   * Staff.   **Summary:**   * This use case allows staff to input product manually.   **Goal:**   * New product will be added to the database.   **Triggers:**   * Staff wants to input new product manually. * To input product manually, staff must do the following steps:   + Click “Quản lý sản phẩm” in the menu.   + Click “Tạo sản phẩm” button.   **Preconditions:**   * User must log in the system with staff role.   **Post Conditions:**   * **Success**: New product will be added to the database. * **Fail:** Nothing is added to the database. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click “Tạo sản phẩm” button. | Navigate to “Tạo sản phẩm” page which contains:   * Tên sản phẩm: textbox (min length: 5, max length: 20), required. * Tên chợ: drop down list, list of available markets in the system, required. * Giá: textbox (min value: 1, max value: 10000, integer number only, min length: 1, max length: 5), required. * “Thêm sản phẩm” button. * “Hủy” button. | | 2 | Enter information into text fields.  Click “Thêm sản phẩm” button to finish. [Alternative 1] | System will add product to database.  A new product will be displayed in list product page. Then, redirect to list product page. [Exception 1, 2, 3] |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click on “Hủy” button to finish. | No product is added. System will return back to list product page. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | “Tên sản phẩm” is not in range [5, 20]. | Display error message: “Tên sản phẩm phải từ 5 đến 20 ký tự”. | | 2 | “Tên chợ” is not selected. | Display error message: “Phải chọn chợ”. | | 3 | “Giá” is not in range [1, 10000]. | Display error message: “Giá sản phẩm phải từ 1 đến 10000”. |   **Relationships:** Manage Product, Create Product.  **Business Rules:**   * When staff enters product name, system will search all product name in the database. * Staff can choose existed product and update the price of this product. | | | |

Table 14: <Staff> Manually Input

##### <Staff> Update Product



Figure 19: <Staff> Update Product

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB015** | | | |
| **Use Case No.** | SB015 | **Use Case Version** | 2.0 |
| **Use Case Name** | Update Product | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Staff.   **Summary:**   * This use case allows staff to update product information.   **Goal:**   * New information will be updated to selected product.   **Triggers:**   * Staff wants to change product information. * To change product information, staff must do the following steps:   + Click “Quản lý sản phẩm” in menu bar.   + Click at product name.   + Change information.   + Click “Cập nhật” button to save new data to database.   **Preconditions:**   * User must log in the system with staff role. * There is at least one product in the database.   **Post Conditions:**   * **Success**: New information will be updated to selected product. * **Fail:** Nothing is updated. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click “Quản lý sản phẩm” in menu bar. | Navigate to “Quản lý sản phẩm” page which contains:   * A table has 5 columns:   + Số thứ tự.   + Tên sản phẩm.   + Khoảng giá.   + Thời gian cập nhật.   + Trạng thái | | 2 | Click at any product name. | Navigate to “Thông tin sản phẩm” page which contains:   * Tên sản phẩm: textbox, min length: 5, max length: 20, required. * Tên chợ: drop down list, list of available markets in the system, required. * Giá: textbox, integer number only, min value: 1, max value: 10000, min length: 1, max length: 5, required. * Cập nhật: button. | | 3 | Update new data. Click “Cập nhật” button. | Save new data to the database. Redirect to “Quản lý sản phẩm” page. |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | “Tên sản phẩm” is not in range [5, 20]. | Display error message: “Tên sản phẩm phải từ 5 đến 20 ký tự”. | | 2 | “Tên chợ” is not selected. | Display error message: “Phải chọn chợ”. | | 3 | “Giá” is not in range [1, 10000]. | Display error message: “Giá sản phẩm phải từ 1 đến 10000”. |   **Relationships:** Manage Product.  **Business Rules:** N/A | | | |

Table 15: <Staff> Update Product

##### <Staff> Deactivate Product



Figure 20: <Staff> Deactivate Product

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB016** | | | |
| **Use Case No.** | SB016 | **Use Case Version** | 2.0 |
| **Use Case Name** | Deactivate Product | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Staff.   **Summary:**   * This use case allows staff to deactivate product.   **Goal:**   * Selected product will be deactivated.   **Triggers:**   * Staff wants to deactivate a product in the system. * To deactivate a product, staff must do the following steps:   + Click “Quản lý sản phẩm” in menu bar.   + Uncheck any active product.   **Preconditions:**   * User must log in the system with staff role.   **Post Conditions:**   * **Success**: Selected product will be deactivated. * **Fail:** Nothing is changed. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click “Quản lý sản phẩm” in menu bar. | Navigate to “Quản lý sản phẩm” page which contains:   * A table has 5 columns:   + Số thứ tự.   + Tên sản phẩm.   + Khoảng giá.   + Thời gian cập nhật.   + Trạng thái | | 2 | Uncheck any active product. | Deactivate selected product. Show success message.  [Exception 1] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Cannot deactivate product due to database connection problem | Show error message: “Thao tác thất bại. Vui lòng thử lại sau!” |   **Relationships:** Manage Product.  **Business Rules:** N/A | | | |

Table 16: <Staff> Deactivate Product

##### <Staff> Activate Product



Figure 21: <Staff> Activate Product

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB017** | | | |
| **Use Case No.** | SB017 | **Use Case Version** | 2.0 |
| **Use Case Name** | Activate Product | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Staff.   **Summary:**   * This use case allows staff to activate product.   **Goal:**   * Selected product will be activated.   **Triggers:**   * Staff wants to activate a product in the system. * To deactivate a product, staff must do the following steps:   + Click “Quản lý sản phẩm” in menu bar.   + Check any deactived product.   **Preconditions:**   * User must log in the system with staff role.   **Post Conditions:**   * **Success**: Selected product will be activated. * **Fail:** Nothing is changed. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click “Quản lý sản phẩm” in menu bar. | Navigate to “Quản lý sản phẩm” page which contains:   * A table has 5 columns:   + Số thứ tự.   + Tên sản phẩm.   + Khoảng giá.   + Thời gian cập nhật.   + Trạng thái | | 2 | Check any deactived product. | Activate selected product. Show success message.  [Exception 1] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Cannot activate product due to database connection problem | Show error message: “Thao tác thất bại. Vui lòng thử lại sau!” |   **Relationships:** Manage Product.  **Business Rules:** N/A | | | |

Table 17: <Staff> Activate Product

#### < Member> Overview Use Case

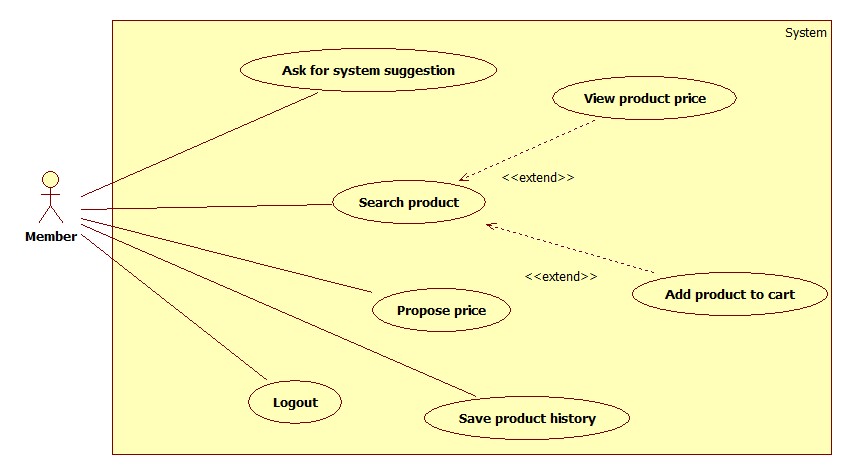


Figure 22: <Member> Overview Use Case

##### <Member> Ask For System Suggestion

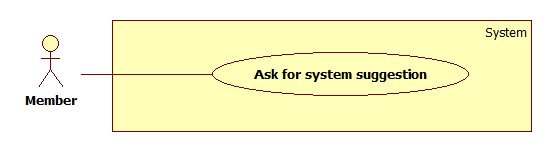


Figure 23: <Instructor> Ask For System Suggestion

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB018** | | | |
| **Use Case No.** | SB018 | **Use Case Version** | 2.0 |
| **Use Case Name** | Ask For System Suggestion | | |
| **Author** | Huynh Thanh Viet | | |
| **Date** | 20/02/2014 | **Priority** | High |
| **Actor:**   * Member.   **Summary:**   * Member can ask for system suggestion about how to buy a list of products.   **Goal:**   * Suggest user the place and things should buy.   **Triggers:**   * After user added a list of product, they can ask to have a suggestion which will be the best buying way. * User clicks “Gợi ý” button.   **Preconditions:**   * User must log in the system with member role. * User has defined a route.   **Post Conditions:**   * **Success**: Application will show all markets suitable for buying product. * **Fail:** Show an error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User click “Gợi ý” button. | * System will show a map with a suggest route as red line follow the street. * On that line will have many markers which each of them will representation for a place to buy. [Alternative 1] |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Search not found. | System will show a message: “Không tìm thấy”. |   **Exceptions:** N/A  **Relationships:** Add to cart  **Business Rules:**   * System finds market’s location dependence on the route which user defined. * If a product available on many markets, pick the market which has the lowest product’s price. | | | |

Table 18: <Member> Ask For System Suggestion

##### <Member> Search Product and View Product Price

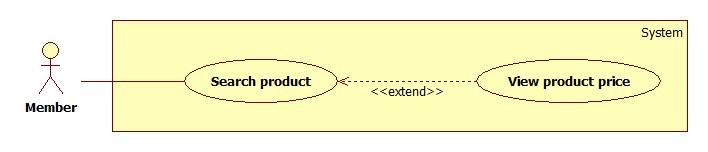


Figure 24: <Member> Search Product and View Product Price

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB019** | | | |
| **Use Case No.** | SB019 | **Use Case Version** | 2.0 |
| **Use Case Name** | Search Product and View Product Price | | |
| **Author** | Huynh Thanh Viet | | |
| **Date** | 20/02/2014 | **Priority** | High |
| **Actor:**   * Member. * Guest.   **Summary:**   * This use case allows user to search and view product information.   **Goal:**   * A list of products will be shown to user.   **Triggers:**   * User can search product to get product’s information: name, range of price. * In search screen, user inputs name of product then they search all products with relative name which they inputted. The searching results will show a list of product which follow product name. * User inputs to a blank textbox then clicks “Tìm” button.   **Preconditions:**   * For mobile application:   + Mobile connected to a wireless network or active data connection (2G, 3G).   + In case the internet connection isn’t satisfy, the application must be synchronized data at daily checkpoint.   **Post Conditions:**   * **Success**: Show search results which include a list of product with name, range of price. * **Fail:** Show an error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User inputs the product’s name into textbox. |  | | 2 | User clicks “Tìm” button. | * System will show a list of product as a grid and order by product name. [Alternative 1] * A product will show in a line as a record with these information:   + First column is order number.   + Second column is product name.   + Third column is range of product price.   + The final column has 2 buttons: “Thêm” and “Đề xuất giá”. |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Search not found | System will show a message: “Không tìm thấy”. |   **Exceptions:** N/A  **Relationships:** N/A  **Business Rules:**   * Search by product name, using full text search. * Result list will be ordered by matching percent. | | | |

Table 19: <Member> Search Product and View Product Price

##### <Member> Add Product To Cart

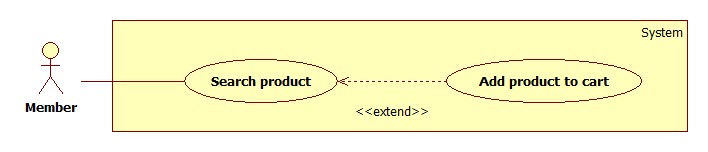


Figure 25: <Member> Add Product To Cart

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB020** | | | |
| **Use Case No.** | SB020 | **Use Case Version** | 2.0 |
| **Use Case Name** | Add Product To Cart | | |
| **Author** | Dang Huu Hoang | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Member. * Guest.   **Summary:**   * This use case allows guest/member to add product to cart.   **Goal:**   * A product will be added to guest/member’s cart.   **Triggers:**   * Guest/Member can add product to cart after search product. * Guest/Member clicks on “Thêm” button on each result row.   **Preconditions:** N/A  **Post Conditions:**   * **Success**: The product will be added to cart. * **Fail:** Product will not be added to cart. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click “Thêm” button on result row. | * Check for the existence of the cart object in session [Exception 1]. * Add clicked product to cart [Alternative 1]. * Notify user. |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | The product has existed in cart. | Update quantity of the product. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Session time out. | * Create new cart object in session. * Add clicked product to cart. * Notify user. |   **Relationships:** Search Product  **Business Rules:**   * Maximum quantity of each product is 10. * Maximum size of cart is 20. | | | |

Table 20: <Member> Add Product To Cart

##### <Member> Propose Price

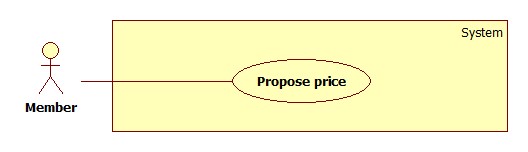


Figure 26: <Member> Propose Price

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB021** | | | |
| **Use Case No.** | SB021 | **Use Case Version** | 2.0 |
| **Use Case Name** | Propose Price | | |
| **Author** | Dang Huu Hoang | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Member.   **Summary:**   * This use case allows member to propose product price.   **Goal:**   * Insert new product price to the database.   **Triggers:**   * Member wants to propose new product price. * Member clicks on “Cập nhật” button on each search result row.   **Preconditions:**   * User has logged in to the system with the role is “member”. * User used search function to find product.   **Post Conditions:**   * **Success**: Propose product price will be inserted to database. Show success message. * **Fail:** Nothing is inserted to the database. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Click on “Cập nhật” button on each search result row. | Pop up a window with:   * Giá đề xuất: text box (integer number only, min length: 1, max length: 4), required. * Lưu lại: button | | 2 | Input proposed product price, click “Lưu lại” button. | Updates new product price to the database and show message “Cảm ơn sự đóng góp của bạn”. [Alternative 1; Exception 1, 2] |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Price is out of range. | Show message “Cảm ơn sự đóng góp của bạn”. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Price is not a positive number. | Show error “Giá không phù hợp”. | | 2 | Price’s length is not in range. | Show error “Giá không phù hợp”. |   **Relationships:** Search Product  **Business Rules:**   * Average price (avgPrice) = * Epsilon is a number set by staff. | | | |

Table 21: <Member> Propose Price

##### <Member> Save Product History

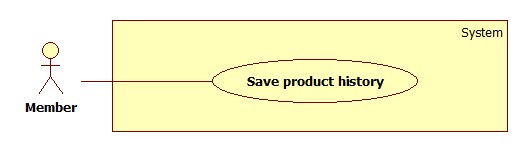


Figure 27: <Member> Save Product History

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB022** | | | |
| **Use Case No.** | SB022 | **Use Case Version** | 2.0 |
| **Use Case Name** | Save Product History | | |
| **Author** | Dang Huu Hoang | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Member.   **Summary:**   * This use case allows member to save their cart.   **Goal:**   * The cart will be saved as member’s history.   **Triggers:**   * Members want to save their cart. * Member clicks “Lưu lại” button.   **Preconditions:**   * User has logged in to the system with the role is “member”. * There is at least one product which was added to cart.   **Post Conditions:**   * **Success**: Information of cart will be added to database. Show success message. * **Fail:** Nothing is added to the database. Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | The member clicks “Lưu lại” button on View cart page. | * Add new cart to database. * Show message “Giỏ hàng đã được lưu thành công” [Alternative 1], [Exception 1]. |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | The cart has existed in database. | * Update cart to database. * Show message “Giỏ hàng đã được lưu thành công”. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Fail to insert to database. | Show message “Có lỗi xảy ra. Vui lòng thử lại sau”. |   **Relationships:** Add Product To Cart  **Business Rules:**   * The insert time of the cart is current time. * Save product name and current price range. | | | |

Table 22: <Member> Save Product History

##### <Member> Logout

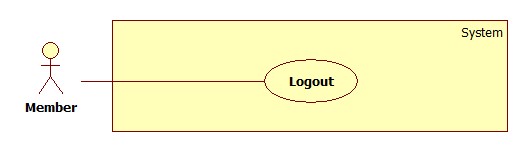


Figure 28: <Member> Logout

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB023** | | | |
| **Use Case No.** | SB023 | **Use Case Version** | 2.0 |
| **Use Case Name** | Logout | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Member. * Staff. * Admin.   **Summary:**   * This use case allows user to log out of the system.   **Goal:**   * User logs out of the system. User’s current session is destroyed.   **Triggers:**   * User wants to log out. * User clicks “Thoát” link.   **Preconditions:**   * User has logged in to the system.   **Post Conditions:**   * **Success**: User’s current session is destroyed. Redirect to homepage. * **Fail:** Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | User clicks “Thoát” link. | Destroy user’s session. Redirect to homepage. [Exception 1] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Fail to destroy user’s session | Redirect to error page. |   **Relationships:** Login  **Business Rules:** N/A | | | |

Table 23: <Member> Logout

#### <Guest> Overview Use Case

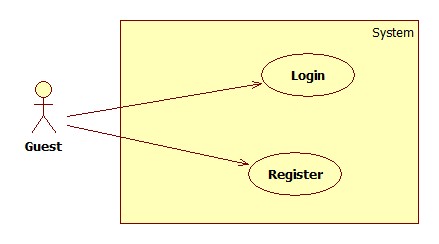


Figure 29: <Guest> Overview Use Case

##### <Guest> Login



Figure 30: <Guest> Login

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB024** | | | |
| **Use Case No.** | SB024 | **Use Case Version** | 2.0 |
| **Use Case Name** | Login | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Guest.   **Summary:**   * This use case allows guest to login to the system.   **Goal:**   * Allow authentication and authorization of the system.   **Triggers:**   * Guest want to login into system. * To login: Guests go to the login page, enter username and password, and click “Đăng nhập” button to login.   **Preconditions:** N/A.  **Post Conditions:**   * **Success:** Guest is authorized, redirect to corresponding page. * **Fail:** System will show error on current page.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Guest go to login page. | System show a login form, includes:   * Username: textbox, min length: 6, max length: 30, required. * Password: textbox, password box, min length: 6, max length: 20, required. * Đăng nhập: button. | | 2 | Guess enter username and password into textboxes.  Press “Đăng nhập” button. | Guest is logged into system, authorized with corresponding role. Redirect to corresponding page.  [Exception 1,2] |   **Alternative Scenario:** N/A  **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | No input in “Username” or “Password” textboxes | Show error message: “Vui lòng điền đủ username và password!” | | 2 | Username/Password not in range [5,30] | Show error message: “Thông tin không hợp lệ. Vui lòng thử lại!” | | 3 | Input invalid “Username” and “Password” | Show error message: “Thông tin không hợp lệ. Vui lòng thử lại!” |   **Relationships:** N/A  **Business Rules:**   * Each member, staff, admin has an account. * Only active account can log in. * Only member’s account can login from mobile application. | | | |

Table 24: <Guest> Login

##### <Guest> Register



Figure 31: <Guest> Register

|  |  |  |  |
| --- | --- | --- | --- |
| **USE CASE – SB025** | | | |
| **Use Case No.** | SB025 | **Use Case Version** | 2.0 |
| **Use Case Name** | Register | | |
| **Author** | Doan Ho Anh Triet | | |
| **Date** | 20/02/2014 | **Priority** | Normal |
| **Actor:**   * Guest.   **Summary:**   * This use case allows guest to register.   **Goal:**   * User can register new account to become a member of the system.   **Triggers:**   * Guest want to be a member of the system. * To register, click “Đăng ký” in menu bar.   **Preconditions:** N/A.  **Post Conditions:**   * **Success:** New member account is created. * **Fail:** Show error message.   **Main Success Scenario:**   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Guest clicks “Đăng ký” link. | System show a register form which includes:   * Username: textbox, min length: 6, max length: 30, required. * Password: textbox, password box, min length: 6, max length: 20, required. * Email: textbox, min length: 0, max length: 100, regular expression: ^[a-zA-Z0-9.!#$%&'\*+/=?^\_`{|}~-]+@[a-zA-Z0-9](?:[a-zA-Z0-9-]{0,61}[a-zA-Z0-9])?(?:\.[a-zA-Z0-9](?:[a-zA-Z0-9-]{0,61}[a-zA-Z0-9])?)\*$, required. * Đăng ký: button. * Xóa trắng: button. | | 2 | Guess enters required information, then clicks “Đăng ký” button. [Alternative 1] | Create new member account. Show success message.  [Exception 1,2, 3] |   **Alternative Scenario:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Guest clicks “Xóa trắng” button. | Clear all input fields. |   **Exceptions:**   |  |  |  | | --- | --- | --- | | No | Actor Action | System Response | | 1 | Length of username is not in range. | Show error message: “Độ dài username phải từ 6-30 ký tự!” | | 2 | Length of password is not in range. | Show error message: “Độ dài password phải từ 6-20 ký tự!” | | 3 | Username’s existed already. | Show error message: “Trùng tên đăng nhập! Vui lòng chọn tên khác!” |   **Relationships:** N/A  **Business Rules:**   * The role of new created account is “member”. | | | |

Table 25: <Guest> Register

## Software System Attribute

### Usability

#### Graphic User Interface

* All the texts, labels and should be written in Vietnamese.

#### Usability

* Admin, staff should need less than one week of training to be productive with the system.
* Guest and member can use the system easily without training.

#### Installation

* The system must be easy to deploy. Customer can deploy successfully and learn to configure, maintain the system within one day of training.
* The mobile app must be easy to install. Compatible with almost Android Phone.
* The attached manual guide must be clear. User can read and do themselves without developer’s help.

### Reliability

* N/A

### Availability

* N/A

### Security

* Privacy: Each role of user has a specific permission to interact with system.
* System always checks authorization and authenticated before doing anything.
* Only admin can grant permission to staff.

### Maintainability

* N/A

### Portability

* N/A

### Performance

* N/A

## Conceptual Diagram

Figure 35: ERD - Conceptual Diagram