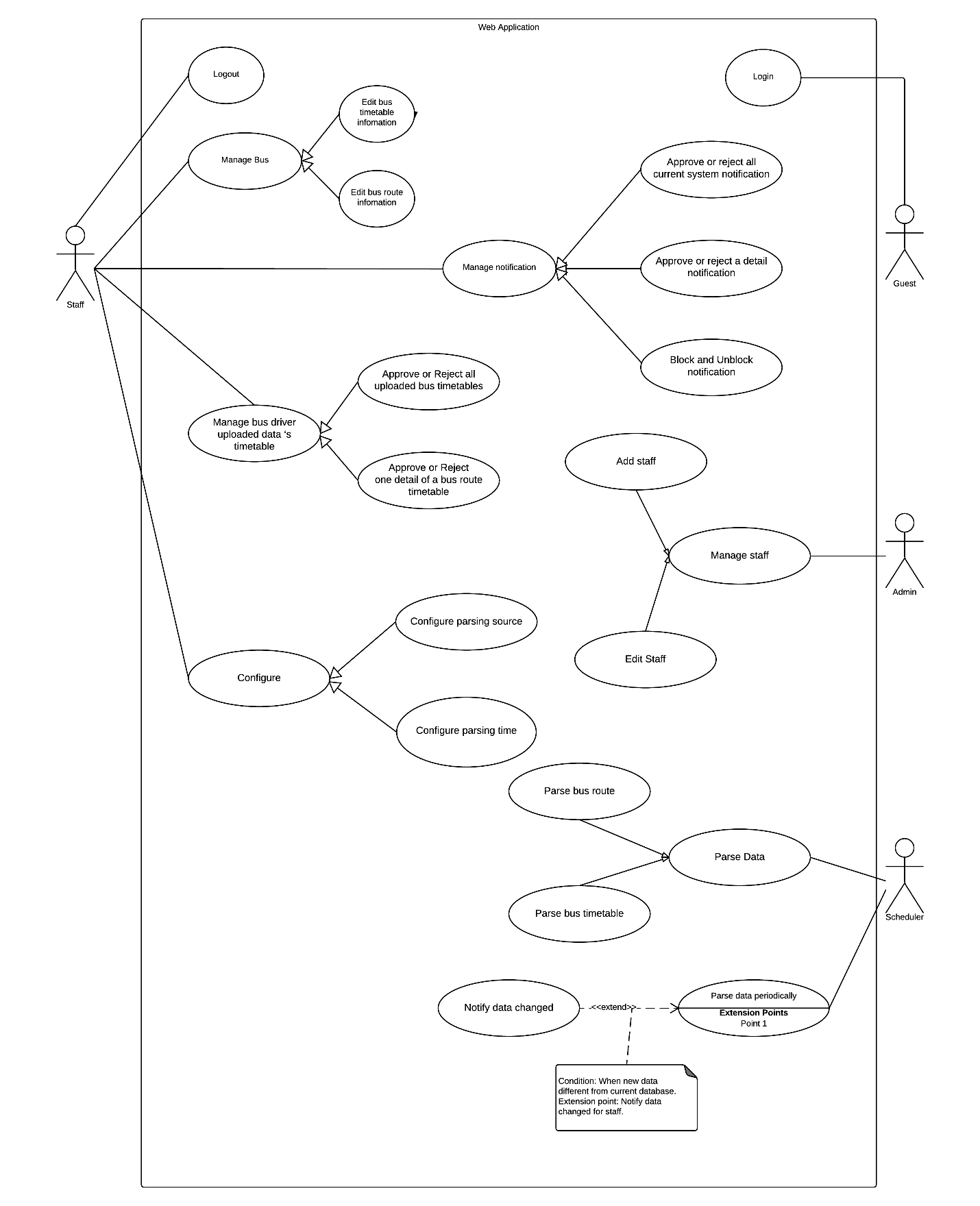
### System overview use case



### List of Use Case

#### Web Application

##### <Guest> Overview Use Case



Figure 1 <Guest> Overview Use Case

###### <Guest> Login



Figure 2 <Guest> Login

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WG01 | | | |
| Use Case No. | WG01 | **Use Case Version** | 2.0 |
| Use Case Name | Login | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | Normal |
| Actor:   * Guest   Summary:   * This use case allows guest to log in the system and this function will implement on web application.   Goal:   * Guest can log in the system.   Triggers:   * Guest sends the login command.   Preconditions:   * N/A   Post Conditions:   * Success: Guest login the system. * Fail: N/A.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Guest goes to login view. | System requires identity information from Guest:   * Guest code: free text input. * Password: free text input. | | 2 | Guest inputs information. |  | | 3 | Guest sends login command to system. | If login successful, guest will login system with login account role.  If login fail, system show error message “Invalid username or password”. |   Alternative Scenario: N/A  Exceptions: N/A  Relationships: N/A  Business Rules:   * Password field must be displayed “\*”. * Encrypt password before being send to server. * After login to system successful, guest will be redirected to specific view based on their role on the system: staff or admin. * If role is “Admin”, the system will display to Admin view. * If role is “Staff”, the system will display to Staff Dashboard view | | | |

Table 1 Use case WG01 - <Guest> Login

##### <Staff> Overview Use Case



Figure 3 <Staff> Overview Use Case

###### <Staff> Logout



Figure 4 <Staff> Logout

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS01 | | | |
| Use Case No. | WS01 | **Use Case Version** | 2.0 |
| Use Case Name | Logout | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | Normal |
| Actor:   * Staff   Summary:   * This use case allows staff logout the system and this function will implement on web application.   Goal:   * System provides logout for support staff exits from system and redirect staff to login view.   Triggers:   * Staff sends logout command.   Preconditions:   * Staff must login to system. * Session must exists.   Post Conditions:   * Success: Staff logs out the system. * Fail: Show error message.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff sends logout command. | Staff exits from system.  [Exception 1] |   Alternative Scenario: N/A  Exceptions:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Session timeout. | System log out automatically then navigate to login page because of long inactivity. |   Relationships: N/A  Business Rules:   * If user is inactive in 30 minutes, session will expire and system will automatically log staff out. * When staff logged out from system, system will redirect staff to login view. | | | |

Table 2 Use case WS01 - <Staff> Logout

###### 1.1.1.2.6. <Staff> Approve or reject all current system notification



Figure 25 <Staff> Approve or reject all current system notification

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS04 | | | |
| Use Case No. | WS06 | **Use Case Version** | 2.0 |
| Use Case Name | Approve or reject all current system notification | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | medium |
| Actor:   * Staff.   Summary:   * This use case allows staff to approve or reject all current system notifications, and this function will implement on web application.   Goal:   * System provides approve or reject all current system notifications for supporting staff manage system notifications.   Triggers:   * Staff sends approve or reject all current system notifications command.   Preconditions:   * Staff must login into the system with role Staff.   Post Conditions:   * Success: Data updated. Show successful message to staff. * Fail: N/A.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff goes to all system notifications view. | Display all current system notification view following information:   * List of notification will show on block and each notification includes:   + Content message – link to view detail notification.   + Action:     - Approve notification.     - Reject notification.     - Unblock notification.   + Time of arrived notification. | | 2 | Staff sends approve all command.  [Alternative 1] | * System will approve all system notifications. * System update new data to storage. * System show successful message to staff. |   Alternative Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff sends reject all command. |  |   Exceptions: N/A.  Relationships: N/A.  Business Rules:   * When staff approve all system notifications, system will update data from notification:   + If notification notify changes of timetable, system will update data of timetable.   + If notification notify changes of bus route, system will update data of bus route. * Staff will receive a successful notification when system done update:   + This notification on left of top of list system notification.   + This notification will automatic close in two second. * Successful message:   + Content: “New data updated”.   + Message place on left of top of list notifications.   + Message will automatic close after two second.   + Message’s color is green. | | | |

Table 28 Use case WS04 - <Staff> Approve or reject all current system notification.

###### 1.1.1.2.7. <Staff> Approve or reject detail notification



Figure 25 <Staff> Approve or reject detail notification

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS04 | | | |
| Use Case No. | WS07 | **Use Case Version** | 2.0 |
| Use Case Name | Approve or reject detail notification | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | medium |
| Actor:   * Staff.   Summary:   * This use case allows staff to approve or reject detail notification, and this function will implement on web application.   Goal:   * System provide approve or reject detail notification for supporting staff manage detail notification.   Triggers:   * Staff sends approve or reject command.   Preconditions:   * Staff must login into the system with role Staff.   Post Conditions:   * Success: Detail of notification will be approved or rejected. * Fail: N/A.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff goes to detail notification view | Display detail notification view with following information:   * Route no. * Route name. * Route type: depart or return. * List of detail notifications on table and each row includes**:**   + Index.   + Time’s type: start time or end time.   + Old notification.   + New notification.   + Time of arrived notification.   + Action:     - Approve notification.     - Reject notification. | | 2 | Staff sends approve command.  [Alternative 1] | * System will approve notification. * System update new data to storage. |   Alternative Scenario:  [Alternative 1]   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff sends reject command. |  |   Exceptions: N/A.  Relationships: N/A.  Business Rules:   * When staff approve detail notification, system will update data from notification:   + If notification notify changes of timetable, system will update data of timetable.   + If notification notify changes of bus route, system will update data of bus route. * Staff will receive a successful message when system done update:   + Message place on left of top of list system notification.   + Content of message is “New data updated”.   + Message’s color is green.   + Message will automatic close in two second. | | | |

Table 28 Use case WS04 - <Staff> Approve or reject detail notification.

###### 1.1.1.2.9. <Staff> Block and Unblock notification



Figure 25 <Staff>Block and Unblock notification

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS04 | | | |
| Use Case No. | WS08 | **Use Case Version** | 2.0 |
| Use Case Name | Block or unblock notification. | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | medium |
| Actor:   * Staff.   Summary:   * This use case allows staff to block or unblock notification and this function will implement on web application.   Goal:   * System provide block or unlock notification function for supporting staff to manage notification.   Triggers:   * Staff sends block or unlock notification command.   Preconditions:   * Staff must login into the system with role Staff.   Post Conditions:   * Success: Notification will block or unlock. * Fail: N/A   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 2 | Staff sends block or unlock notification command. | System block or unlock notification, which requested.  System show successful message:   * If message notify about route timetable, message is “Notification for timetable of [route name] is blocked (unlocked)”. * If message notify about bus route, message is “Notification for bus [route name] is blocked (unblocked)”. |   Alternative Scenario: N/A  Exceptions: N/A  Relationships: N/A  Business Rules:   * The initial status of notification is “Pending”. * When staff block notification, status of notification will change “Pending” to “Blocked”. * When staff unblock notification, status of notification will change “Blocked” to “Activated”. | | | |

Table 28 Use case WS04 - <Staff> Unlock notification.

###### 1.1.1.2.10. <Staff> Configure parsing source



Figure 25 <Staff> Configure parsing source

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS04 | | | |
| Use Case No. | WS08 | **Use Case Version** | 2.0 |
| Use Case Name | Configure parsing source. | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | medium |
| Actor:   * Staff.   Summary:   * This use case allows staff to choose parsing source and this function will implement on web application.   Goal:   * The system provide configure parsing source for parser knows which source to parse.   Triggers:   * Staff sends configure parsing source command.   Preconditions:   * Staff must login into the system with role Staff. * Staff must specific source for parsing.   Post Conditions:   * Success: System call scheduler for parsing data. * Fail: N/A.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff sends configure parsing source command. | System have two option for parsing:   * If staff chooses parsing from file:   + Staff select file from local computer.   + If selected file is json(reference use case: <Scheduler> Parse bus route)   + If selected file is excel (reference use case: <Scheduler> Parse bus timetable).   [Alternative 1]   * If staff chooses parsing from web:   + System request parsed link: <http://www.buyttphcm.com.vn/TTLT.aspx> (link 1) and   <http://mapbus.ebms.vn/> (link 2).   * + Within parsed link, system fetch data by using JSoup and HTMLUnit.   + System call scheduler:     - Within link 1, system call parse bus timetable (reference use case <Scheduler> Parse bus timetable)     - With link 2, system call parse bus route (reference use case <Scheduler> Parse bus route) |   Alternative Scenario:  [Alternative 1]   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | No file for parsing. | Show message to notify staff must select file before configure parsing source. | | 2 | File is inappropriate with required file from system. | Show message to notify staff select incorrect file for parsing. |   Exceptions: N/A  Relationships: N/A.  Business Rules:   * System just supports parse json file and excel file (“.xls”, “.xlsx”). * In presently, system just supports for map of Ho Chi Minh bus. | | | |

Table 28 Use case WS04 - <Staff> Configure parsing source.

###### 1.1.1.2.11. <Staff> Configure parsing time



Figure 25 <Staff> Configure parsing time

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS04 | | | |
| Use Case No. | WS08 | **Use Case Version** | 2.0 |
| Use Case Name | Configure parsing time. | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | medium |
| Actor:   * Staff.   Summary:   * This use case allows staff to configure parsing time and this function will implement on web application.   Goal:   * System provide configure parsing time for parser knows when to parse.   Triggers:   * Staff sends configure parsing time command.   Preconditions:   * Staff must login into the system with role Staff.   Post Conditions:   * Success: System record configured time and scheduler will parse at configured time. * Fail: N/A.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Staff goes to configure parsing time view. | Configure parsing time view shown with following information:   * Date Picker. * Repeat day. | | 2 | Staff configure time. |  | | 3 | Staff sends configure parsing time command. | System records configured time and call scheduler for parsing at configured time (reference use case Parse data periodically). |   Alternative Scenario: N/A.  Exceptions: N/A.  Relationships: N/A.  Business Rules:   * Default time for configuration is 0:00 AM. * Time for configuration must be from 11:00 PM to 11:59 PM, 0:00 AM to 04:00 AM. | | | |

Table 28 Use case WS04 - <Staff> Choose parsing time.

##### 1.1.1.3 <Scheduler> Overview Use Case

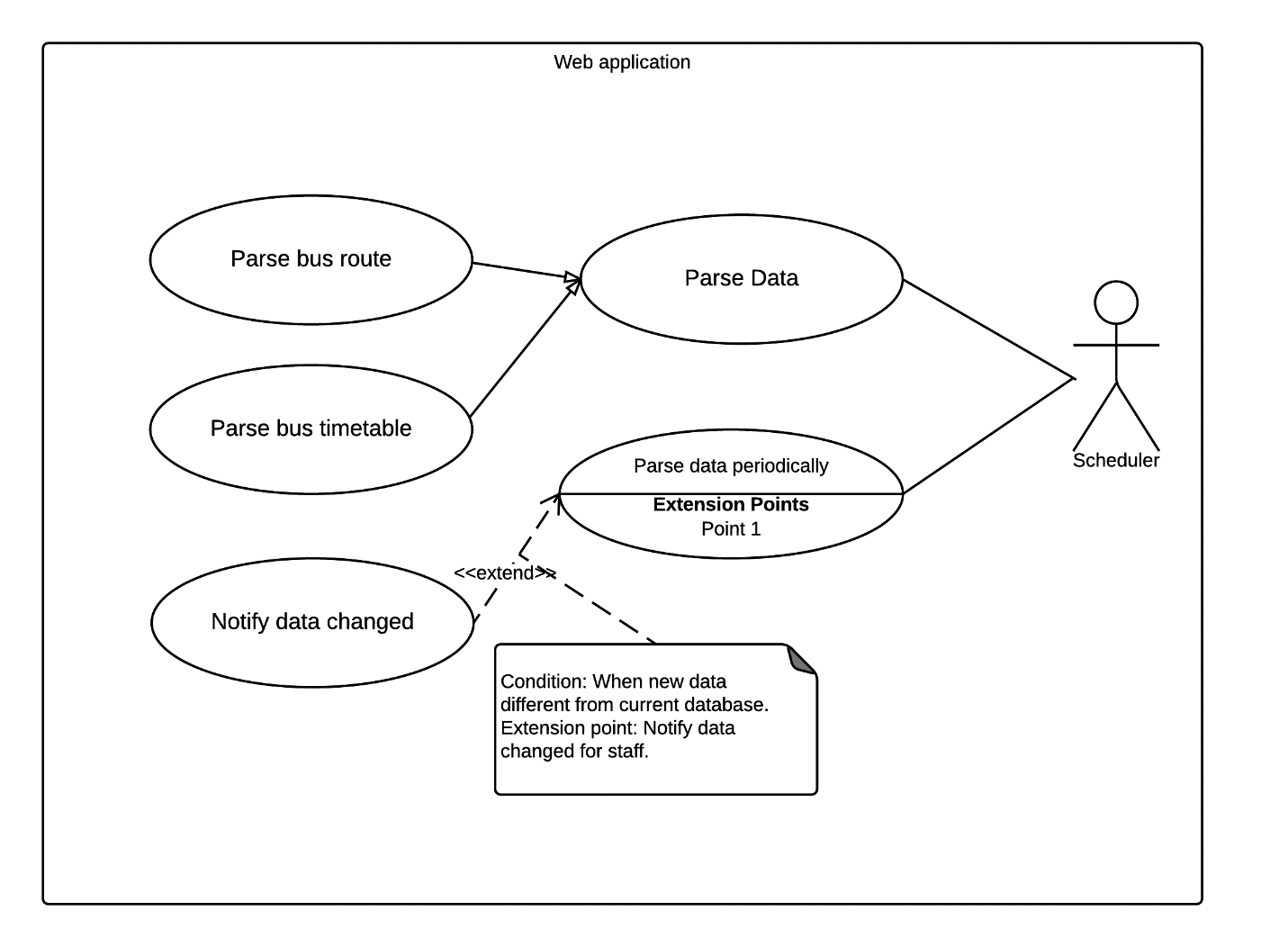


Figure 21 <Scheduler> Overview Use Case

###### 1.1.1.2.11. <Scheduler> Parse bus route



Figure 25 <Staff> Parse bus route

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS04 | | | |
| Use Case No. | WS08 | **Use Case Version** | 2.0 |
| Use Case Name | Parse bus route. | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | medium |
| Actor:   * Staff.   Summary:   * This use case allows scheduler to parse bus route and this function will implement on web application.   Goal:   * The system provide parse bus route for getting source.   Triggers:   * Scheduler sends parsing source command.   Preconditions:   * Staff must specific json file for parsing. * Staff sends configure parsing source command.   Post Conditions:   * Success: New data inserted to storage. * Fail: Nothing changed in storage.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Scheduler sends parse bus route command. | * Get json file. * Fetch data based on Jackson Json. * Validate Data [Exception 1] * If data valid, insert data into storage. [Alternative 1] |   Alternative Scenario:   |  |  |  | | --- | --- | --- | | Step | Cause | System Response | | 1 | System insert data to storage successful. | System sends successful message to staff. |   Exceptions:   |  |  |  | | --- | --- | --- | | Step | Cause | System Response | | 1 | Local file is incorrect with format json file. | * System terminate process parsing. * System sends fail message to staff and suggests a json template file. |   Relationships: N/A.  Business Rules:   * The json template file for suggestion can download. * File for parsing must correct following json template file:      * + Field 1 is route no.   + Field 2 is not use.   + Field 3 is not use.   + Field 4 is middle point in path.   + If field 5 is false, route return. If field 5 is true, route depart.   + Field 7 is order in path.   + Field 8 is not use.   + Field 9 is name of station.   + Field 10 is a latitude.   + Field 11 is a longitude.   + Field 12 is not use.   + Field 13 is name of route.   + Field 14 is id of station. * Successful message:   + Content: “Parse bus route successful”.   + This message place on left of header panel.   + Message’s color is blue.   + Closing message will close when staff clicked. * Error message:   + Content: “Parse bus route failed. Please make sure json file is correct with template Template.xls”   + This message place on left of header panel and next to successful message.   + Message’s color is red.   + Closing message when staff clicked. | | | |

Table 28 Use case WS04 - <Staff> Configure parsing source.

###### 1.1.1.2.11. <Scheduler> Parse bus timetable.



Figure 25 <Staff> Parse bus timetable

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS04 | | | |
| Use Case No. | WS08 | **Use Case Version** | 2.0 |
| Use Case Name | Parse bus timetable. | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | medium |
| Actor:   * Staff.   Summary:   * This use case allows scheduler to parse bus timetable and this function will implement on web application.   Goal:   * The system provide parse bus timetable for getting source.   Triggers:   * Scheduler sends parsing source command.   Preconditions:   * Source has configured.   Post Conditions:   * Success: New data inserted to storage. * Fail: Nothing changed in storage.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Scheduler sends parse bus time command. | * Get excel file. * Fetch data based on Apache POI. * Validate Data [Exception 1] * If data valid, insert data into storage. * System show successful message to staff |   Alternatives Scenario: N/A.  Exceptions:  [Exception 1]   |  |  |  | | --- | --- | --- | | Step | Cause | System Response | | 1 | Local file is incorrect with format excel file. | * System terminates process parsing. * System show failed message to staff and suggests an excel template file. |   Relationships: N/A.  Business Rules:   * The excel template file can download. * File for parsing must correct following excel template file:      * + Input time is date type. * Successful message:   + Content: “Parse bus timetable successful”.   + This message place on left of header panel.   + Message’s color is blue.   + Closing message will close when staff clicked. * Error message:   + Content: “Parse bus timetable failed. Please make sure excel file is correct with template Template.xls”   + This message place on left of header panel and next to successful message.   + Message’s color is red.   + Closing message when staff clicked. | | | |

Table 28 Use case WS04 - <Staff> Parse bus timetable.

###### 1.1.1.2.11. <Scheduler> Parse data periodically

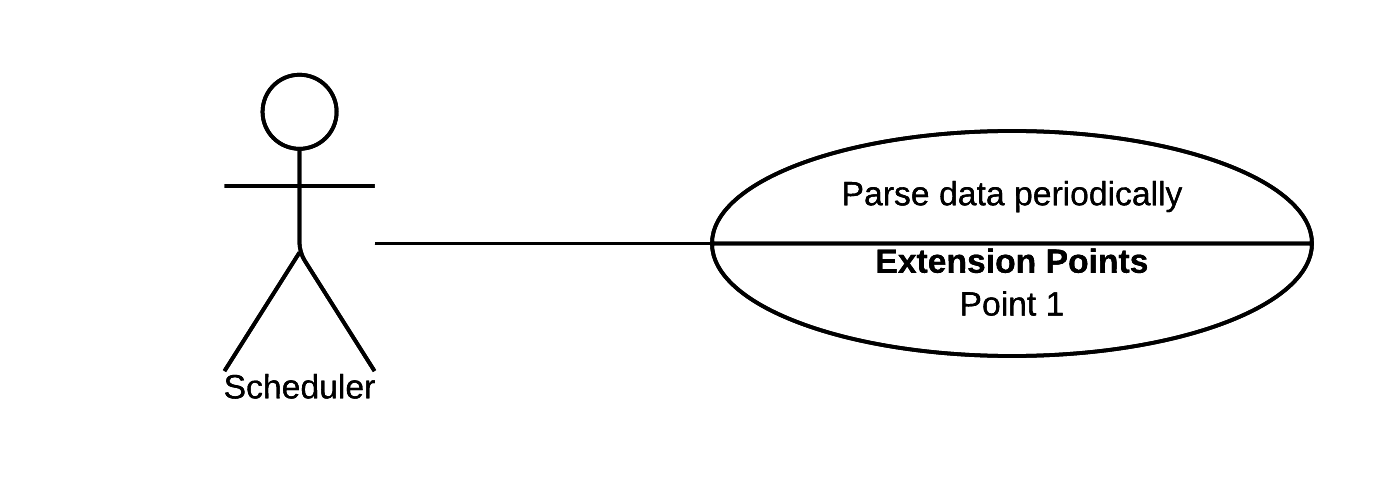


Figure 25 <Staff> Parse data periodically

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS04 | | | |
| Use Case No. | WS08 | **Use Case Version** | 2.0 |
| Use Case Name | Parse data periodically. | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | medium |
| Actor:   * Staff.   Summary:   * This use case allows scheduler to parse data periodically and this function will implement on web application.   Goal:   * The system provide parse data periodically for automating get source when periodically time arrive.   Triggers:   * Scheduler sends parse data periodically command.   Preconditions:   * Time has configured.   Post Conditions:   * Success: Show successful message. * Fail: N/A.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Scheduler sends parse data periodically command. | - When periodical time arrive, system call parse bus route and parse bus timetable (reference use case *<Scheduler> Parse bus route* and *<Scheduler> Parse bus timetable*). |   Alternatives Scenario: N/A  Exceptions: N/A.  Relationships: N/A.  Business Rules: N/A. | | | |

Table 28 Use case WS04 - <Staff> Configure parsing source.

##### 1.1.1.3 <Admin> Overview Use Case

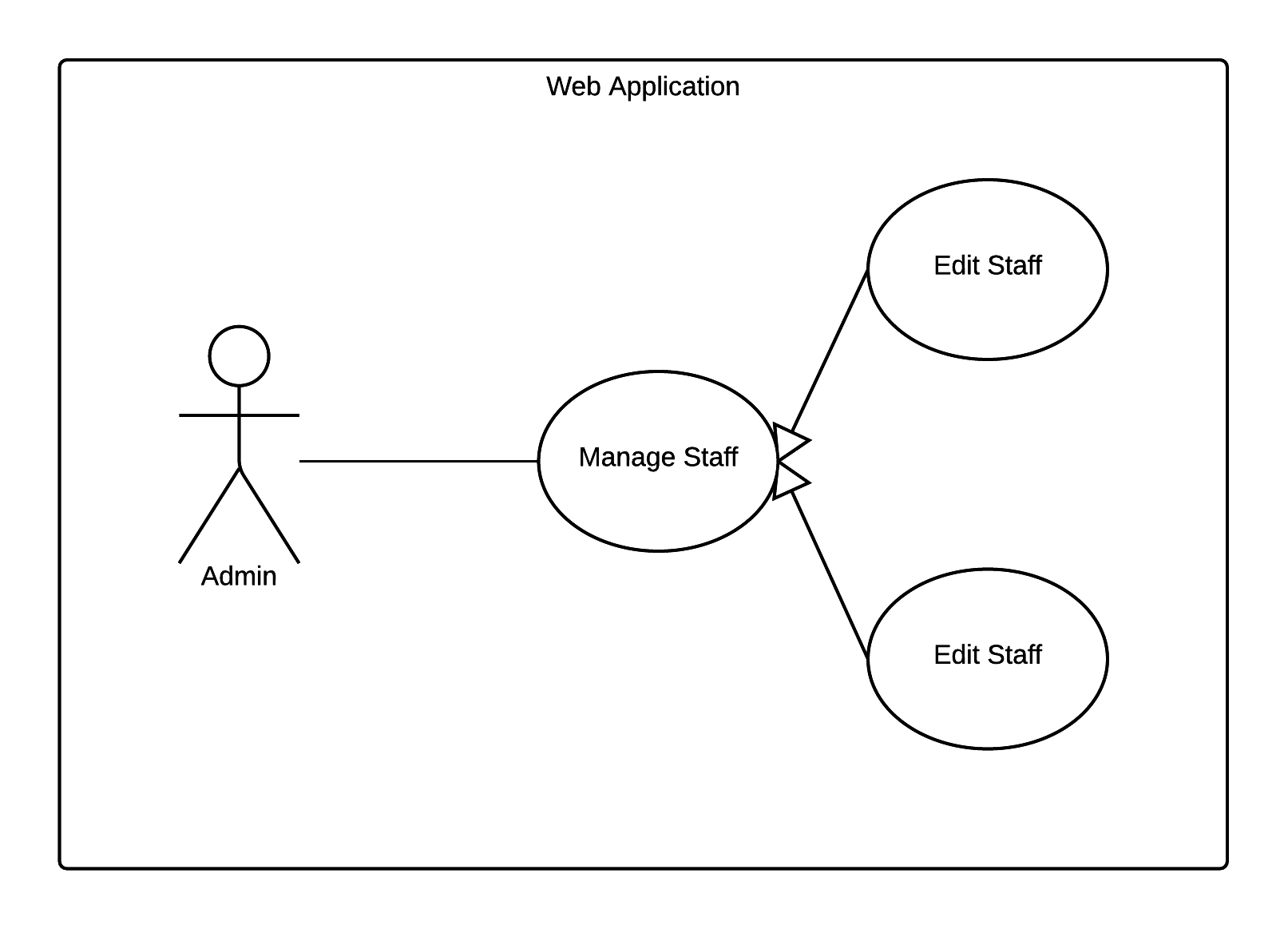
. 

Figure 25 <Admin> Admin Overview Use Case

###### 1.1.1.2.11. <Admin> Add staff

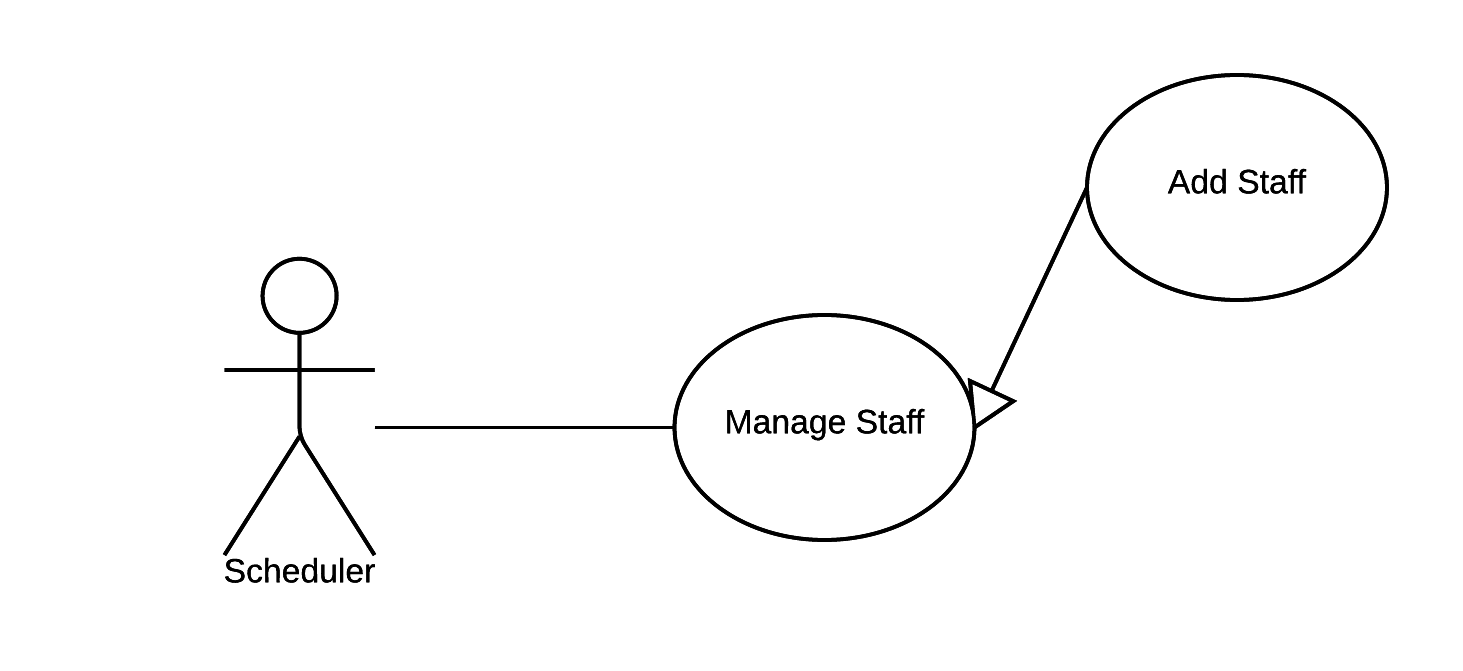
**

Figure 25 <Admin> Add staff

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS04 | | | |
| Use Case No. | WS08 | **Use Case Version** | 2.0 |
| Use Case Name | Add staff. | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | medium |
| Actor:   * Staff.   Summary:   * This use case allows admin add staff and this function will implement on web application.   Goal:   * The system provide add staff for creating new staff.   Triggers:   * Admin sends add staff command.   Preconditions:   * Admin must login to system.   Post Conditions:   * Success: New staff created. Show success message. * Fail: N/A.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Admin goes to add staff view. | System display view with following information:   * Staff’s full name: free text input, required. * Staff’s username: free text input, required. * Staff’s password: password input, required. * Staff’s email address: free text input, required. * Staff’s phone number: free text input. * Staff’s role: dropdown list. | | 2 | Staff fills out the form. |  | | 3 | Staff sends create staff command. | * Validate data.   [Exception 1]   * If data valid, system create new staff. * System show successful message to admin. |   Alternatives Scenario: N/A  Exceptions:  [Exception 1]   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Missing required field. | Show message to notify admin, which required fields are missing. | | 2 | Field’s value have length out of specified range. | Show message to notify staff which field’s value is out of range | | 3 | Email address is incorrect with format email. | Show message to notify staff an email is not valid. | | 4 | The inputted email address has existed on storage. | Show message to notify staff an inputted email address has existed. |   Relationships: N/A.  Business Rules:   * An email address must be validated by this regular expression:   /^([a-z0-9\_\.-]+)@([\da-z\.-]+)\.([a-z\.]{2,6})$/   * Role have two choice: admin and staff, default role is staff. * Successful message:   + This message place on left of top of form add staff.   + Message’s color is green.   + This message will automatic close in two second. * Error message:   + This message on left of top of form edit staff.   + This message is red. | | | |

Table 28 Use case WS04 - <Staff> Add staff.

###### 1.1.1.2.11. <Admin> Edit staff

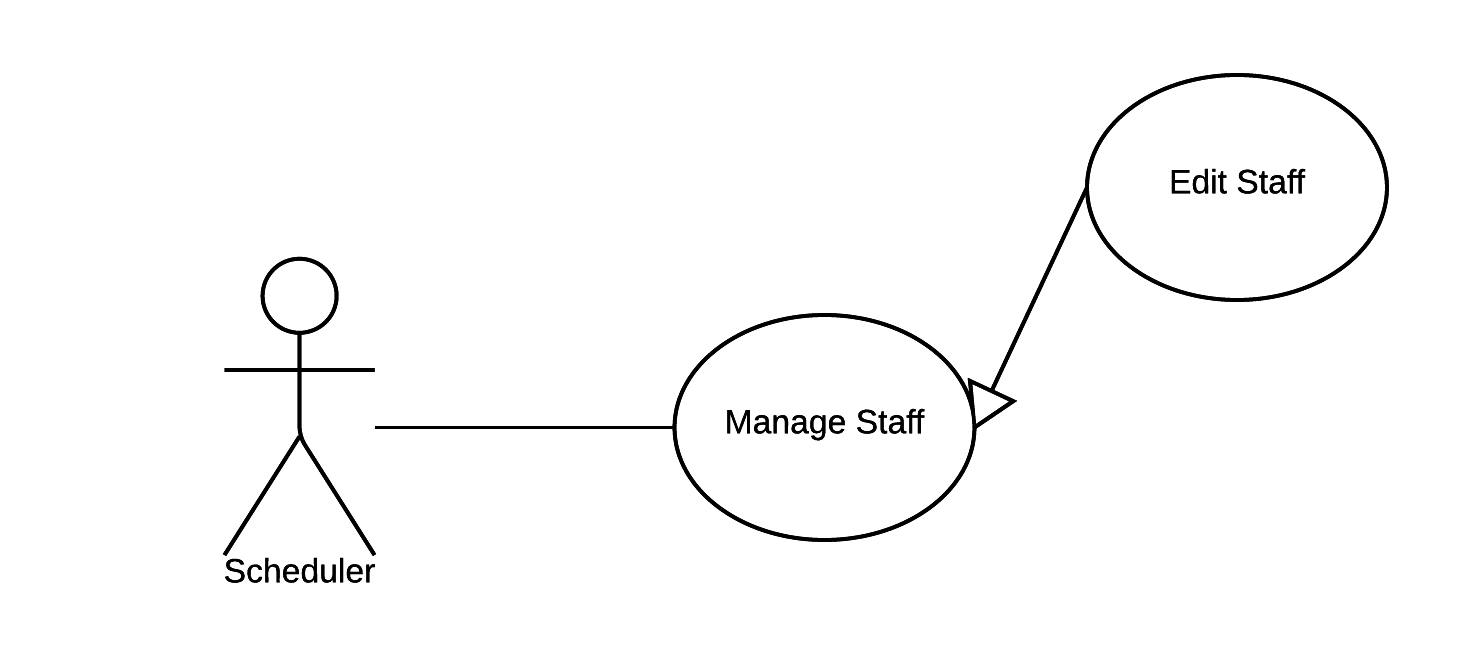


Figure 25 <Admin> Edit staff

|  |  |  |  |
| --- | --- | --- | --- |
| USE CASE – WS04 | | | |
| Use Case No. | WS08 | **Use Case Version** | 2.0 |
| Use Case Name | Add staff. | | |
| Author | DatNT | | |
| Date | 23/09/2015 | **Priority** | medium |
| Actor:   * Staff.   Summary:   * This use case allows admin add staff and this function will implement on web application.   Goal:   * The system provide edit staff to help admin can edit staff information.   Triggers:   * Admin sends edit staff command.   Preconditions:   * Admin must login to system.   Post Conditions:   * Success: Staff’s information updated. Show success message. * Fail: N/A.   Main Success Scenario:   |  |  |  | | --- | --- | --- | | Step | Actor Action | System Response | | 1 | Admin goes to edit customer information view. | System display view with following information:   * Staff’s full name. * Staff’s username. * Staff’s email address * Staff’s phone number. * Staff’s role. | | 2 | Staff selected field |  | | 3 | Staff input value. |  | | 3 | Staff sends edit staff command. | * Validate data.   [Exception 1]   * If data valid, system update new staff’s information to storage. * System show successful message to admin. |   Alternatives Scenario: N/A  Exceptions:  [Exception 1]   |  |  |  | | --- | --- | --- | | No | Cause | System Response | | 1 | Field’s value have length out of specified range. | Show message to notify staff which field’s value is out of range | | 2 | Email address is incorrect with format email. | Show message to notify staff an email is not valid. | | 3 | The inputted email address has existed on storage. | Show message to notify staff an inputted email address has existed. |   Relationships: N/A.  Business Rules:   * An email address must be validated by this regular expression:   /^([a-z0-9\_\.-]+)@([\da-z\.-]+)\.([a-z\.]{2,6})$/   * Role have two choice: admin and staff, default role is staff. * Successful message:   + This message on left of top of form edit staff.   + This message is green.   + This message will automatic close in two second. * Error message:   + This message on left of top of form edit staff.   + This message is red. | | | |

Table 28 Use case WS04 - <Staff> Add staff.