

BUS USER SUPPORT SYSTEM

DETAIL DESIGN DOCUMENT

Class Design

**Project Code: BUSS**

**Document Code: BUSS\_Class\_Design\_v1.0\_EN**

**Ha Noi, 26/06/2015**

Record of change

\*A - Added M - Modified D – Deleted

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Effective Date** | **Changed Items** | **A\* M, D** | **Change Description** | **New Version** |
| 26/06/2015 | Add new | A | Add this document | v1.0 |
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SIGNATURE PAGE

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# Introduction

## Purpose

Bus user support system class design document contains descriptions of all classes of the Bus user support system. It includes:

* Class diagrams that describe the static relation of all classes in the system.

## Definitions, Acronyms and Abbreviations

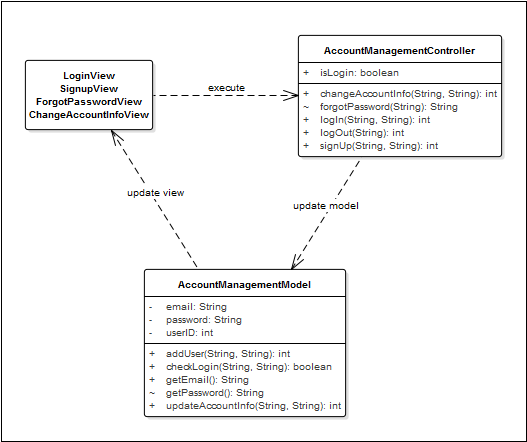
|  |  |  |
| --- | --- | --- |
| Abbreviations | Description | Comment |
| MVC | Model View Control model |  |
| BUSS | Bus User Support System |  |

# Packages

|  |  |  |  |
| --- | --- | --- | --- |
| No | Package | Language | Description |
| 1. 01 | Common | Java, XML | Store all information search |
|  | Account management | Java, XML | Store all information user and action as : registration, login, log out, viewprofile… |
|  | Bus | Java, XML | Contribution (database, opinion,Q&A) |
|  | Path finder | Java, XML | Do test and Reading document |
|  | Reminder | Java, XML | Manage to admin (add, delete, edit) |
|  | Track | Java, XML | Manage to member (ban/unban,detele) |
|  | Favorite | Java, XML | Store all information of Vocabulary. |

## Account management Package

### Class diagram



**Figure 1: Class diagram Account mangement package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | AccountManagementModel | Include method interact with database |
| 2 | AccountManagementController | Include method interact with model |

### AccountManagementModel class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | userID | Number |  | private |  |
| 1. 2 | email | String |  | private |  |
| 1. 3 | password | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | addUser() | Interact with database: add a new user. |
|  | checkLogin() | Interact with database: check if email and password inputted match with database or not |
|  | getEmail() | Interact with database: get user’s email |
|  | getPassword() | Interact with database: get user’s password |
|  | updateAccountInfo() | Interact with database: update user account info |

### AccountManagementController

#### Attributes

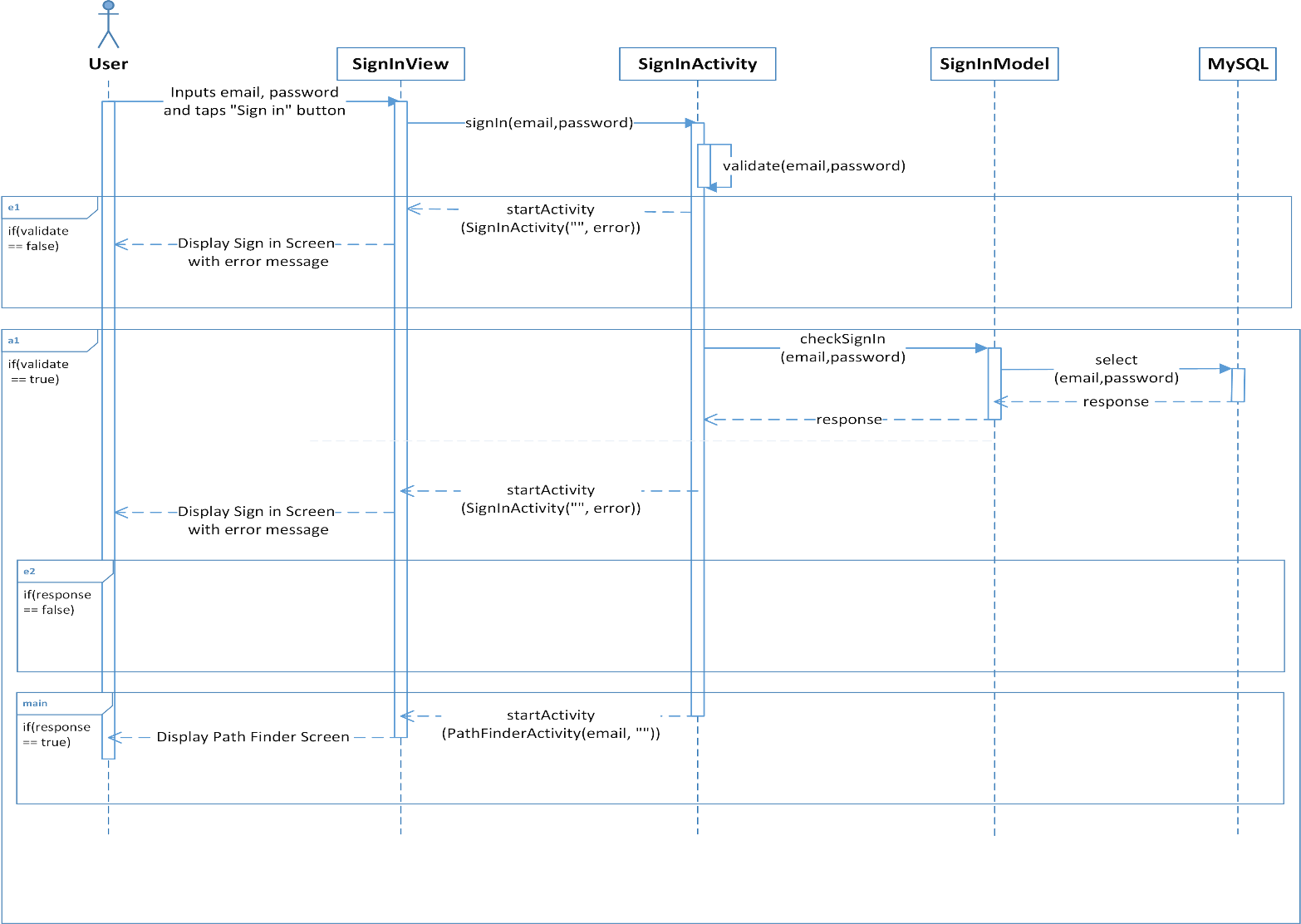
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | isLogin | Boolean |  | package |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | changeAccountInfo() | Interact with model to change account info in database |
|  | forgotPassword() | Interact with model to get password from database and send to user’s email |
|  | logIn() | Interact with model to check if user input validated data to log in or not and let them log in. |
|  | logOut() | Log user out of the application |
|  | signUp() | Interact with model to create new user in database and let user sign up. |

### Account management Sequence Diagram

#### UC001\_LogIn



#### UC002\_SignUp

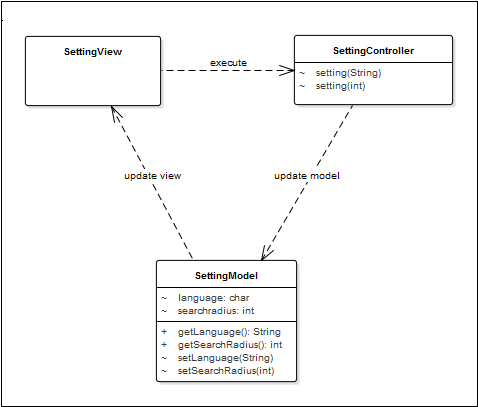
#### UC003\_LogOut

#### UC004\_ForgotPassword

#### UC005\_ChangeAccountInfo

## Common Package

### Class diagram



**Figure 2: Class diagram common package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | SettingModel | Include method interact with database |
| 2 | SettingController | Include method interact with model |

### CommonModel class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | language | String |  | Package |  |
| 2 | searchradius | Number |  | Package |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getLanguage() | Interact with database: get language info |
|  | getSearchRadius() | Interact with database: get search radius info |
|  | setLanguage() | Interact with database: set language |
|  | setSearchRadius() | Interact with database: set search radius |

### CommonController class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |

#### Methods

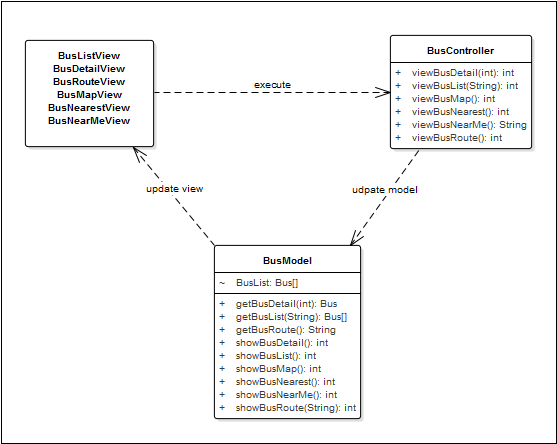
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | setting(String) | Set language |
|  | setting(int) | Set search radius |

### Sequence Diagram

#### UC006\_Change app setting

## Bus Package

### Class diagram



**Figure 3: Class diagram Contact package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | BusModel | Include method interact with database |
| 2 | BusController | Include method interact with model |

### BusModel class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | busList | Bus[] |  | package |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getBusList() | Interact with database: get bus list |
|  | getBusDetail() | Interact with database: get bus detail |
|  | getBusRoute() | Interact with database: get bus route |
|  | showBusDetail() | Notify change to view – show bus detail |
|  | showBusRoute() | Notify change to view – show bus route |
|  | showBusMap() | Notify change to view – show bus map |
|  | showBusNearest() | Notify change to view – show bus nearest |
|  | showBusNearMe() | Notify change to view – show bus near me |

### BusController class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | viewBusList() | View bus list |
|  | viewBusDetail() | View bus detail |
|  | viewBusRoute() | View bus route |
|  | viewBusMap() | View bus map |
|  | viewBusNearest() | View bus nearest |
|  | viewBusNearMe() | View bus near me |

### Sequence diagram

#### UC0007\_View bus list

#### UC0008\_Search bus in list

#### UC0009\_View bus info

#### UC0010\_View bus route

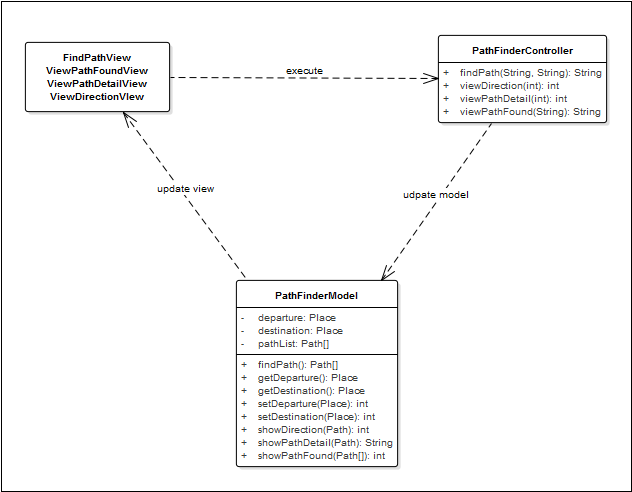
#### UC0011\_View bus map

#### UC0012\_View bus nearest

#### UC0013\_View bus near me

## Path Finder Package

### Class diagram



***Figure 4: Class diagram Path finder package***

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | PathFinderModel | Include method interact with database |
| 5 | PahtFinderController | Include method interact with models |

### PathFinderModel class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | departure | Place |  | private |  |
| 1. 2 | destination | Place |  | private |  |
| 1. 3 | pathList | Path[] |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | findPath() | Find path |
|  | getDeparture() | Get departure |
|  | getDestination() | Get destination |
|  | setDeparture() | Set departure |
|  | setDestination() | Set destination |
|  | showPathFound() | Show path found |
|  | showPathDetail() | Show path detail |
|  | showDirection() | Show direction |

### PathFinderController class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | findPath() | Find path |
| 2 | viewPathFound() | View path found |
| 3 | viewPathDetail() | View path detail |
| 4 | viewDirection() | View direction |

### Sequence Diagram

#### UC0014\_Find path

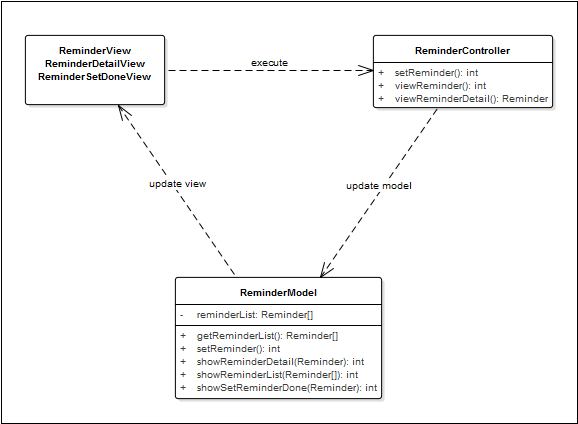
#### UC0015\_View path found

#### UC0016\_View path detail

#### UC0017\_View direction

## Reminder Package

### Class diagram



**Figure 5: Class diagram Reminder package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | ReminderModel | Include method interact with database |
| 2 | ReminderController | Include method interact with model |

### ReminderModel class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | reminderList | Reminder[] |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getReminderList() | Interact with database: get reminder list |
|  | setReminder() | Interact with database: set a reminder (add/edit/delete/suspend) |
|  | showReminderList() | Notify change to view – show reminder list |
|  | showReminderDetail() | Notify change to view – show reminder detail |
|  | showReminderSetDone() | Notify change to view – show reminder set done |

### ReminderController class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | setReminder() | Set a reminder (add/edit/delete/suspend) |
|  | viewReminder() | View reminder list |
|  | viewReminderDetail() | View reminder detail |

### Sequence Diagram

#### UC0018\_View bus reminder

#### UC0019\_Add reminder

#### UC0020\_Edit reminder

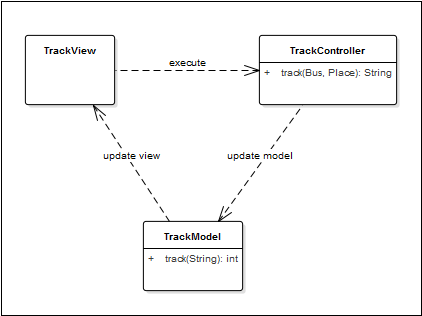
#### UC0021\_Delete reminder

#### UC0022\_ Suspend/Unsuspend all reminder

#### UC0023\_ Suspend/Unsuspend a chosen reminder

## Track Package

### Class diagram



**Figure 6: Class diagram Management member package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | TrackModel | Include method interact with database |
| 2 | TrackController | Include method interact with model |

### TrackModel class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | track() | Interact with database: set track and track bus(es) |

### TrackController class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | track() | Track bus(es) |

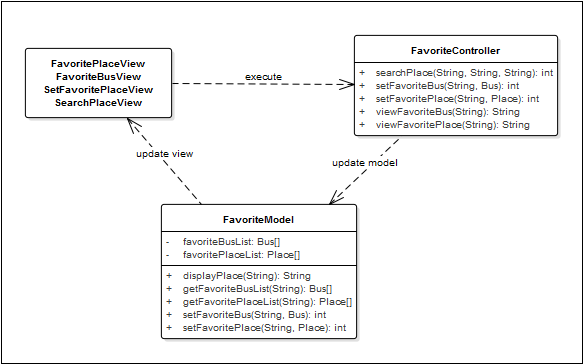
### Sequence Diagram

#### UC0024\_SetTrack

#### UC0025\_CancelTrack

## Favorite Package

### Class diagram



**Figure 7: Class diagram Favorite package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | FavoriteModel | Include method interact with database |
| 2 | FavoriteController | Include method interact with model |

### FavoriteModel class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | favoriteBusList | Bus[] |  | private |  |
| 2 | favoritePlaceList | Place[] |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | displayPlace() | Notify change to view – display found place |
| 2 | getFavoriteBus() | Interact with database: get favorite bus |
| 3 | getFavoritePlac() | Interact with database: get favorite place |
| 4 | setFavoriteBus() | Interact with database: set favorite bus |
| 5 | setFavoritePlace() | Interact with database: set favorite place |

### FavoriteController class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | searchPlace() | Search place |
|  | viewFavoriteBus() | View favorite bus |
|  | viewFavoritePlac() | Get favorite place |
|  | setFavoriteBus() | Set favorite bus |
|  | setFavoritePlace() | Set favorite place |

### Sequence Diagram

#### UC0026\_View favorite place

#### UC0027\_ Add favorite place

#### UC0028\_ Edit favorite place

#### UC0029\_ Delete favorite place

#### UC0030\_Search favorite place

#### UC0031\_View favorite bus

#### UC0032\_Add favorite bus

#### UC0033\_Delete favorite bus

#### UC0033\_ Search favorite bus

# MVC model



***Figure 6: MVC Model***