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# CHAPTER 1 | INTRODUCTION

## 1.1 Purpose

The Software Design Document (SDD) is a document to provide documentation, which will be used to aid in software development by providing the detail of how the software should be built. In the Software Design Document is narrative and graphical documentation of the software design for this project.

This document contains design description of the promotion provider. This includes the architectural feature of the system down though the detail of what operations will perform. It also shows how the use cases promised in the SRS would be implementation in the system using this design.

## 1.2 Project Scope

This Software Design Document provides a description of the design of the promotion provider. The dominant design methodology is an object-oriented design combine with Model-View-Controller.

This Software Design Document is for a high-level system, which will work as a proof of the concepts. This software design is focused on the high-level system and critical parts of the system.

## 1.3 Definition, Acronyms, and Abbreviation

### 1.3.1 Key definition

**Design** “The period of time in the software lift cycle during which the design for architect, software components, interfaces, and data are created, and verified to satisfy requirement.”[IEEE90]

**Entity Relationship Diagram** “data modeling technique that creates a graphical representation of the entities, and the relationships between entities, within an information system.”

[techtarget.com]

**iOS** “the operating system in the iPhone and

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iPod touch."

**System Architecture** "a generic discipline to handle objects (existing or to be created) called "systems", in a way that supports reasoning about the structural properties of these objects."

[Lix.polytechnique.fr]

**Client** "a client is an application that runs on a personal computer or workstation and relies on a server to perform some operations. For example, an *e-mail client* is an application that enables you to send and receive e-mail."

### 1.3.2 Keys Acronyms and Abbreviations

Key Acronyms	Abbreviation
SRS	System Requirement Specification
SDD	Software Design Document
ERD	Entity Relationship Diagram
GUI	Graphic User Interface
SD	Sequence Diagram

Table 4.1: Key Acronyms and Abbreviations

## 1.4 User Characteristic

Administrator should be able to:

- Login to web application
- Logout from web application
- Add shop owner account
- View shop owner account
- Delete shop owner account
- Add promotion
- Edit promotion
- Delete promotion
- Accept register request
- Reject Register request

Shop owner should be able to:

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- Login to web application
- Logout from web application
- Add promotion
- Edit promotion
- Delete promotion
- Update profile
- Change password

Guest should be able to:

- Sent register request

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# CHAPTER 2 | SYSTEM ARCHITECTURE

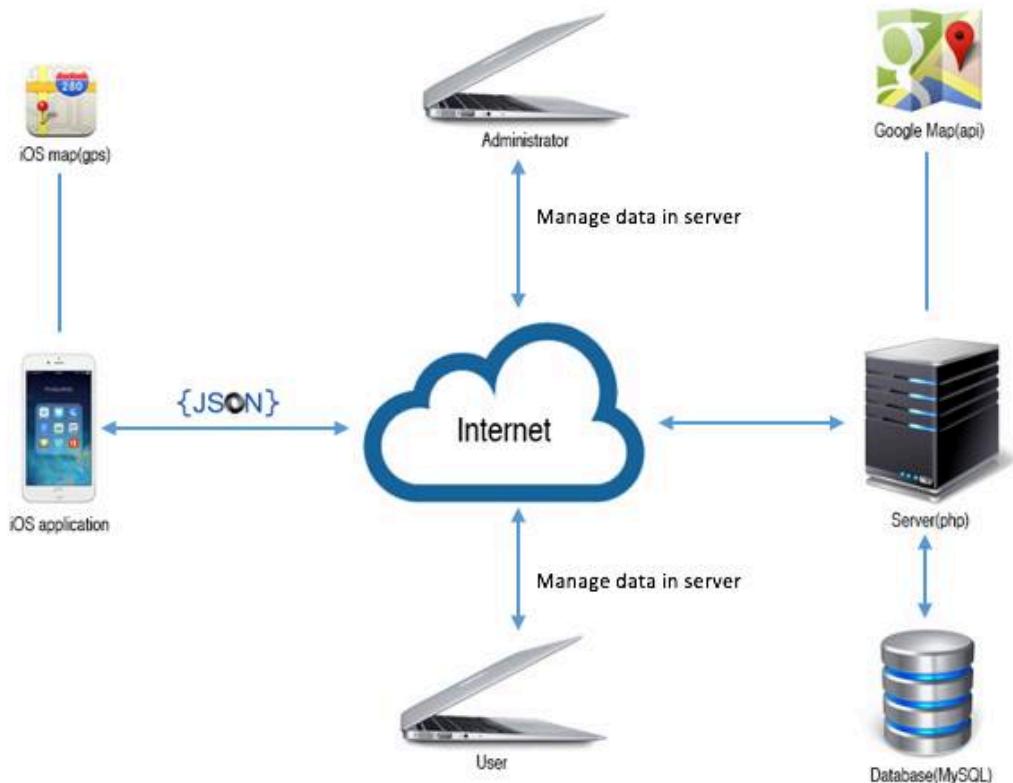


Figure 4.1: System Architecture

This project will have two sides, the first is client side that is the iPhone application. The client will use Apple API to provide a map. The second is server side that is web and database. In this system client need to connect a server, and then the server will connect to the database and sent the data back to the client via the Internet in the form of JSON. The client application cannot retrieve information without connecting to the server because every data and information of the restaurant or the hotel will store in the database server. User (Hotel or restaurant) can add promotions into our system, and admin can also manage data in the system that are adding, editing and deleting.

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# CHAPTER 3 | DETAILED DESIGN

## 3.1 Class diagram

### 3.1.1 Promotion provider class diagram

#### 3.1.1.1 Overall Promotion provider class diagram

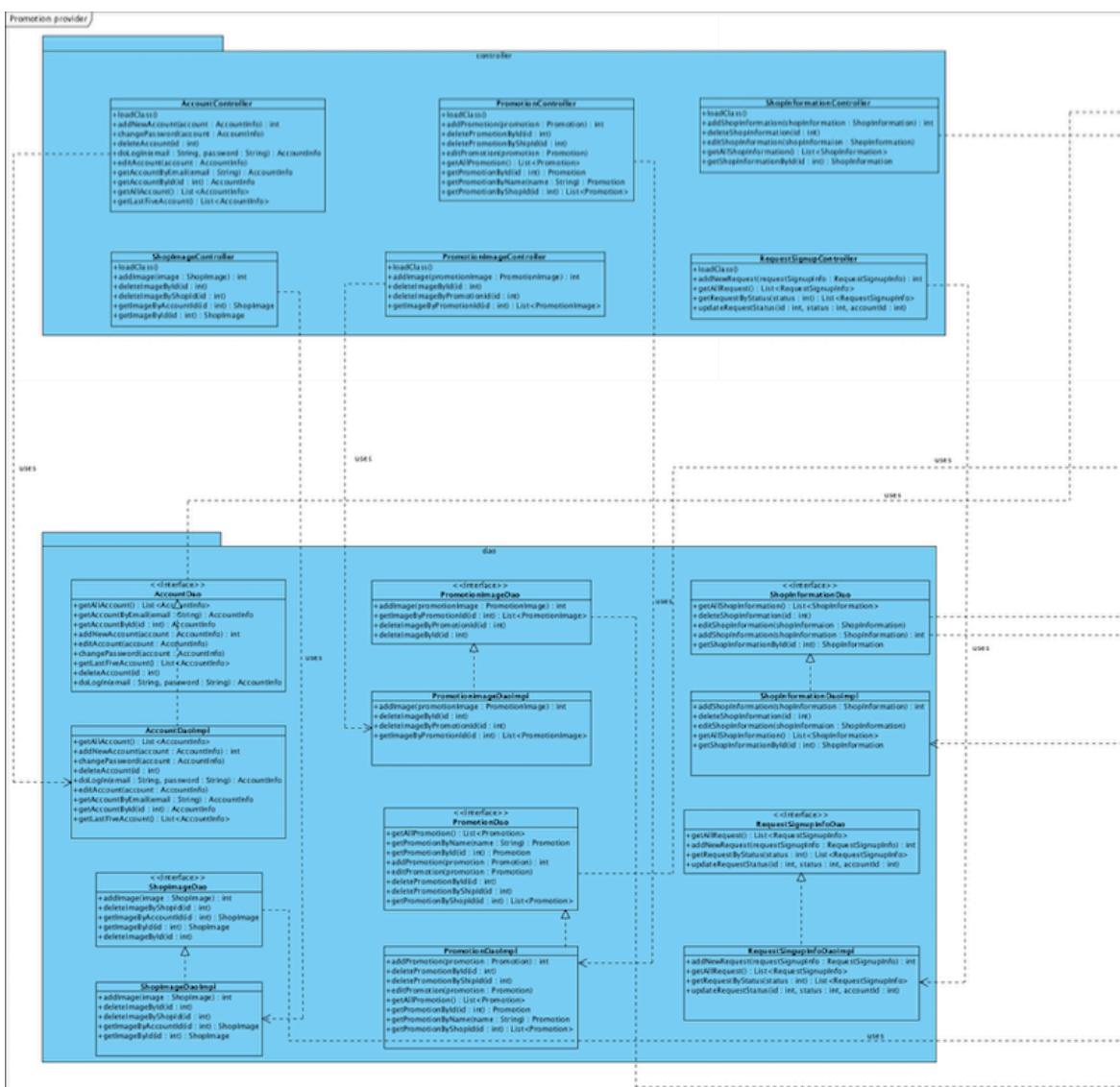


Figure 4.2: Overall Promotion provider class diagram (1)

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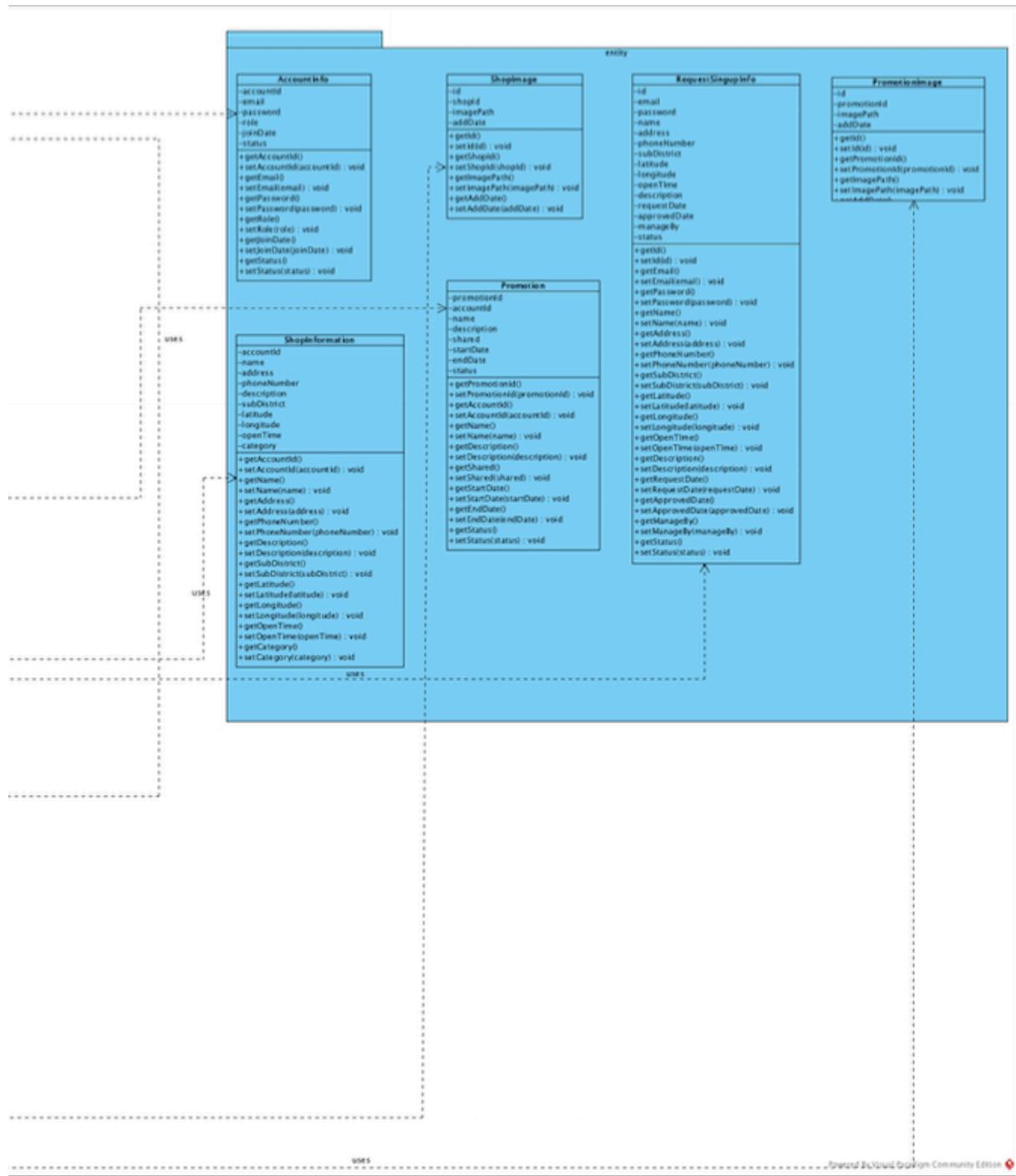


Figure 4.3: Overall Promotion provider class diagram (2)

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### 3.1.1.2 Dao package class diagram

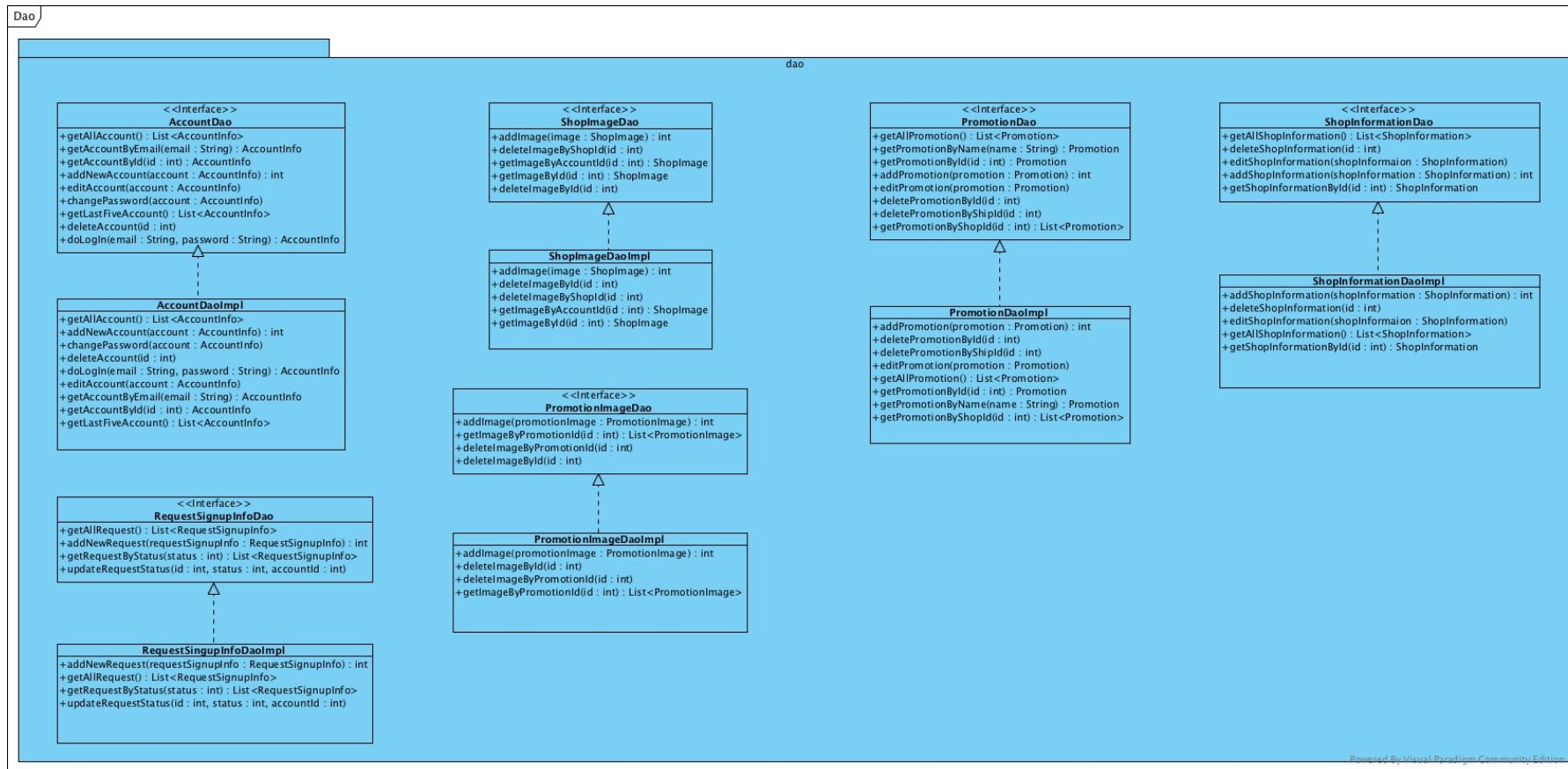


Figure 4.4: Dao package class diagram

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### 3.1.1.3 Controller package class diagram

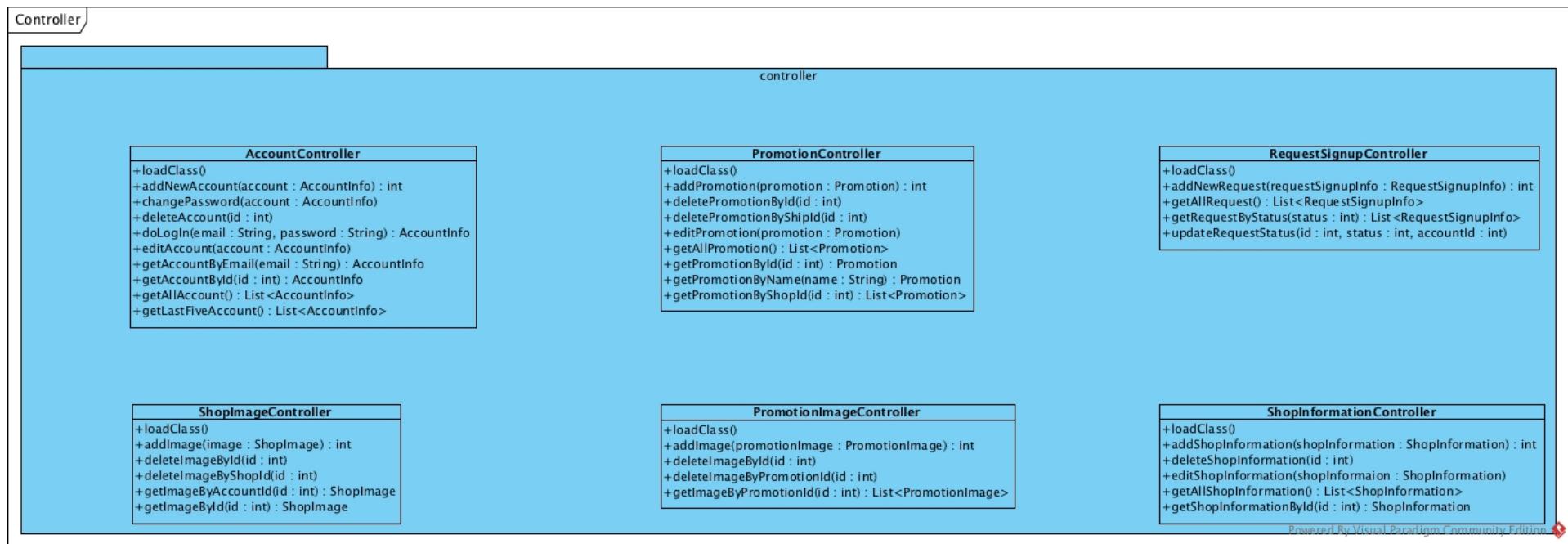


Figure 4.5: Controller class diagram

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### 3.1.1.4 Entity package class diagram

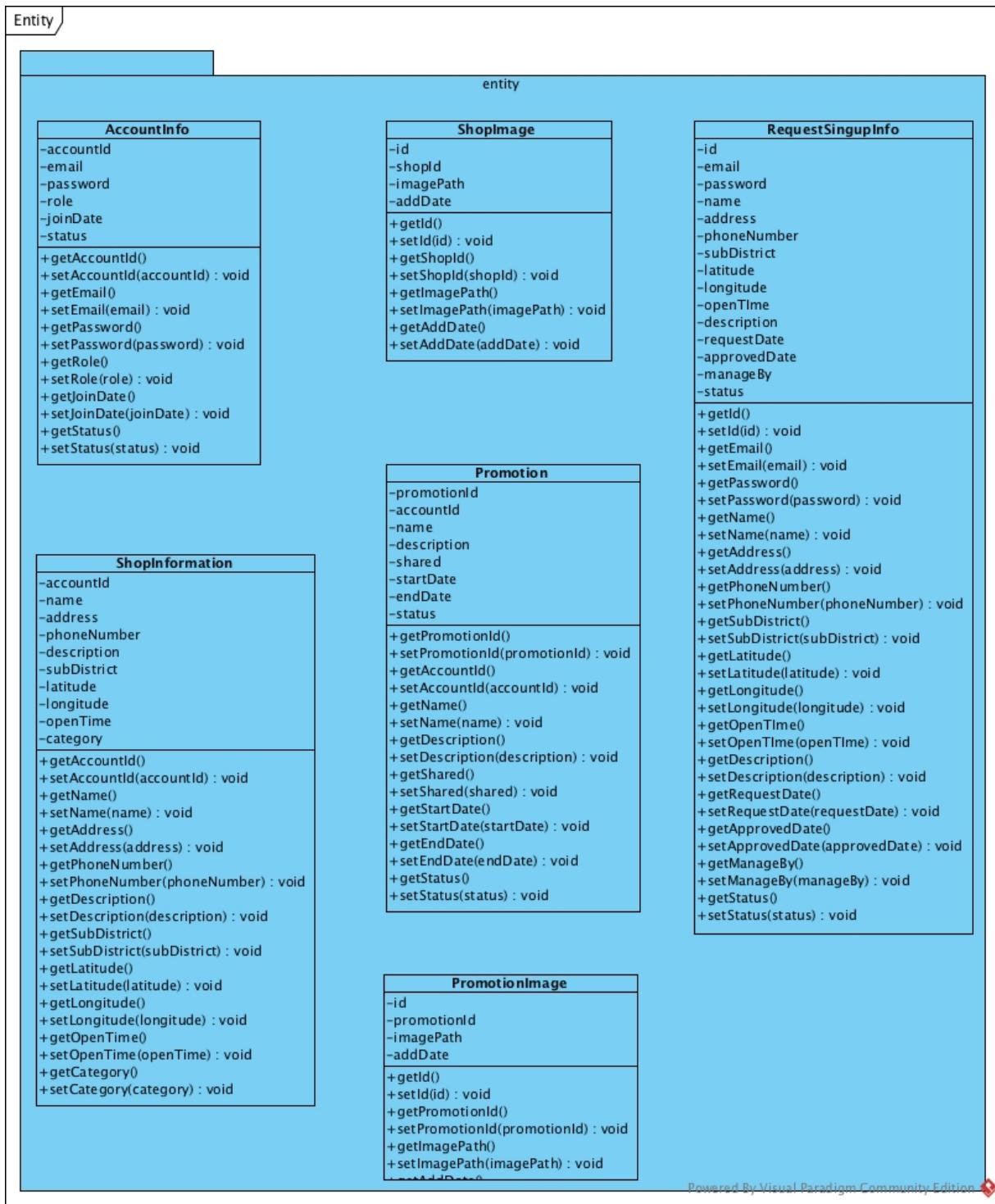


Figure 4.6: Entity package class diagram

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### 3.1.2 Promotion provider class diagram description

#### 1. Class name: AccountInfo

AccountInfo	
-accountId	
-email	
-password	
-role	
-joinDate	
-status	
+getAccountId()	
+setAccountId(accountId) : void	
+getEmail()	
+setEmail(email) : void	
+getPassword()	
+setPassword(password) : void	
+getRole()	
+setRole(role) : void	
+getJoinDate()	
+setJoinDate(joinDate) : void	
+getStatus()	
+setStatus(status) : void	

Figure 4.7: AccountInfo Class

Field Name	Description	Remark
accountId	Account Id	Type: int
email	Email	Type: String
password	Password	Type: String
role	Role of user	Type: String
joinDate	Join Date	Type: Datetime
status	Status of user	Type: int

Method Name	Description	Remark
getAccountId()	Method for getting attribute name accountId	
setAccountId(accountId)	Method for setting attribute name accountId	Return Type: void
getEmail()	Method for getting attribute name email	
setEmail(email)	Method for setting attribute name email	Return Type: void
getPassword()	Method for getting attribute name password	
setPassword(password)	Method for setting attribute name password	Return Type: void
getRole()	Method for getting attribute name role	
setRole(role)	Method for setting attribute name role	Return Type: void
getJoinDate()	Method for getting attribute name joinDate	
setJoinDate(joinDate)	Method for setting attribute name joinDate	Return Type: void
getStatus()	Method for getting attribute name status	
setStatus(status)	Method for setting attribute name status	Return Type: void

Table 4.2: AccountInfo Class Description

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2. Class name: ShopInformation

ShopInformation	
-accountId	
-name	
-address	
-phoneNumber	
-description	
-subDistrict	
-latitude	
-longitude	
-openTime	
-category	
+getAccountId()	
+setAccountId(accountId) : void	
+getName()	
+setName(name) : void	
+getAddress()	
+setAddress(address) : void	
+getPhoneNumber()	
+setPhoneNumber(phoneNumber) : void	
+getDescription()	
+setDescription(description) : void	
+getSubDistrict()	
+setSubDistrict(subDistrict) : void	
+getLatitude()	
+setLatitude(latitude) : void	
+getLongitude()	
+setLongitude(longitude) : void	
+getOpenTime()	
+setOpenTime(openTime) : void	
+getCategory()	
+setCategory(category) : void	

Figure 4.8: ShopInformation Class

Field Name	Description	Remark
accountId	Account Id	Type: int
name	Shop Name	Type: String
address	Shop address	Type: String
phoneNumber	Shop phone number	Type: String
description	Shop description	Type: String
subDistrict	Shop sub district	Type: String
latitude	Latitude	Type: decimal
longitude	Longitude	Type: decimal
openTime	Shop open time	Type: Datetime
category	Shop category	Type: String

Method Name	Description	Remark
getAccountId()	Method for getting attribute name accountId	
setAccountId(accountId)	Method for setting attribute name accountId	Return Type: void
getName()	Method for getting attribute name name	
setName(name)	Method for setting attribute name name	Return Type: void
getAddress()	Method for getting attribute name adress	

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setAddress (address)	Method for setting attribute name address	Return Type: void
getPhoneNumber()	Method for getting attribute name phoneNumber	
setPhoneNumber(phoneNumber)	Method for setting attribute name phoneNumber	Return Type: void
getDescription()	Method for getting attribute name description	
setDescription(description)	Method for setting attribute name description	Return Type: void
getSubDistrict()	Method for getting attribute name subDistrict	
setSubDistrict(subDistrict)	Method for setting attribute name subDistrict	Return Type: void
getLatitude()	Method for getting attribute name latitude	
setLatitude(latitude)	Method for setting attribute name latitude	Return Type: void
getLongitude()	Method for getting attribute name longitude	
setLongitude(logitude)	Method for setting attribute name logitude	Return Type: void
getOpenTime()	Method for getting attribute name openTime	
setOpenTime(openTime)	Method for setting attribute name openTime	Return Type: void
getCategory()	Method for getting attribute name category	
setCategory(category)	Method for setting attribute name category	Return Type: void

Table 4.3: ShopInformation Class Description

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3. Class name: ShopImage



Figure 4.9: ShopImage Class

Field Name	Description	Remark
id	Image Id	Type: int
shopId	Shop Id	Type: int
imagePath	Image Path	Type: String
addDate	Add Date	Type: Datetime

Method Name	Description	Remark
getId()	Method for getting attribute name id	
setId(id)	Method for setting attribute name id	Return Type: void
getShopId()	Method for getting attribute name shopId	
setShopId(shopId)	Method for setting attribute name shopId	Return Type: void
getImagePath()	Method for getting attribute name imagePath	
setImagePath(imagePath)	Method for setting attribute name imagePath	Return Type: void
getAddDate()	Method for getting attribute name addDate	
setAddDate(addDate)	Method for setting attribute name addDate	Return Type: void

Table 4.4: ShopImage Class Description

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4. Class name: Promotion

Promotion	
-promotionId	
-accountId	
-name	
-description	
-shared	
-startDate	
-endDate	
-status	
+getPromotionId()	
+setPromotionId(promotionId) : void	
+getAccountId()	
+setAccountId(accountId) : void	
+getName()	
+setName(name) : void	
+getDescription()	
+setDescription(description) : void	
+getShared()	
+setShared(shared) : void	
+getStartDate()	
+setStartDate(startDate) : void	
+getEndDate()	
+setEndDate(endDate) : void	
+getStatus()	
+setStatus(status) : void	

Figure 4.10: Promotion Class

Field Name	Description	Remark
promotionId	Promotion Id	Type: int
accountId	Account Id	Type: int
name	Promotion name	Type: String
description	Promotion description	Type: String
shared	Amount of shared promotion	Type: int
startDate	Date of start promotion	Type: Datetime
endDate	Date of end promotion	Type: Datetime
status	Status of promotion	Type: int

Method Name	Description	Remark
getPromotionId()	Method for getting attribute name promotionId	
setPromotionId(promotionId)	Method for setting attribute name promotionId	Return Type: void
getAccountId()	Method for getting attribute name accountId	
setAccountId(accountId)	Method for setting attribute name accountId	Return Type: void

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getName()	Method for getting attribute name name	
setName(name)	Method for setting attribute name name	Return Type: void
getDescription()	Method for getting attribute name description	
setDescription(description)	Method for setting attribute name description	Return Type: void
getShared()	Method for getting attribute name shared	
setShared(shared)	Method for setting attribute name shared	Return Type: void
getStartDate()	Method for getting attribute name startDate	
setStartDate(startDate)	Method for setting attribute name startDate	Return Type: void
getEndDate()	Method for getting attribute name endDate	
setEndDate(startDate)	Method for setting attribute name endDate	Return Type: void
getStatus()	Method for getting attribute name status	
setStatus(status)	Method for setting attribute name status	Return Type: void

Table 4.5: Promotion Class Description

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5. Class name: RequestSignupInfo

RequestSignupInfo	
-id	
-email	
-password	
-name	
-address	
-phoneNumber	
-subDistrict	
-latitude	
-longitude	
-openTlme	
-description	
-requestDate	
-approvedDate	
-manageBy	
-status	
+getId()	
+setId(id) : void	
+getEmail()	
+setEmail(email) : void	
+getPassword()	
+setPassword(password) : void	
+getName()	
+setName(name) : void	
+getAddress()	
+setAddress(address) : void	
+getPhoneNumber()	
+setPhoneNumber(phoneNumber) : void	
+getSubDistrict()	
+setSubDistrict(subDistrict) : void	
+getLatitude()	
+setLatitude(latitude) : void	
+getLongitude()	
+setLongitude(longitude) : void	
+getOpenTlme()	
+setOpenTlme(openTlme) : void	
+getDescription()	
+setDescription(description) : void	
+getRequestDate()	
+setRequestDate(requestDate) : void	
+getApprovedDate()	
+setApprovedDate(approvedDate) : void	
+getManageBy()	
+setManageBy(manageBy) : void	
+getStatus()	
+setStatus(status) : void	

Figure 4.11: RequestSignupInfo Class

Field Name	Description	Remark
id	Id	Type: int
email	Email	Type: String
password	Password	Type: String
name	Name	Type: String
address	Address	Type: String

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	22 / 72
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phoneNumber	Shop phone number	Type: String
subDistrict	Shop sub district	Type: String
latitude	Latitude	Type: decimal
longitude	Longitude	Type: decimal
openTime	Shop open time	Type: Datetime
description	Shop description	Type: String
requestDate	Request sign up date	Type: Datetime
approvedDate	Approved sign up date	Type: Datetime
manageBy	Who approve or reject sign up request	Type: int
status	Status of sign up request	Type: int

Method Name	Description	Remark
getId()	Method for getting attribute name id	
setId(id)	Method for setting attribute name id	Return Type: void
getEmail()	Method for getting attribute name email	
setEmail(email)	Method for setting attribute name email	Return Type: void
getPassword()	Method for getting attribute name password	
setPassword(password)	Method for setting attribute name password	Return Type: void
getName()	Method for getting attribute name name	
setName(name)	Method for setting attribute name name	Return Type: void
getAddress()	Method for getting attribute name address	
setAddress (address)	Method for setting attribute name address	Return Type: void
getPhoneNumber()	Method for getting attribute name phoneNumber	
setPhoneNumber(phoneNumber)	Method for setting attribute name phoneNumber	Return Type: void
getSubDistrict()	Method for getting attribute name subDistrict	
setSubDistrict(subDistrict)	Method for setting attribute name subDistrict	Return Type: void
getLatitude()	Method for getting attribute name latitude	
setLatitude(latitude)	Method for setting attribute name latitude	Return Type: void
getLongitude()	Method for getting attribute name longitude	
setLongitude(logitude)	Method for setting attribute name longitude	Return Type: void

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	23 / 72
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getOpenTime()	Method for getting attribute name openTime	
setOpenTime(openTime)	Method for setting attribute name openTime	Return Type: void
getDescription()	Method for getting attribute name description	
setDescription(description)	Method for setting attribute name description	Return Type: void
getRequestDate()	Method for getting attribute name requestDate	
setRequestDate(requestDate)	Method for setting attribute name requestDate	Return Type: void
getApprovedDate()	Method for getting attribute name approvedDate	
setApprovedDate(approvedDate)	Method for setting attribute name ApprovedDate	Return Type: void
getManageBy()	Method for getting attribute name manageBy	
setManageBy(manageBy)	Method for setting attribute name manageBy	Return Type: void
getStatus()	Method for getting attribute name status	
setStatus(status)	Method for setting attribute name status	Return Type: void

Table 4.6: RequestSignupInfo Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	24 / 72
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6. Class name: PromotionImage

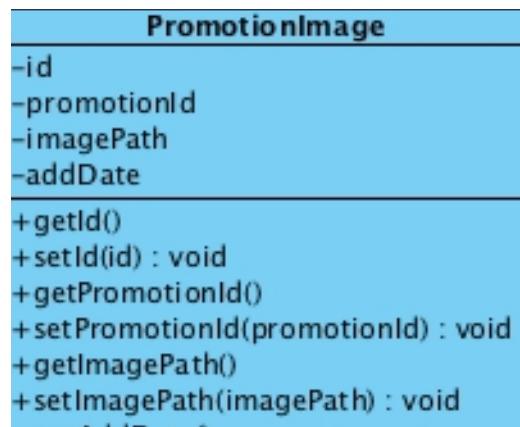


Figure 4.12: PromotionImage Class

Field Name	Description	Remark
id	Promotion image Id	Type: int
promotionId	Promotion Id	Type: int
imagePath	Image path	Type: String
addDate	Add date	Type: String

Method Name	Description	Remark
getId()	Method for getting attribute name id	
setId(id)	Method for setting attribute name id	Return Type: void
getPromotionId()	Method for getting attribute name promotionId	
setPromotionId(promotionId)	Method for setting attribute name promotionId	Return Type: void
getImagePath()	Method for getting attribute name imagePath	
setImagePath(imagePath)	Method for setting attribute name imagePath	Return Type: void
getAddDate()	Method for getting attribute name addDate	
setAddDate(addDate)	Method for setting attribute name addDate	Return Type: void

Table 4.7: PromotionImage Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	25 / 72
Document Type	Software Design Document	Release Date	29 July 2015	Print Date	28 August 2015

7. Class name: AccountDao

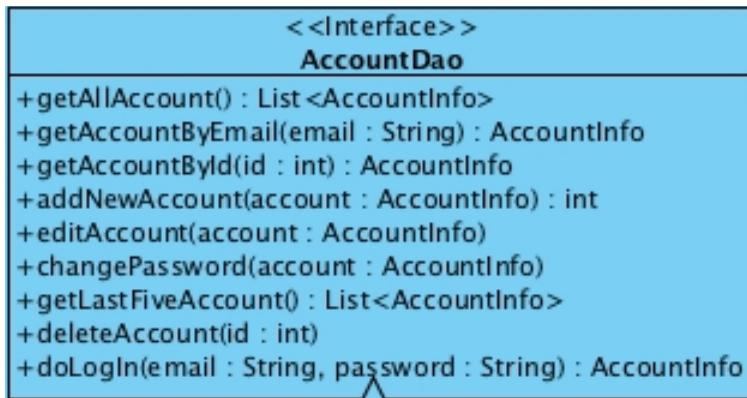


Figure 4.13: AccountDao Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
getAllAccount()	Method for getting all account from database	Return Type: List<AccountInfo>
getAccountByEmail(email: String)	Method for getting account information from database by using email	Return Type: AccountInfo
getAccountById(id: int)	Method for getting account information from database by using account id	Return Type: AccountInfo
addNewAccount(account: AccountInfo)	Method for adding new account information into database	Return Type: int
editAccount(account: AccountInfo)	Method for edit account information into database	
changePassword(account: AccountInfo)	Method for changing new password	
getLastFiveAccount()	Method for getting latest five account in database	Return Type: List<AccountInfo>
deleteAccount(id: int)	Method for deleting account information from database by using account id	
doLogin(email: String, password: String)	Method for logging in to web server	Return Type: AccountInfo

Table 4.8: AccountDao Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	26 / 72
Document Type	Software Design Document	Release Date	29 July 2015	Print Date	28 August 2015

8. Class name: AccountDaoImpl

AccountDaoImpl
+getAllAccount() : List <AccountInfo>
+addNewAccount(account : AccountInfo) : int
+changePassword(account : AccountInfo)
+deleteAccount(id : int)
+doLogin(email : String, password : String) : AccountInfo
+editAccount(account : AccountInfo)
+getAccountByEmail(email : String) : AccountInfo
+getAccountById(id : int) : AccountInfo
+getLastFiveAccount() : List <AccountInfo>

Figure 4.14: AccountDaoImpl Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
getAllAccount()	Method for getting all account from database	Return Type: List<AccountInfo>
addNewAccount(account: AccountInfo)	Method for adding new account information into database	Return Type: int
changePassword(account: AccountInfo)	Method for changing new password	
deleteAccount(id: int)	Method for deleting account information from database by using account id	
doLogin(email: String, password: String)	Method for logging in to web server	Return Type: AccountInfo
editAccount(account: AccountInfo)	Method for edit account information into database	
getAccountByEmail(email: String)	Method for getting account information from database by using email	Return Type: AccountInfo
getAccountById(id: int)	Method for getting account information from database by using account id	Return Type: AccountInfo
getLastFiveAccount()	Method for getting latest five account in database	Return Type: List<AccountInfo>

Table 4.9: AccountDaoImpl Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	27 / 72
Document Type	Software Design Document	Release Date	29 July 2015	Print Date	28 August 2015

9. Class name: RequestSignupInfoDao

<b>&lt;&lt;Interface&gt;&gt;</b> <b>RequestSignupInfoDao</b>
+getAllRequest() : List<RequestSignupInfo>
+addNewRequest(requestSignupInfo : RequestSignupInfo) : int
+getRequestByStatus(status : int) : List <RequestSignupInfo>
+updateRequestStatus(id : int, status : int, accountId : int)

Figure 4.15: RequestSignupInfoDao Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
getAllRequest()	Method for getting all request sign up from database	Return Type: List<RequestSignupInfo>
addNewRequest(requestSignupInfo: RequestSignupInfo)	Method for adding new request sign up information into database	Return Type: int
getRequestByStatus(status: int)	Method for getting request sign up information from database by using status	Return Type: List<RequestSignupInfo>
updateRequestStatus(id: int, status: int, accountId: int)	Method for updating status of request sign up into database	

Table 4.10: RequestSignupInfoDao Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	28 / 72
Document Type	Software Design Document	Release Date	29 July 2015	Print Date	28 August 2015

10. Class name: RequestSignupInfoDaoImpl

RequestSignupInfoDaoImpl
+addNewRequest(requestSignupInfo : RequestSignupInfo) : int
+getAllRequest() : List<RequestSignupInfo>
+getRequestByStatus(status : int) : List <RequestSignupInfo>
+updateRequestStatus(id : int, status : int, accountId : int)

Figure 4.16: RequestSignupInfoDaoImpl Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
addNewRequest(requestSignupInfo: RequestSignupInfo)	Method for adding new request sign up information into database	Return Type: int
getAllRequest()	Method for getting all request sign up from database	Return Type: List<RequestSignupInfo>
getRequestByStatus(status: int)	Method for getting request sign up information from database by using status	Return Type: List<RequestSignupInfo>
updateRequestStatus(id: int, status: int, accountId: int)	Method for updating status of request sign up into database	

Table 4.11: RequestSignupInfoDaoImpl Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	29 / 72
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11. Class name: PromotionImageDao



*Figure 4.17: PromotionImageDao Class*

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
addImage(promotionImage: PromotionImage)	Method for adding new image promotion into database	Return Type: int
getImageByPromotionId(id: int)	Method for getting promotion image by using promotion id	Return Type: List<PromotionImage>
deleteImageByPromotionId(id: int)	Method for deleting promotion image by using promotion id	
deleteImageById(id: int)	Method for deleting promotion image by using image id	

*Table 4.12: PromotionImageDao Class Description*

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	30 / 72
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12. Class name: PromotionImageDaoImpl



Figure 4.18: PromotionImageDaoImpl Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
addImage(promotionImage: PromotionImage)	Method for adding new image promotion into database	Return Type: int
getImageByPromotionId(id: int)	Method for getting promotion image by using promotion id	Return Type: List<PromotionImage>
deleteImageByPromotionId(id: int)	Method for deleting promotion image by using promotion id	
deleteImageById(id: int)	Method for deleting promotion image by using image id	

Table 4.13: PromotionImageDaoImpl Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	31 / 72
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13. Class name: PromotionDao



Figure 4.19: PromotionDao Class

Field Name	Description	Remark
-	-	-
Method Name	Description	Remark
getAllPromotion()	Method for getting all promotion information from database	Return Type: List<Promotion>
getPromotionByName(name: String)	Method for getting promotion information from database by using promotion name	Return Type: Promotion
getPromotionById(id: int)	Method for getting promotion information from database by using promotion id	Return Type: Promotion
addPromotion(promotion: Promotion)	Method for adding new promotion information into database	Return Type: int
editPromotion(promotion: Promotion)	Method for editing new promotion information into database	
deletePromotionById(id: int)	Method for deleting promotion information by using promotion id	
deletePromotionByShopId(shopId: int)	Method for deleting promotion information by using shop id	
getPromotionByShopId(id: int)	Method for getting promotion information by using shop id	Return Type: list<Promotion>

Table 4.14: PromotionDao Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	32 / 72
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14. Class name: PromotionDaoImpl

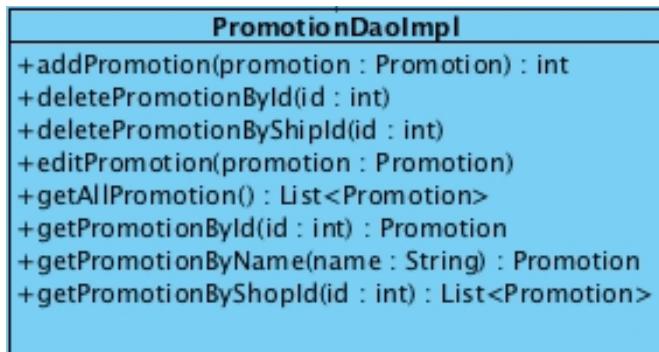


Figure 4.20: PromotionDaoImpl Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
addPromotion(promotion: Promotion)	Method for adding new promotion information into database	Return Type: int
deletePromotionById(id: int)	Method for deleting promotion information by using promotion id	
deletePromotionByShopId(shopId: int)	Method for deleting promotion information by using shop id	
editPromotion(promotion: Promotion)	Method for editing new promotion information into database	
getAllPromotion()	Method for getting all promotion information from database	Return Type: List<Promotion>
getPromotionByName(name: String)	Method for getting promotion information from database by using promotion name	Return Type: Promotion
getPromotionById(id: int)	Method for getting promotion information from database by using promotion id	Return Type: Promotion
getPromotionByShopId(id: int)	Method for getting promotion information by using shop id	Return Type: list<Promotion>

Table 4.15: PromotionDaoImpl Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	33 / 72
Document Type	Software Design Document	Release Date	29 July 2015	Print Date	28 August 2015

15. Class name: ShopImageDao



Figure 4.21: ShopImageDao Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
addImage(image: ShopImage)	Method for adding new shop image into database	Return Type: int
deleteImageByShopId(id: int)	Method for deleting shop image by using shop id	
getImageByAccountId(id: int)	Method for getting shop image from database by using account id	Return Type: ShopImage
getImageById(id: int)	Method for getting shop image from database by using image id	Return Type: ShopImage
deleteImageById(id: int)	Method for deleting shop image by using image id	

Table 4.16: ShopImageDao Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	34 / 72
Document Type	Software Design Document	Release Date	29 July 2015	Print Date	28 August 2015

16. Class name: ShopImageDaoImpl



Figure 4.22: *ShopImageDaoImpl* Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
addImage(image: ShopImage)	Method for adding new shop image into database	Return Type: int
deleteImageById(id: int)	Method for deleting shop image by using image id	
deleteImageByShopId(id: int)	Method for deleting shop image by using shop id	
getImageByAccountId(id: int)	Method for getting shop image from database by using account id	Return Type: ShopImage
getImageById(id: int)	Method for getting shop image from database by using image id	Return Type: ShopImage

Table 4.17: *ShopImageDaoImpl* Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	35 / 72
Document Type	Software Design Document	Release Date	29 July 2015	Print Date	28 August 2015

17. Class name: ShopInformationDao



Figure 4.23: ShopInformationDao Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
getAllShopInformation()	Method for getting all shop information from database	List<ShopInformation>
deleteShopInformation(id: int)	Method for deleting shop information by using shop id	
editShopInformation(shopInformation: ShopInformation)	Method for editing shop information	
addShopInformation(shopInformation: ShopInformation)	Method for adding new shop information into database	Return Type: int
getShopInformationById(id: int)	Method for getting shop information from database by using shop id	Return Type: ShopInformation

Table 4.18: ShopInformationDao Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	36 / 72
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18. Class name: ShopInformationDaoImpl



Figure 4.24: *ShopInformationDaoImpl* Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
addShopInformation(shopInformation: ShopInformation)	Method for adding new shop information into database	Return Type: int
deleteShopInformation(id: int)	Method for deleting shop information by using shop id	
editShopInformation(shopInformation: ShopInformation)	Method for editing shop information	
getAllShopInformation()	Method for getting all shop information from database	List<ShopInformation>
getShopInformationById(id: int)	Method for getting shop information from database by using shop id	Return Type: ShopInformation

Table 4.19: *ShopInformationDaoImpl* Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	37 / 72
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19. Class name: AccountController

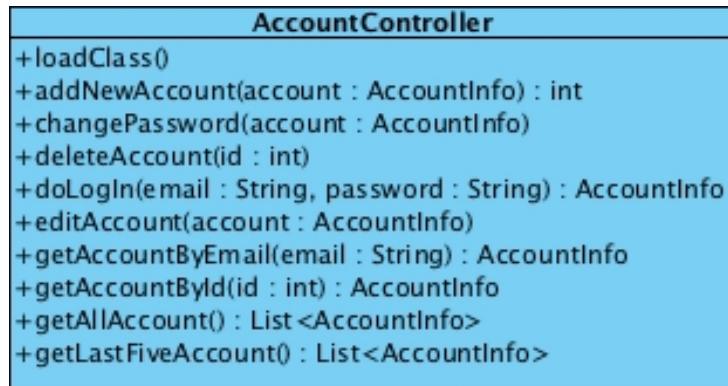


Figure 4.25: AccountController Class

Field Name	Description	Remark
-	-	-
Method Name	Description	Remark
loadClass()	Method for initialize class	
addNewAccount(account: AccountInfo)	Method for adding new account into database	Return Type: int
changePassword(account: AccountInfo)	Method for changing password	
deleteAccount(id: int)	Method for deleting account from database	
doLogin(email: String, password: String)	Method for logging in to system	Return Type: AccountInfo
editAccount(account: AccountInfo)	Method for editing account information	
getAccountByEmail(email: String)	Method for getting account information by using email	Return Type: AccountInfo
getAccountById(id: int)	Method for getting account information by using id	Return Type: AccountInfo
getAllAccount ()	Method for getting all account information	Return Type: List<AccountInfo>
getLastFiveAccount ()	Method for getting latest five account information	Return Type: List<AccountInfo>

Table 4.20: AccountController Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	38 / 72
Document Type	Software Design Document	Release Date	29 July 2015	Print Date	28 August 2015

20. Class name: ShopImageController



Figure 4.26: ShopImageController Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
loadClass()	Method for initialize class	
addImage(image: ShopImage)	Method for adding new shop image into database	Return Type: int
deleteImageById(id: int)	Method for deleting shop image from database by using id	
deleteImageByShopId(id: int)	Method for deleting shop image from database by using shop id	
getImageByAccountId(id: int)	Method for getting shop image by using account id	Return Type: ShopImage
getImageById(id: int)	Method for getting shop image by using id	Return Type: ShopImage

Table 4.21: ShopImageController Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	39 / 72
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21. Class name: PromotionImageController

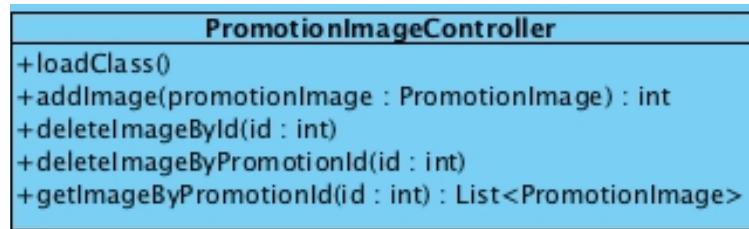


Figure 4.27: PromotionImageController Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
loadClass()	Method for initialize class	
addImage(promotionImage: PromotionImage)	Method for adding new promotion image into database	Return Type: int
deleteImageById(id: int)	Method for deleting promotion image from database by using id	
deleteImageByPromotionId(id: int)	Method for deleting promotion image from database by using promotion id	
getImageByPromotionId(id: int)	Method for getting promotion image by using promotion id	Return Type: List<PromotionImage>

Table 4.22: PromotionImageController Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	40 / 72
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22. Class name: PromotionController



Figure 4.28: PromotionController Class

Field Name	Description	Remark
-	-	-
Method Name	Description	Remark
loadClass()	Method for initialize class	
addPromotion(promotionImage: PromotionImage)	Method for adding new promotion into database	Return Type: int
deletePromotionById(id: int)	Method for deleting promotion from database by using id	
deletePromotionByShopId(id: int)	Method for deleting promotion from database by using shop id	
editPromotion(promotion: Promotion)	Method for editing promotion information	
getAllPromotion()	Method for getting all promotion	Return Type: List<Promotion>
getPromotionById(id: int)	Method for getting promotion information from database by using promotion id	Return Type: Promotion
getPromotionByName(name: String)	Method for getting promotion information from database by using promotion name	Return Type: Promotion
getPromotionByShopId(id: int)	Method for getting promotion information from database by using shop id	Return Type: Promotion

Table 4.23: PromotionController Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	41 / 72
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23. Class name: RequestSignupController

RequestSignupController
+loadClass()
+addNewRequest(requestSignupInfo : RequestSignupInfo) : int
+getAllRequest() : List<RequestSignupInfo>
+getRequestByStatus(status : int) : List<RequestSignupInfo>
+updateRequestStatus(id : int, status : int, accountId : int)

Figure 4.29: RequestSignupController Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
loadClass()	Method for initialize class	
addNewRequest(requestSignupInfo: RequestSignupInfo)	Method for adding new request sign up information into database	Return Type: int
getAllRequest()	Method for getting all request sign up information from database	Return Type: List<RequestSignupInfo>
getRequestBystatus(status: int)	Method for getting request sign up information from database by using status	Return Type: List<RequestSignupInfo>
updateRequestStatus(id: int, status: int, accountId: int)	Method for getting update status of request sign up	

Table 4.24: RequestSignupController Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	42 / 72
Document Type	Software Design Document	Release Date	29 July 2015	Print Date	28 August 2015

24. Class name: ShopInformationController



Figure 4.30: ShopInformationController Class

Field Name	Description	Remark
-	-	-

Method Name	Description	Remark
loadClass()	Method for initialize class	
addShopInformation(shopInformation: ShopInformation)	Method for adding new shop information into database	Return Type: int
deleteShopInformation(id: int)	Method for deleting shop information from database	
editShopInformation(shopInformation: ShopInformation)	Method for editing shop information	
getAllShopInformation()	Method for getting all shop information from database	Return Type: List<ShopInformation>
getShopInformationById(id: int)	Method for getting shop information from database by using shop id	Return Type: ShopInformation

Table 4.25: ShopInformationController Class Description

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	43 / 72
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## 3.2 ER-Diagram

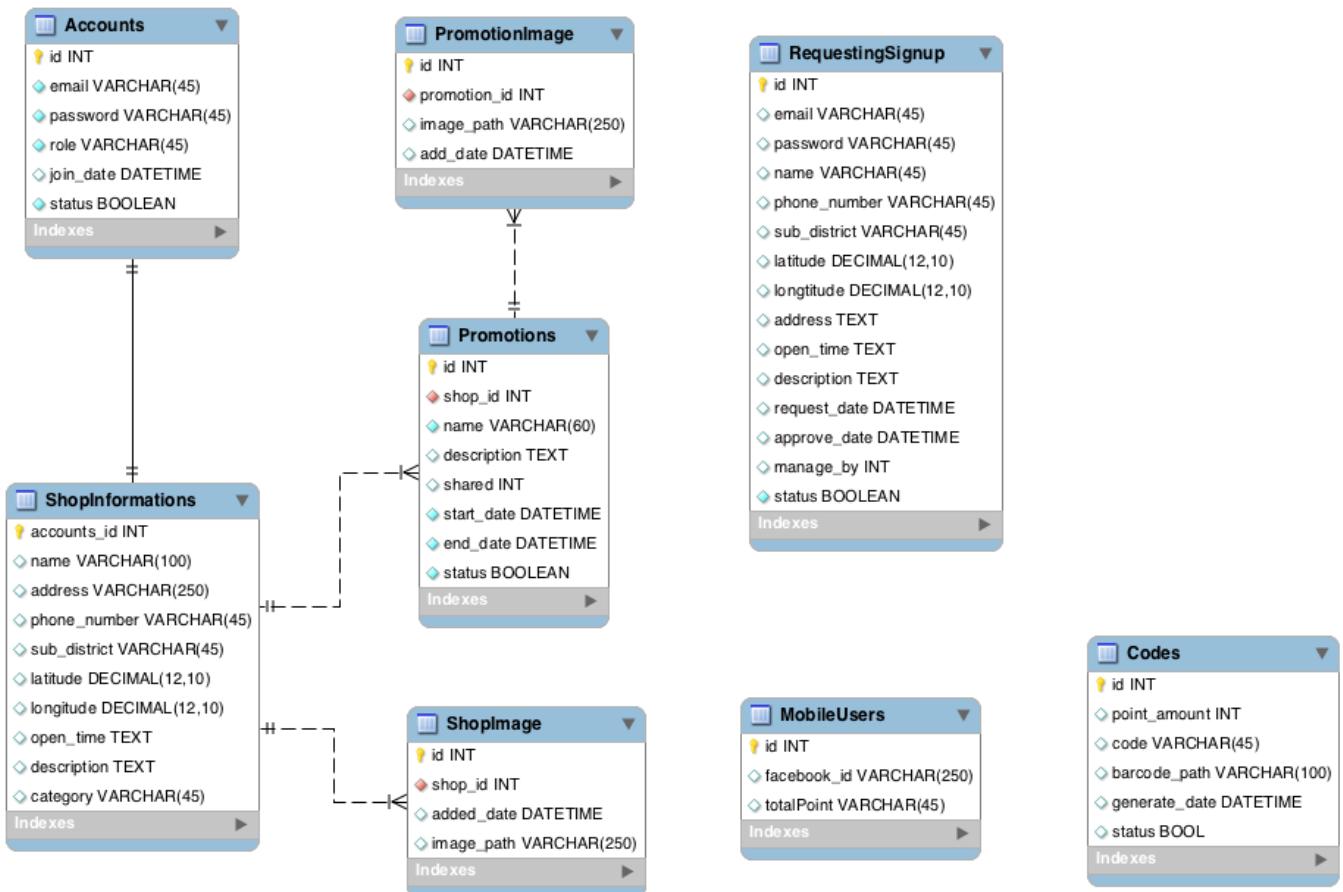


Figure 4.31: ER - Diagram

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### 3.2.1 Accounts Table

Column Name	Data Type	Description	Remark
id	int	Account id	PK
email	VARCHAR (45)	Email	
password	VARCHAR (45)	Password	
role	VARCHAR (45)	Role	
join_date	DATETIME	Join date	
status	BOOLEAN	Status	

Table 4.26: Accounts Table

### 3.2.2 ShopInformations Table

Column Name	Data Type	Description	Remark
account_id	int	Account id	PK
name	VARCHAR (100)	Shop name	
address	VARCHAR (250)	Shop address	
phone_number	VARCHAR (45)	Shop phone number	
sub_district	VARCHAR (45)	Shop sub district	
latitude	DECIMAL (12,10)	Shop latitude	
longitude	DECIMAL (12,10)	Shop longitude	
open_time	TEXT	Shop open time	
description	TEXT	Shop description	
category	VARCHAR (45)	Shop category	

Table 4.27: ShopInformations Table

### 3.2.3 Promotions Table

Column Name	Data Type	Description	Remark
id	int	Promotion id	Primary Key
shop_id	int	Shop id	Foreign Key
name	VARCHAR (60)	Promotion name	
description	TEXT	Promotion description	
shared	int	Amount of promotion shared	
start_date	DATETIME	Start date of this promotion	
end_date	DATETIME	End date of this promotion	
status	BOOLEAN	Promotion status	

Table 4.28: Promotions Table

### 3.2.4 ShopImage Table

Column Name	Data Type	Description	Remark
id	int	Image id	Primary Key
shop_id	int	Shop id	Foreign Key
add_date	DATETIME	Add date of image	
image_path	VARCHAR (250)	Shop image path	

Table 4.29: ShopImage Table

Document Name	Promotion provider_SDD_1.0	Owner	Project Team	Page	45 / 72
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### 3.2.5 PromotionImage Table

Column Name	Data Type	Description	Remark
id	int	Image id	Primary Key
promotion_id	int	Promotion id	Foreign Key
add_date	DATETIME	Add date of image	
image_path	VARCHAR (250)	Image path	

Table 4.30: PromotionImage Table

### 3.2.6 MobileUsers Table

Column Name	Data Type	Description	Remark
id	int	User id	Primary Key
facebook_id	VARCHAR (250)	User facebook id	
total_point	VARCHAR (45)	User total point	

Table 4.31: MobileUsers Table

### 3.2.7 RequestingSignup Table

Column Name	Data Type	Description	Remark
id	int	Request id	Primary Key
email	VARCHAR (45)	Email	
password	VARCHAR (45)	Password	
name	VARCHAR (100)	Request sign up name	
phone_number	VARCHAR (45)	Request sign up phone number	
sub_district	VARCHAR (45)	Request sign up sub district	
latitude	DECIMAL (12,10)	Request sign up latitude	
longitude	DECIMAL (12,10)	Request sign up longitude	
address	TEXT	Request sign up address	
open_time	TEXT	Request sign up open time	
description	TEXT	Request sign up description	
request_date	DATETIME	Request sign up request date	
approve_date	DATETIME	Request sign up approve date	
manage_by	int	Request sign up manager	
status	BOOLEAN	Request sign up status	

Table 4.32: RequestingSignup Table

### 3.2.8 Codes Table

Column Name	Data Type	Description	Remark
id	int	Code id	Primary Key
point_amount	int	Code point amount	
code	VARCHAR (45)	Code	
barcode_path	VARCHAR (100)	Barcode path	
generate_date	DATETIME	Code generate date	
status	BOOLEAN	Code status	
MobileUsers_id	int	Mobile user id	Foreign Key

Table 4.33: Codes Table

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## 3.3 Sequence Diagram

### 3.3.1 URS-09: Admin can accept register request

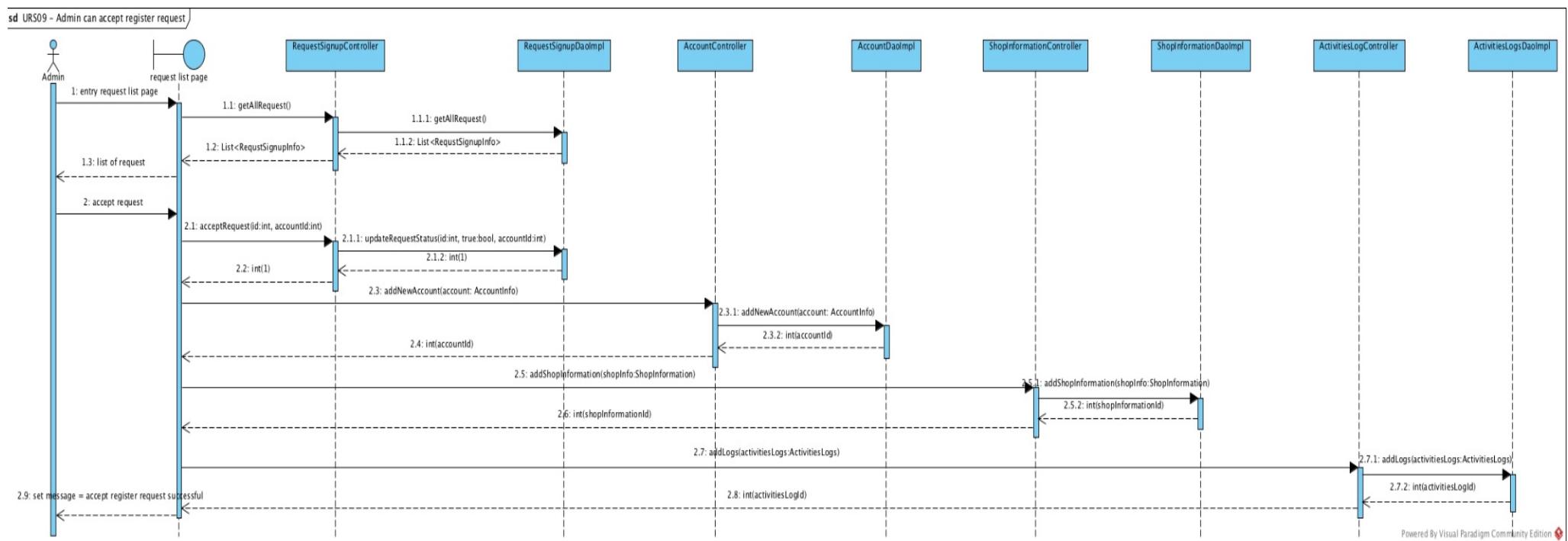


Figure 4.32: SD-09 Admin can accept register request sequence diagram

SD-09 Admin can accept register request sequence diagram

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### 3.3.2 URS-10: Admin can reject register request

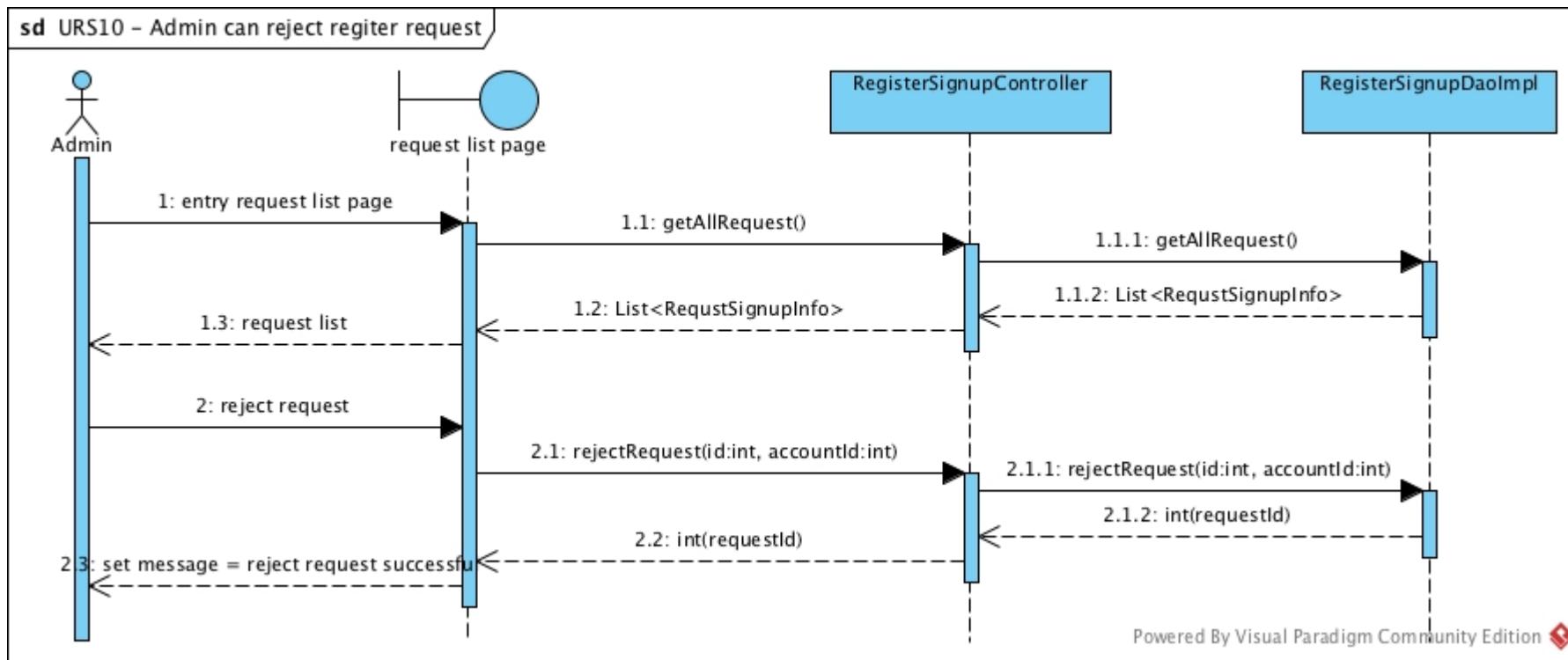


Figure 4.33: SD-10 Admin can reject register request sequence diagram

**SD-10** Admin can reject register request sequence diagram

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### 3.3.3 URS-11: Admin can view account list

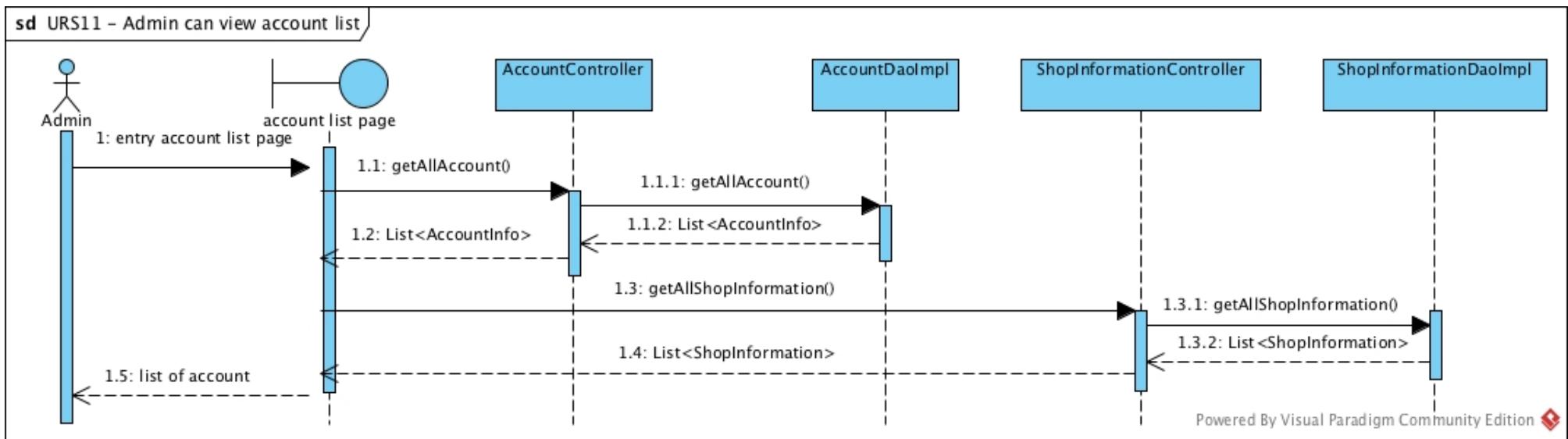


Figure 4.34: SD-11 Admin can view account list sequence diagram

**SD-11** Admin can view account list sequence diagram

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### 3.3.4 URS-12: Admin can view account information

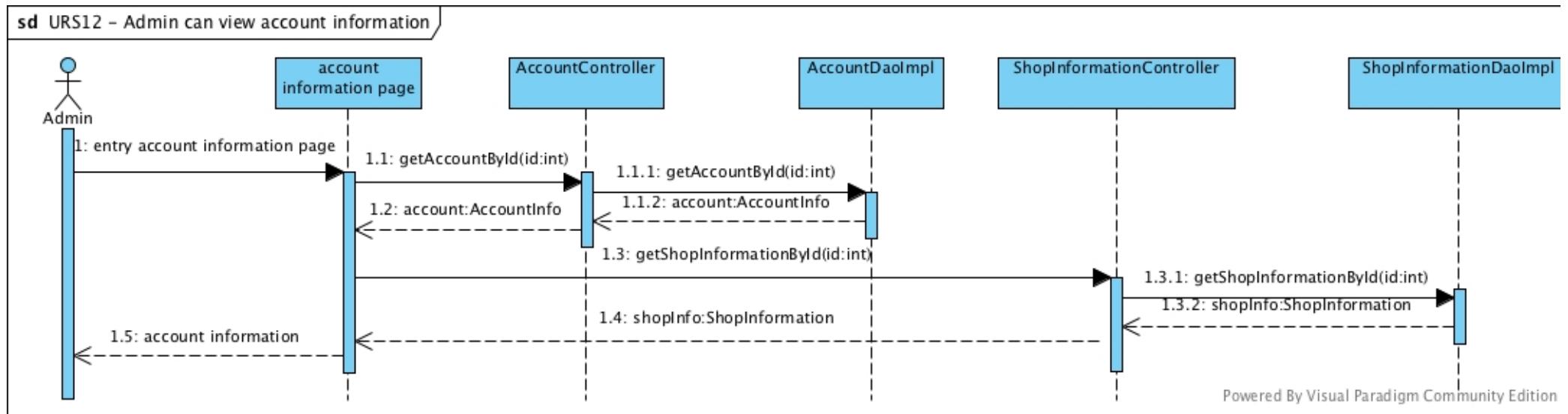


Figure 4.35: SD-12 Admin can view account information sequence diagram

SD-12 Admin can view account information sequence diagram

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### 3.3.5 URS-13: Admin can view promotion list

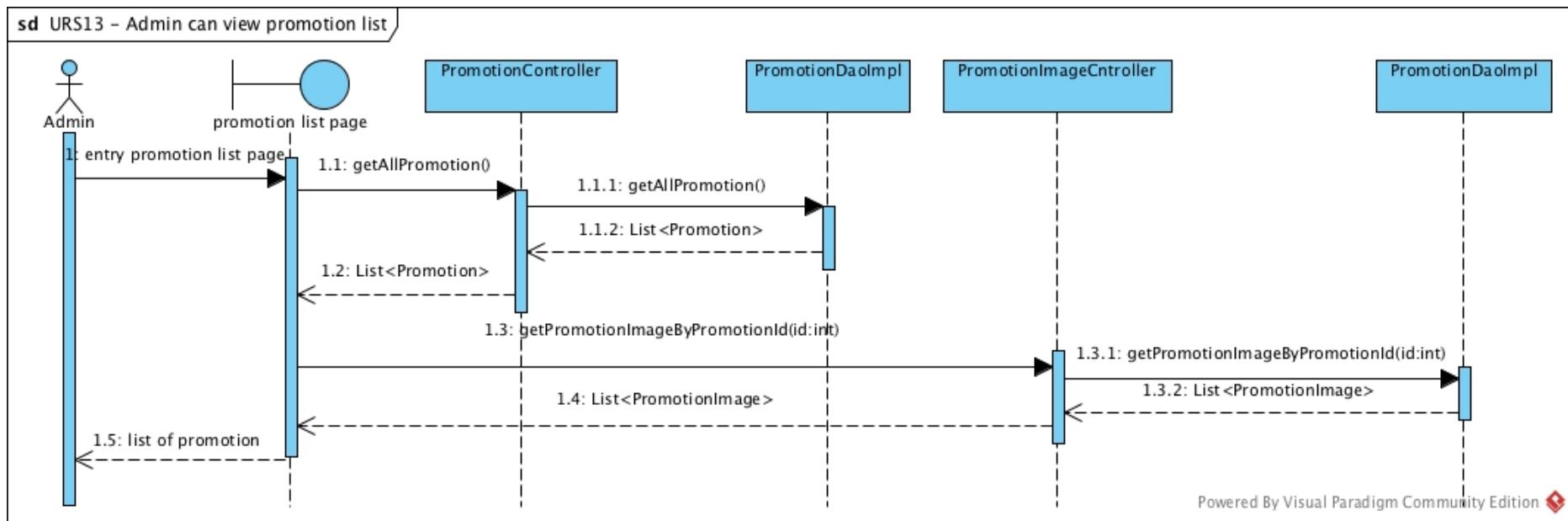


Figure 4.36: SD-13 Admin can view promotion list sequence diagram

**SD-13** Admin can view promotion list sequence diagram

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### 3.3.6 URS-14: Admin can view promotion information

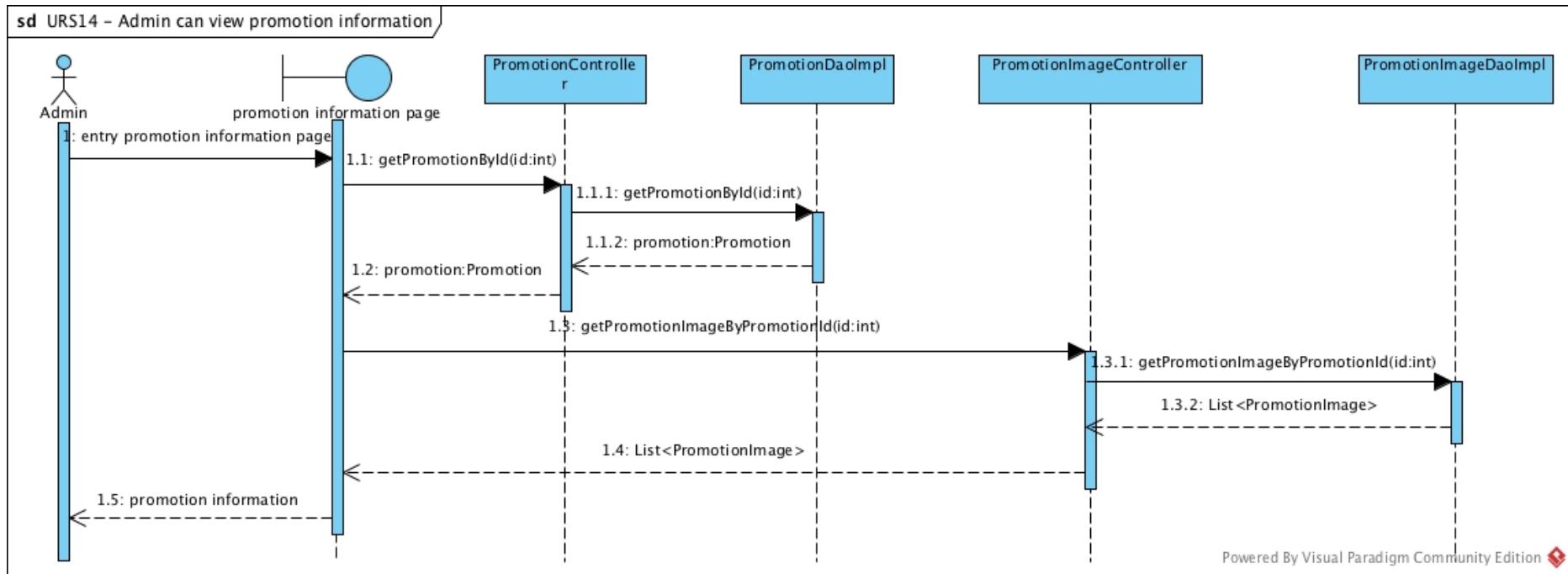


Figure 4.37: SD-14 Admin can view promotion information sequence diagram

**SD-14 Admin can view promotion information sequence diagram**

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### 3.3.7 URS-16: Admin can view redeem code list

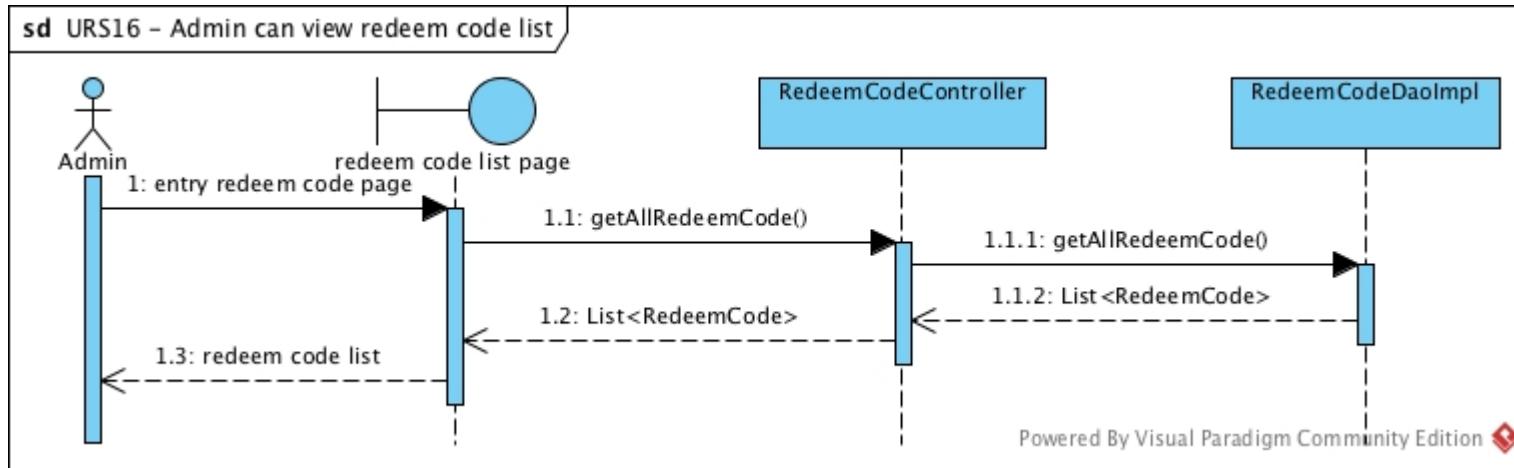


Figure 4.38: SD-16 Admin can view redeem code list sequence diagram

**SD-16** Admin can view redeem code list sequence diagram

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### 3.3.8 URS-17: Admin can view redeem code information

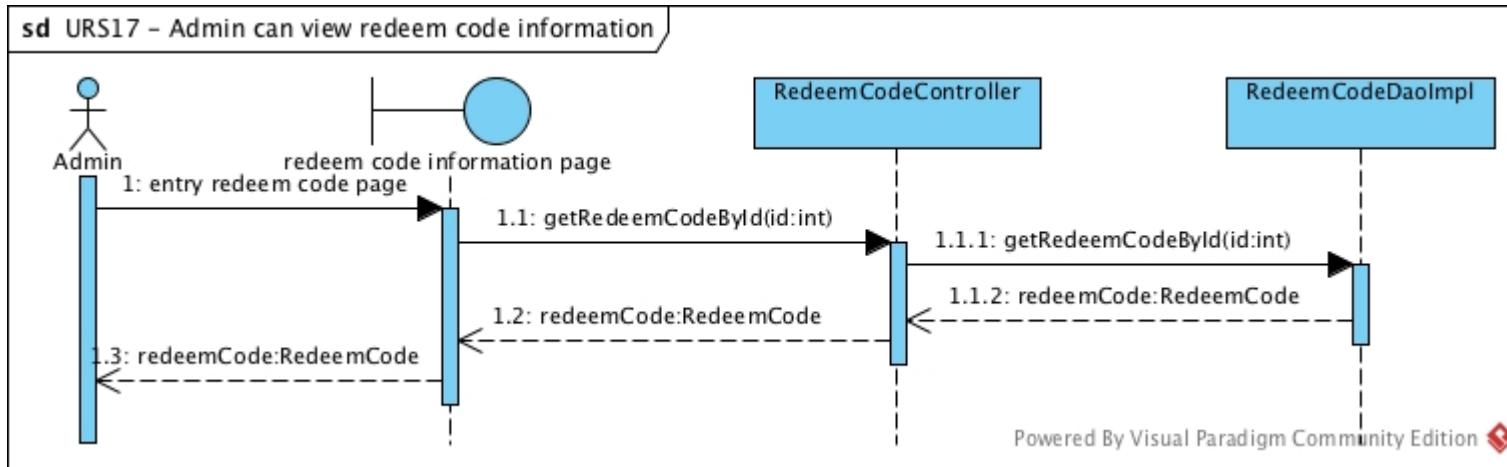


Figure 4.39: SD-17 Admin can view redeem code information sequence diagram

**SD-17** Admin can view redeem code information sequence diagram

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### 3.3.9 URS-18: Admin can view mobile user list

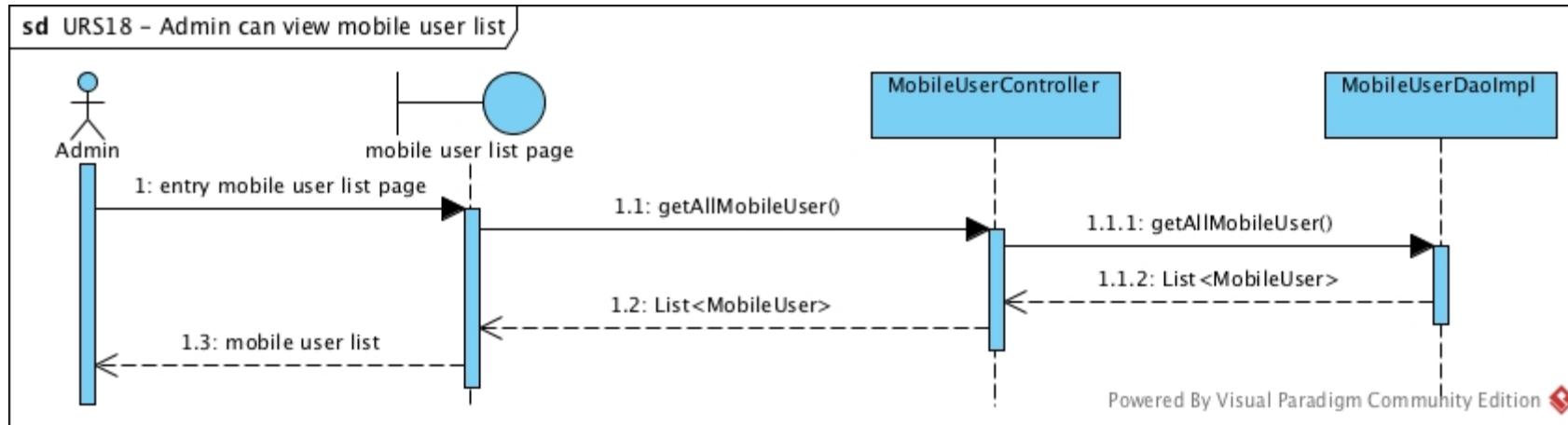


Figure 4.40: SD-18 Admin can view mobile user list sequence diagram

**SD-18** Admin can view mobile user list sequence diagram

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### 3.3.10 URS-19: Admin can view mobile user information

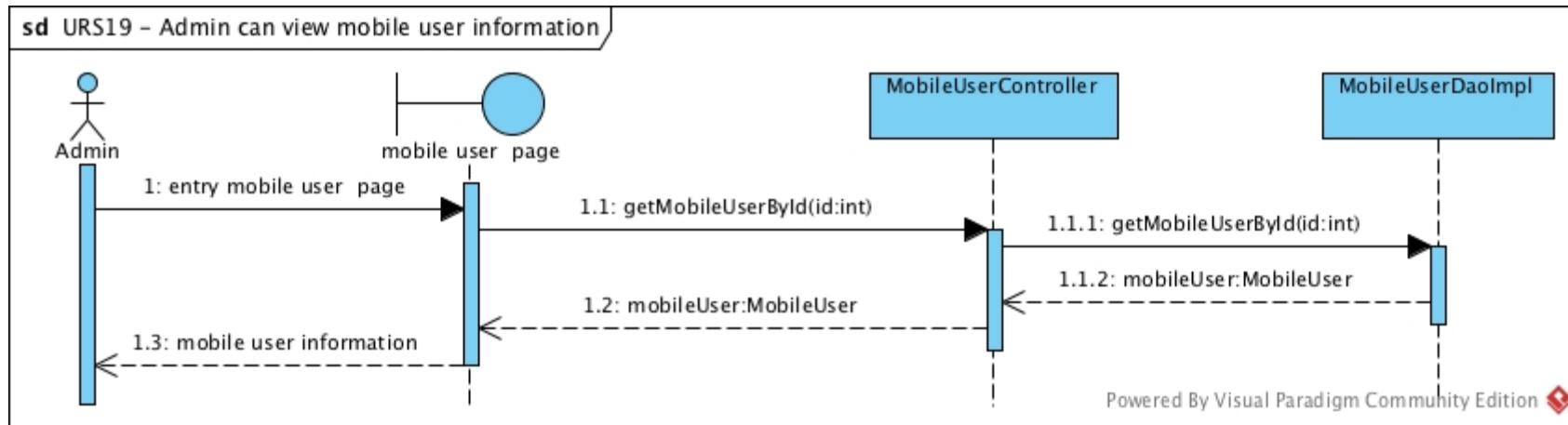


Figure 4.41: SD-19 Admin can view mobile user information sequence diagram

SD-19 Admin can view mobile user information sequence diagram

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### 3.3.11 URS-20: Admin can search account by shop name

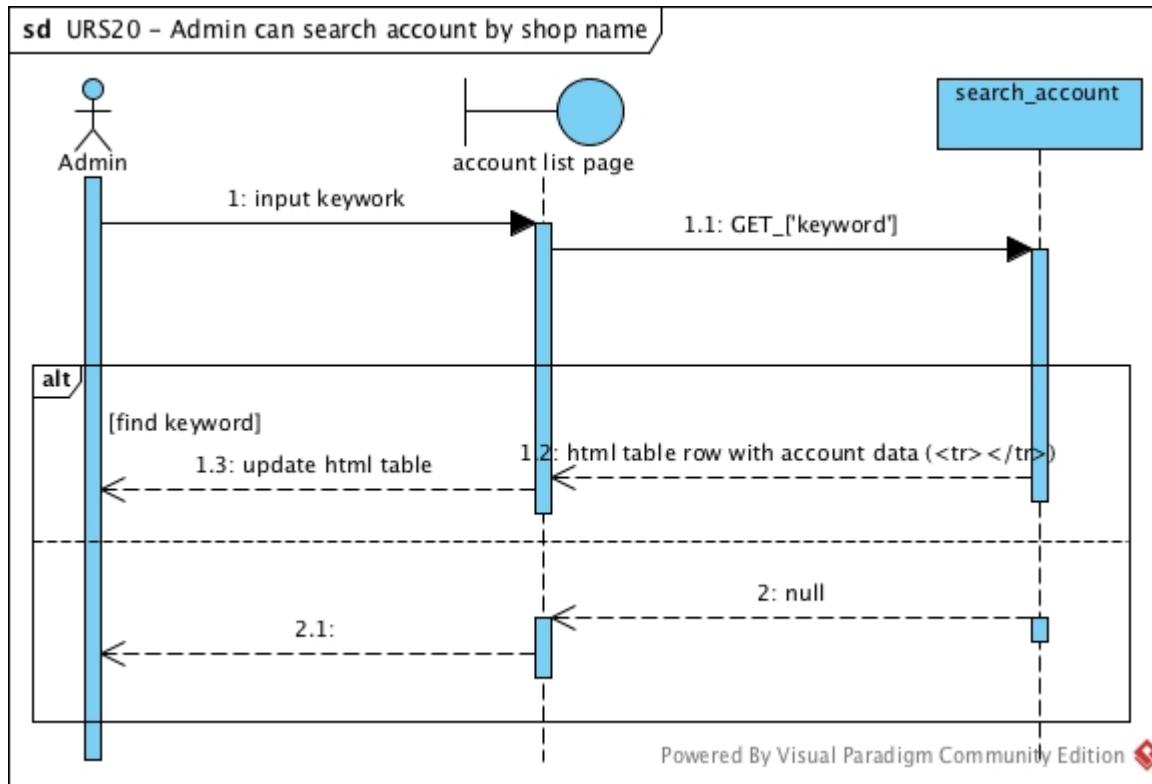


Figure 4.42: SD-20 Admin can search account by shop name sequence diagram

**SD-20** Admin can search account by shop name sequence diagram

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### 3.3.12 URS-21: Admin can search account by email

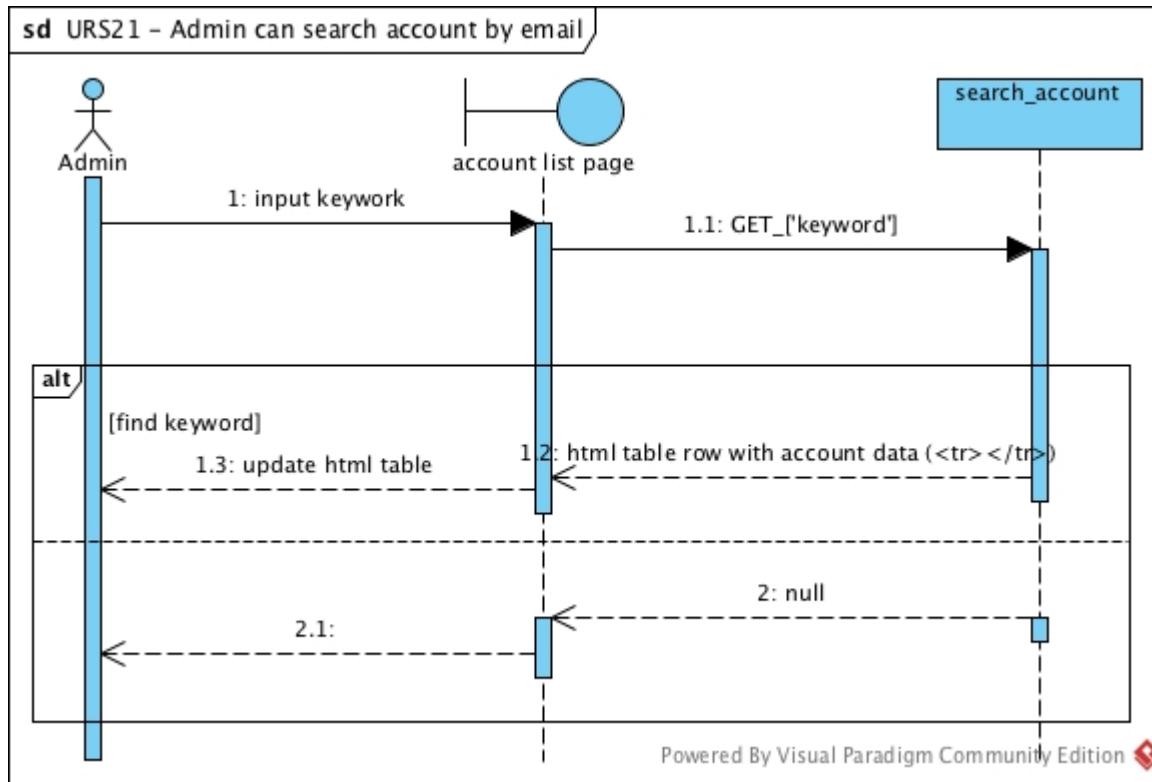


Figure 4.43: SD-21 Admin can search account by email sequence diagram

#### SD-21 Admin can search account by email sequence diagram

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### 3.3.13 URS-22: Admin can search account by id

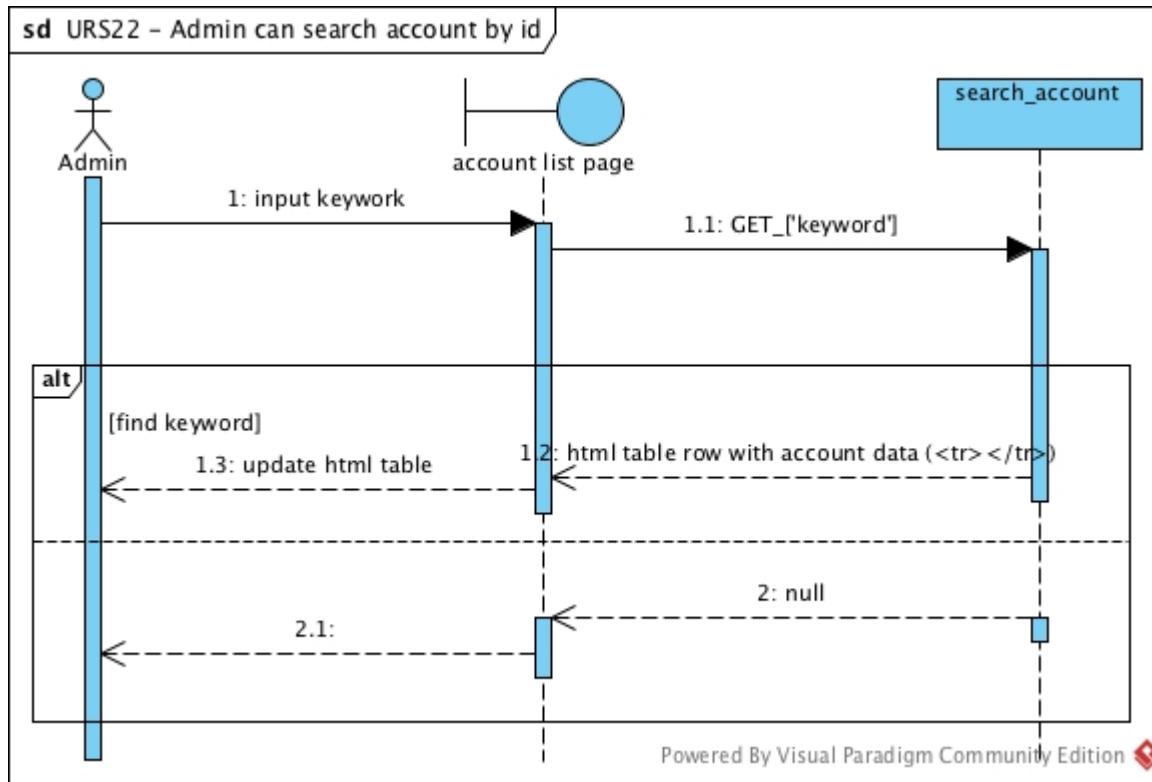


Figure 4.44: SD-22 Admin can search account by id sequence diagram

**SD-22** Admin can search account by id sequence diagram

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### 3.3.14 URS-23: Admin can search promotion by name

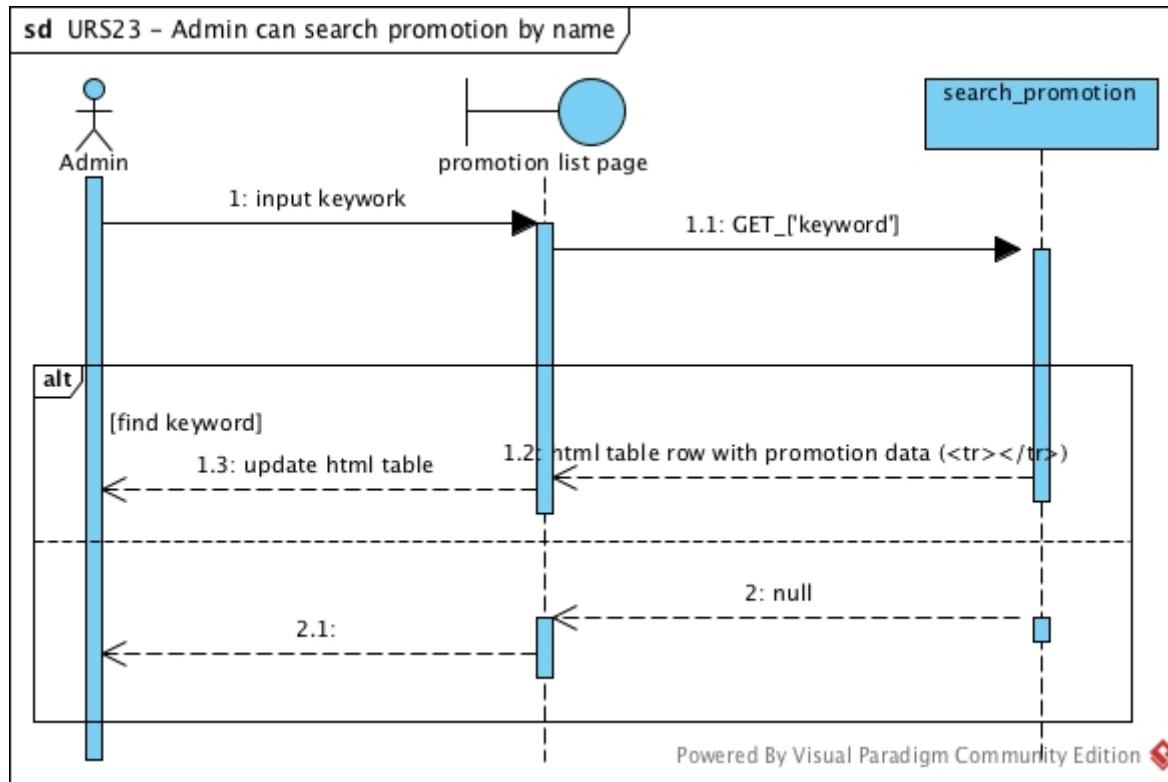


Figure 4.45: SD-23 Admin can search promotion by name sequence diagram

### SD-23 Admin can search promotion by name sequence diagram

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### 3.3.15 URS-24: Admin can search promotion by id

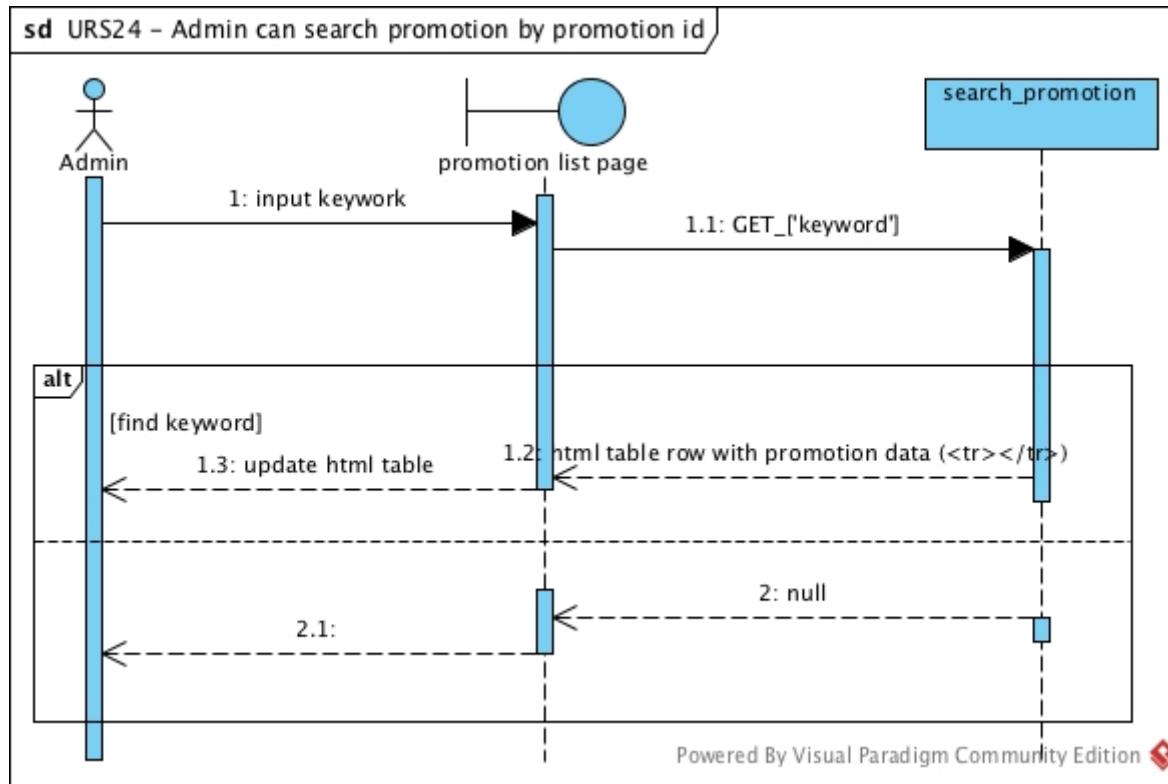


Figure 4.46: SD-24 Admin can search promotion by id sequence diagram

#### SD-24 Admin can search promotion by id sequence diagram

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### 3.3.16 URS-25: Admin can search promotion by shop name

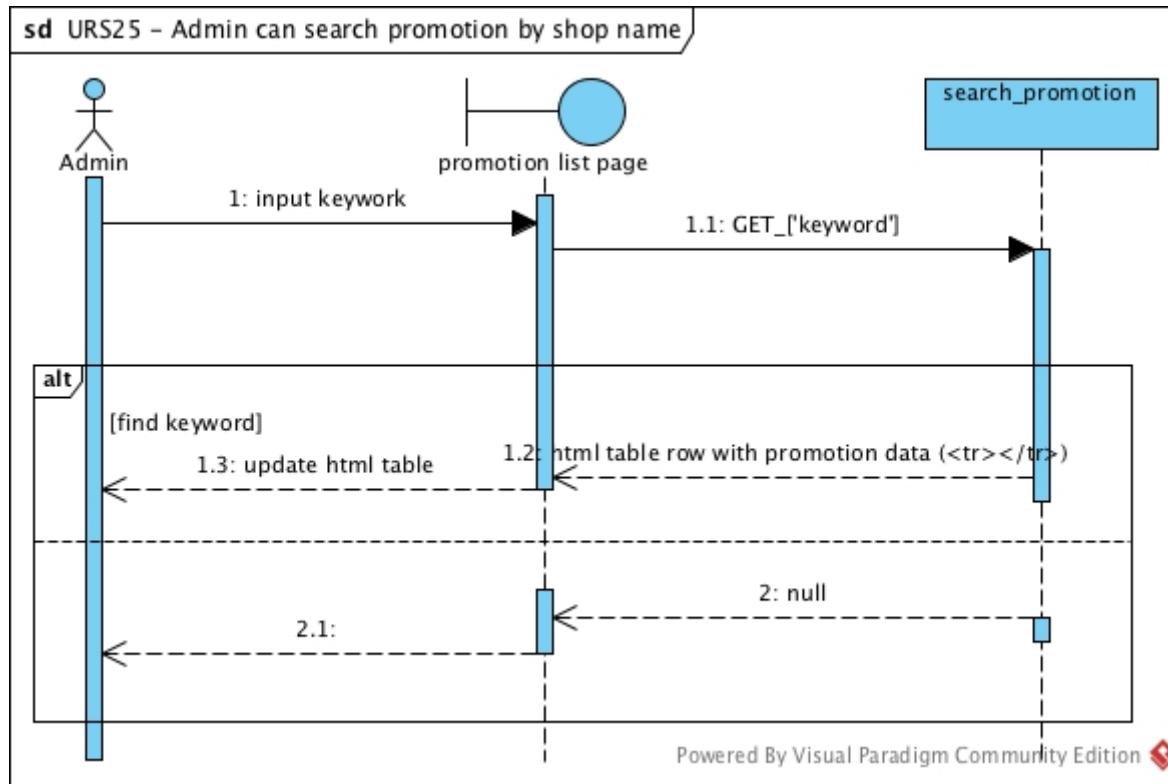


Figure 4.47: SD-25 Admin can search promotion by shop name sequence diagram

SD-25 Admin can search promotion by shop name sequence diagram

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### 3.3.17 URS-38: Shop owner can view promotion list

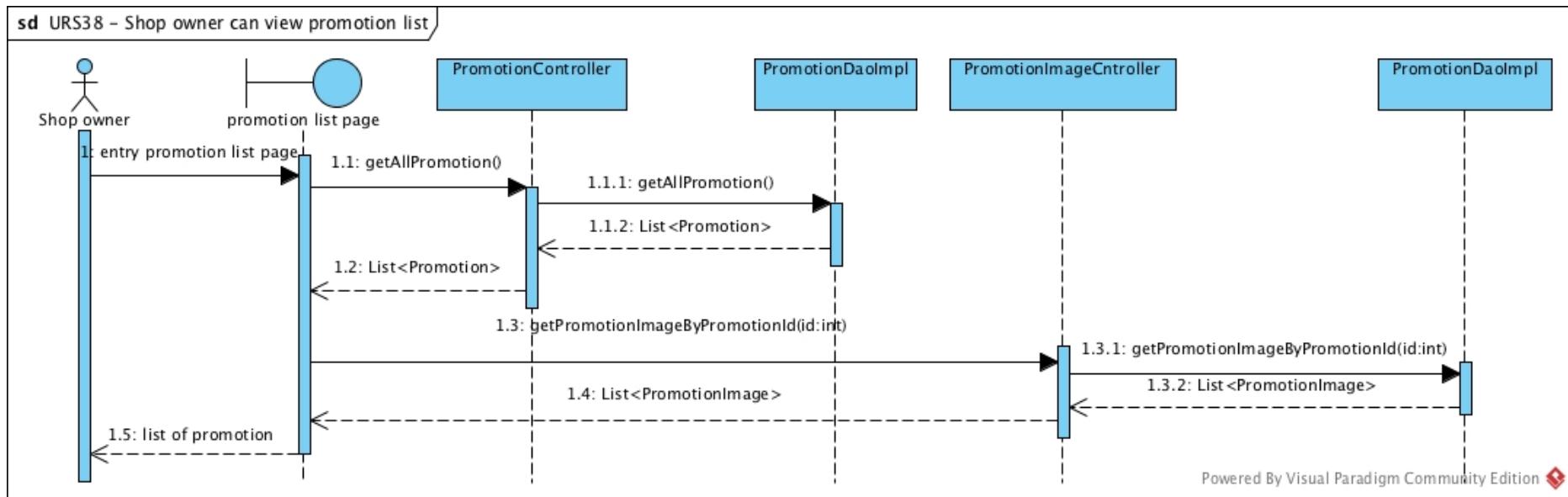


Figure 4.48: SD-38 Shop owner can view promotion list sequence diagram

**SD-38** Shop owner can view promotion list sequence diagram

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### 3.3.18 URS-39: Shop owner can view promotion information

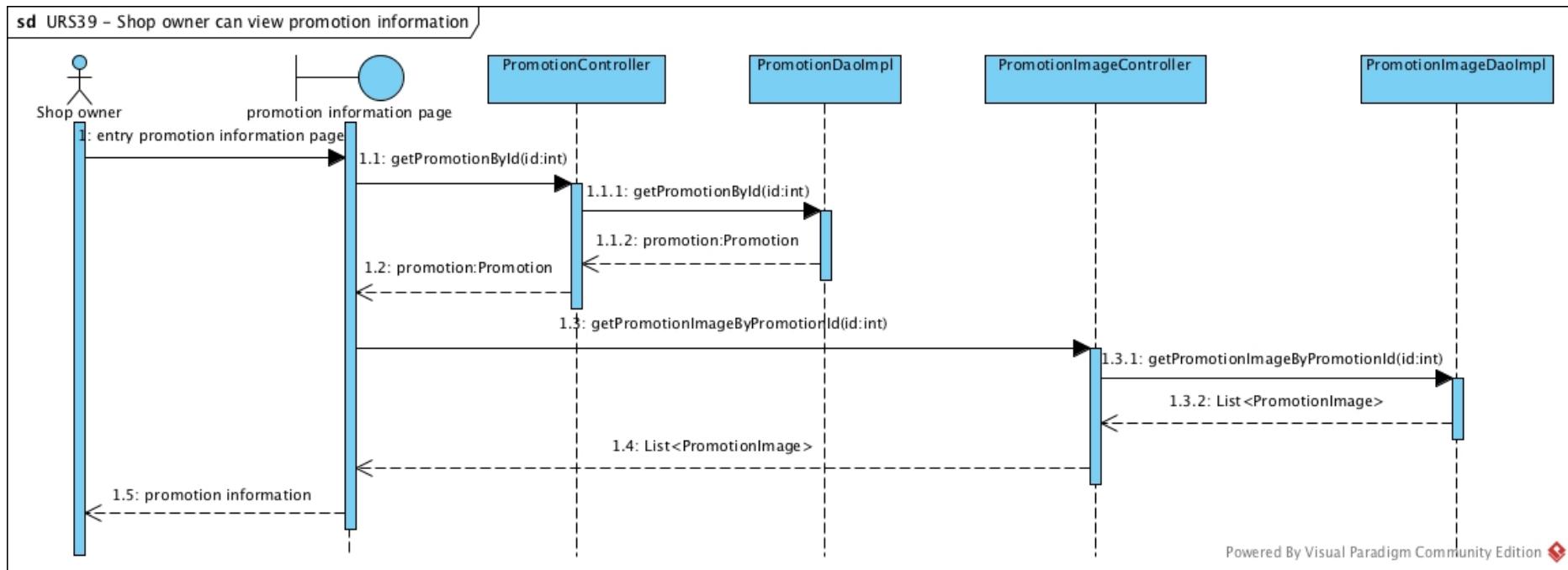


Figure 4.49: SD-39 Shop owner can view promotion information sequence diagram

**SD-39** Shop owner can view promotion information sequence diagram

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### 3.3.19 URS-40: Guest can send register request

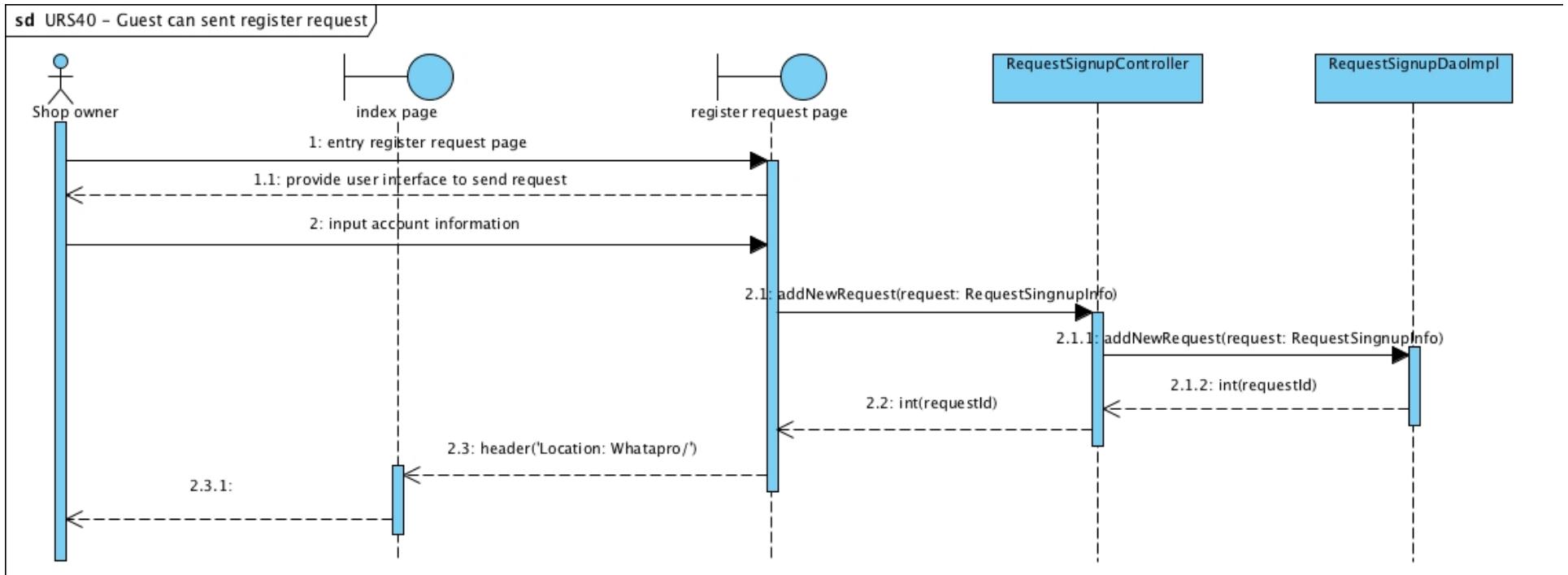


Figure 4.50: SD-40 Guest can sent register request sequence diagram

#### SD-40 Guest can send register request sequence diagram

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# CHAPTER 4 | USER INTERFACE DESIGN

## 1. Index page

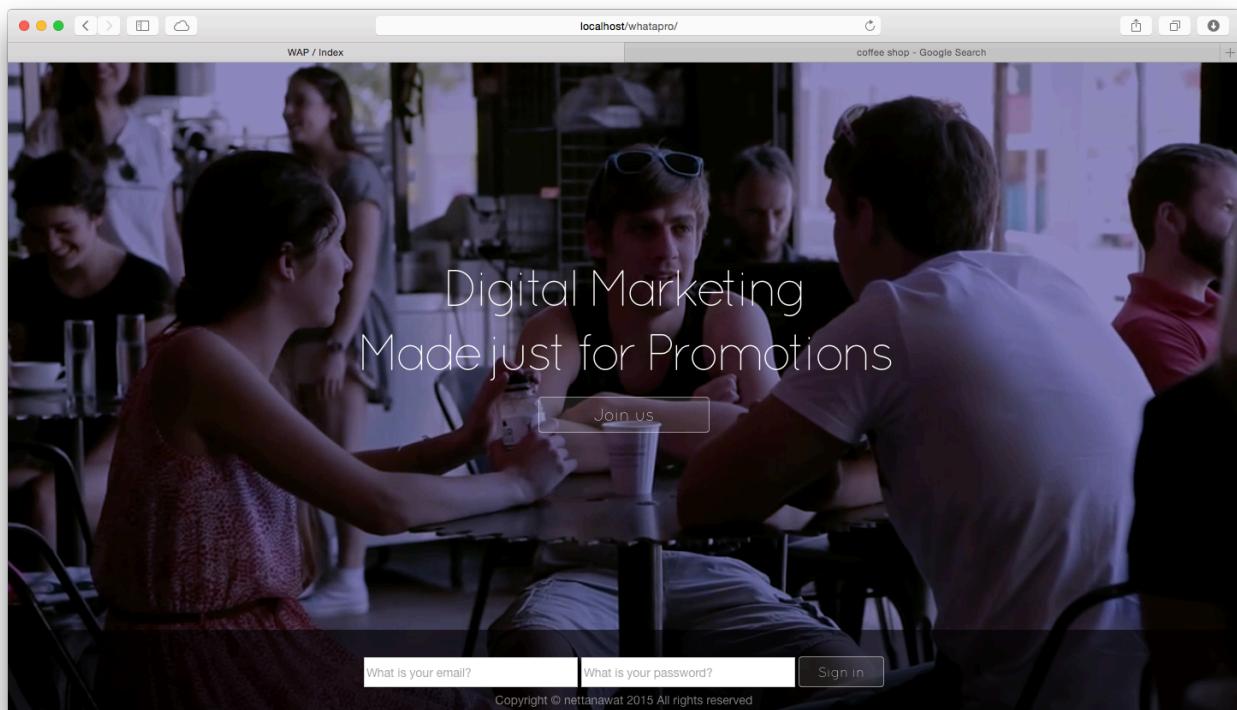


Figure 4.51: Index page

This layout presented the main page of web service.

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## 2. Promotion list page

The screenshot shows a web browser window with the URL `localhost/whatapro/promotions`. The page title is "Promotions". At the top, there is a search bar with placeholder text "Search promotion by promotion name, shop name or promotion id" and a button labeled "+ New promotion". Below the search bar is a table with the following columns: Id, Promotion name, Shop name, Start date, End date, Image, Status, and Action. There is one row of data:

Id	Promotion name	Shop name	Start date	End date	Image	Status	Action
1	10% discount	Coffee smith	2015-07-14	2015-07-30		active	

Figure 4.52: Promotion list page

This layout presented the promotion page, allowing to add, edit, and delete promotion.

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### 3. Account list page

The screenshot shows a web browser window titled "localhost/whatapro/accounts". The main content area is titled "Accounts". At the top right is a search bar with placeholder text "Search account by email, shop name or account id" and a "New Account" button. Below the search bar is a table with the following columns: Id, Email, Role, Join Date, Shop name, Image, Status, and Action. The table contains 15 rows of account data. The last row, for account ID 15, has a "Shop name" of "Coffee smith" and two small thumbnail images of coffee shop interiors. The "Action" column for this row contains two icons: a pencil and a trash can.

ID	Email	Role	Join Date	Shop name	Image	Status	Action
1	nettawat@gmail.com	admin	2015-07-28 00:00:00	-		active	[Edit] [Delete]
10	admin1@gmail.com	admin	2015-07-28 00:00:00	-		active	[Edit] [Delete]
11	admin2@gmail.com	admin	2015-07-28 00:00:00	-		active	[Edit] [Delete]
12	admin3@gmail.com	admin	2015-07-28 00:00:00	-		active	[Edit] [Delete]
13	iamadmin@gmail.com	admin	2015-07-28 00:00:00	-		active	[Edit] [Delete]
14	iamfuckingadmin@gmail.com	admin	2015-07-28 00:00:00	-		active	[Edit] [Delete]
15	coffeesmith@gmail.com	user	2015-07-28 20:07:34	Coffee smith		active	[Edit] [Delete]

Figure 4.53: Account list page

This layout presented the account page, allowing to add, edit, and delete account.

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## 4. Request list page

The screenshot shows a web browser window with the URL 'localhost/whatapro/requests'. The page title is 'Request sign up'. At the top, there is a navigation bar with links: Dashboard, Account, Promotion, Request, Mobile user, Redeem Code, Activities Log, and a user email 'nettanawat@gmail.com'. Below the navigation bar is a table titled 'Request sign up' with one row of data.

ID	Shop name	Email	Phone number	Address	Request date	Manage by	Approve/reject date	Status	Action
1	Sam bar	sambar@gmail.com	054 333 923	40 Nimmarnhemin Rd., T.Suthep, A.Muang, Chiang Mai, 50200	2015-07-28 21:01:37	-		waiting	<span style="color: red;">(X)</span> <span style="color: green;">(checkmark)</span>

Figure 4.54: Request list page

This layout is for admin to see request list and choose to accept or reject from this page.

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## 7. Promotion information page

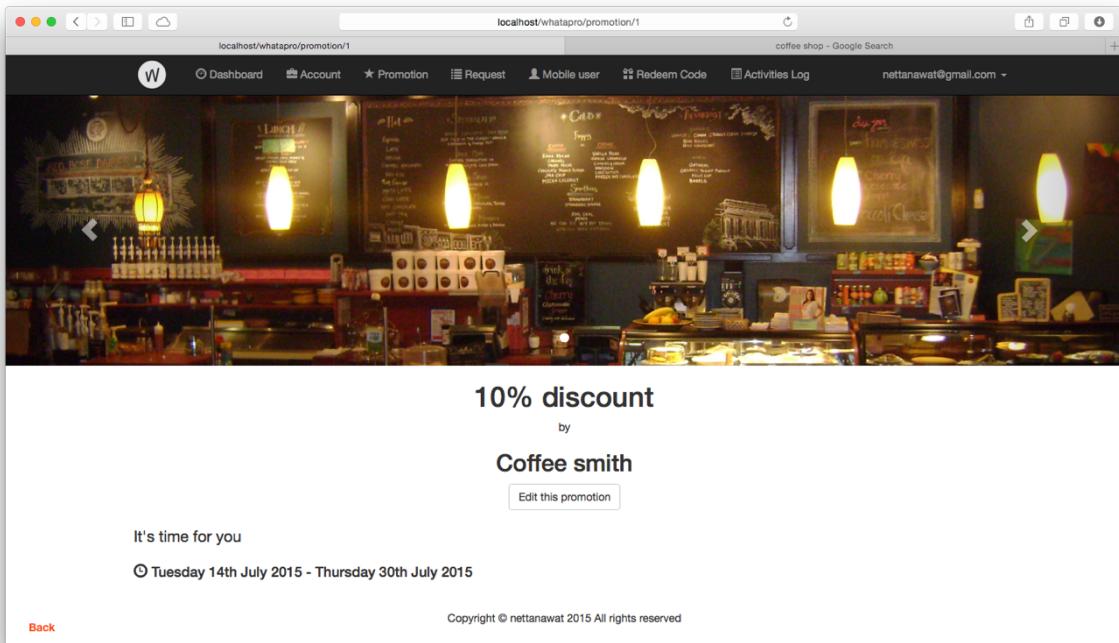


Figure 4.55: Promotion information page

This layout is for view promotion information.

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## 8. Account information page

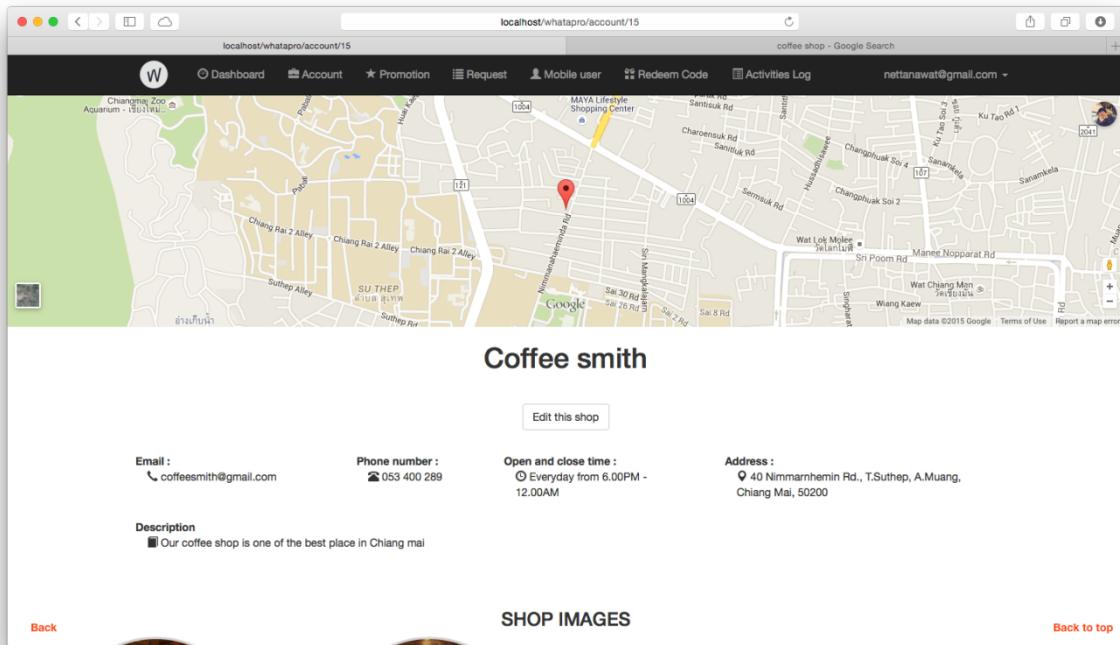


Figure 4.56: Account information page

This layout is for view account information.

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## 9. Home page

The screenshot shows the Whatapro admin interface at [localhost/whatapro/admin](http://localhost/whatapro/admin). The top navigation bar includes links for Dashboard, Account, Promotion, Request, Mobile user, Redeem Code, Activities Log, and a user dropdown for nettanawat@gmail.com.

The main content features a map of Chiang Mai, Thailand, with several red location markers indicating specific points of interest. Below the map are two tables:

5 Newest accounts				
ID	Name	Email	Join date	Status
70	adadad	adsadassd@dadad.com	2015-07-27 21:48:03	active
69	Coffee smith	testadd@gmail.com	2015-07-24 13:58:00	active
68	Test eddit	testadd@gmail.com	2015-07-24 13:58:00	active
67	Test	testadd@gmail.com	2015-07-24 13:58:00	active
66	T	l	2015-07-24 13:58:00	active

5 Newest promotions					
ID	Name	Shop name	Start date	End date	Status
21	Test edit unit test t	Coffee smith	2015-07-01	2015-07-16	active

[see more](#)

Figure 4.57: Home page

This layout is home page for admin to view overall of system.

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