

USEFUL JAPANESE DICTIONARY FOR VIETNAMESE

DETAIL DESIGN DOCUMENT

Class Design

**Project Code: UJD\_VN**

**Document Code: UJD\_VN\_Class Design\_v1.0\_EN**

**Ha Noi, 26/06/2014**

Record of change

\*A - Added M - Modified D – Deleted

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Effective Date** | **Changed Items** | **A\* M, D** | **Change Description** | **New Version** |
| 26/06/2014 | Add new | A |  | V1.0 |
| 05/08/2014 | Modify Package | M |  | V1.1 |
| 11/08/2014 | Modify sequence | M |  | V1.2 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

SIGNATURE PAGE

**ORIGINATOR:** Pham Tien Dat 26/06/2014

Developer

**REVIEWERS:**

**APPROVAL:** Nguyen Van Sang

Supervisor

TABLE OF CONTENTS

1 Introduction 6

1.1 Purpose 6

1.2 Definitions, Acronyms and Abbreviations 6

2 Packages 7

2.1 User Package 8

2.1.1 Class diagram 8

2.1.2 Model\_User class 9

2.1.3 UserController class 9

2.2 Admin Package 10

2.2.1 Class diagram 10

2.2.2 Model\_User class 11

2.2.3 Model\_Vocabulary class 12

2.2.4 Model\_Grammar class 13

2.2.5 Model\_Kanji class 14

2.2.6 Model\_Sentence class 14

2.2.7 Model\_Video class 15

2.2.8 Model\_TrainingListening class 15

2.2.9 Model\_ReadingDocument class 15

2.2.10 Model\_Contact class 15

2.2.11 Model\_Conversation class 15

2.2.12 Model\_Test class 15

2.3 Vocabulary Package 16

2.3.1 Class diagram 16

2.3.2 Model\_Vocabulary class 17

2.3.3 VocabularyController class 18

2.4 Grammar Package 18

2.4.1 Class diagram 18

2.4.2 Model\_Grammar class 19

2.4.3 GrammarController class 20

2.5 Kanji Package 20

2.5.1 Class diagram 20

2.5.2 Model\_Kanji class 21

2.5.3 KanjiController class 21

2.6 ReadingDocument Package 22

2.6.1 22

2.7 TrainingListening Package 22

2.7.1 Class diagram 22

2.7.2 Model\_TraniningListening class 23

2.7.3 TrainingListeningController 23

2.8 Video Package 24

2.8.1 Class diagram 24

2.8.2 Model\_Video class 25

2.8.3 VideoController 25

2.9 Contact Package 26

2.9.1 Class diagram 26

2.9.2 Model\_Contact class 26

2.9.3 ContactController 27

2.10 Sentence Package 28

2.10.1 Class diagram 28

2.10.2 Model\_Sentence class 29

2.10.3 SentenceController 29

2.11 Conversation Package 30

2.11.1 Class diagram 30

2.11.2 Model\_Conversation class 31

2.11.3 ConversationController 31

2.12 Test Package 32

2.12.1 Class diagram 32

2.12.2 Model\_Test class 33

2.12.3 TestController 34

3 MVC model 35

# Introduction

## Purpose

Useful Japanese Dictionary for Vietnamese class design document contains descriptions of all classes of the Useful Japanese Dictionary for Vietnamese system. It includes:

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

## Definitions, Acronyms and Abbreviations

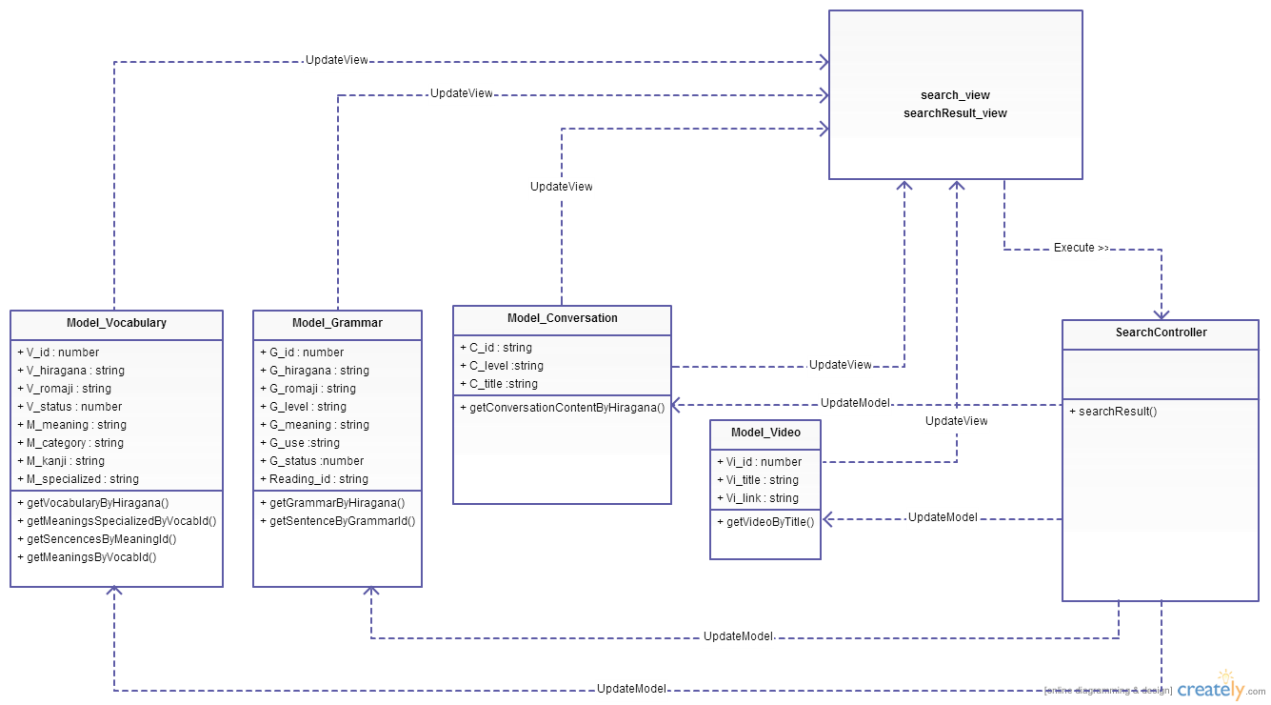
|  |  |  |
| --- | --- | --- |
| Abbreviations | Description | Comment |
| MVC | Model View Control model |  |

# Packages

|  |  |  |  |
| --- | --- | --- | --- |
| No | Package | Language | Description |
| 1. 01 | Common | PHP | Store all information search |
|  | Account management | PHP | Store all information user and action as : registration, login, log out, viewprofile… |
|  | Contact | PHP | Contribution (database, opinion,Q&A) |
|  | Practice management |  | Do test and Reading document |
|  | Admin’s account management | PHP | Manage to admin (add, delete, edit) |
|  | Management member | PHP | Manage to member (ban/unban,detele) |
|  | Vocabulary management | PHP | Store all information of Vocabulary. |
|  | Grammar management | PHP | Store all information of Grammar. |
|  | Kanji management | PHP | Store all information of Kanji. |
|  | ReadingDocument management | PHP | Store all information of Document. |
|  | TrainingListening management | PHP | Store all information of Listen. |
|  | Video management | PHP | Store all information of Video. |
|  | Contact management | PHP | Store all information of Contact ( Q&A, opinion). |
|  | Conversation management | PHP | Store all information of Conversation. |
|  | Test management | PHP | Store all information of Test( question, answer). |

## Common Package

### Class diagram



**Figure 1: Class diagram Admin package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_Vocabulary | Include method interact with database |
| 2 | Model\_Grammar | Include method interact with database |
| 3 | Model\_Video | Include method interact with database |
| 4 | Model\_Conversation | Include method interact with database |
| 5 | SearchController | Include method interact with model |

### Model\_Vocabulary class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | V\_id | Number |  | private |  |
| 1. 2 | V\_hiragana | String |  | private |  |
| 1. 3 | V\_romaji | String |  | private |  |
| 1. 3 | V\_status | Number |  | private |  |
|  | M\_id | Number |  | private |  |
|  | M\_meaningvn | String |  | private |  |
|  | M\_category | String |  | private |  |
|  | M\_kanji | String |  | private |  |
|  | M\_specialized | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getVocabularyByHiragana() | Interact with database: find vocabulary in database that has hiragana as keyword input. |
|  | getMeaningsSpecializedByVocabId() | Interact with database: get meaning specialized in database that id was known. |
|  | getSencencesByMeaningId() | Interact with database: get sentence in database that contained vocabulary was found. |
|  | getMeaningsByVocabId() | Interact with database: get meaning in database that id was known. |

### Model\_Grammar class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | G\_id | Number |  | private |  |
| 1. 2 | G\_hiragana | String |  | private |  |
| 1. 3 | G\_romaji | String |  | Private |  |
| 1. 3 | G\_level | String |  | private |  |
|  | G\_meaning | String |  | private |  |
|  | G\_use | String |  | private |  |
|  | G\_status | Number |  | Private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getGrammarByHiragana() | Interact with database: find grammar in database that has hiragana as keyword input. |
|  | getSentenceByGrammarId() | Interact with database: Interact with database: get sentence in database that contained grammar was found. |

### Model\_Video class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | Vi\_id | Number |  | private |  |
| 1. 2 | Vi\_title | String |  | private |  |
| 1. 3 | Vi\_link | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getVideoByTitle() | Interact with database: find video in database that has title as keyword input. |

### Model\_Conversation class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | C\_id | String |  | private |  |
| 1. 2 | C\_level | String |  | private |  |
| 1. 3 | C\_title | String |  | private |  |
|  | C\_image | String |  | private |  |
|  | Con\_id | Number |  | private |  |
|  | Con\_title | String |  | private |  |
|  | Con\_hiragana | String |  | private |  |
|  | Con\_romaji | String |  | private |  |
|  | Con\_meaning | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getConversationContentByHiragana() | Interact with database: find conversation in database that has title as keyword input. |

### SearchController

#### Attributes

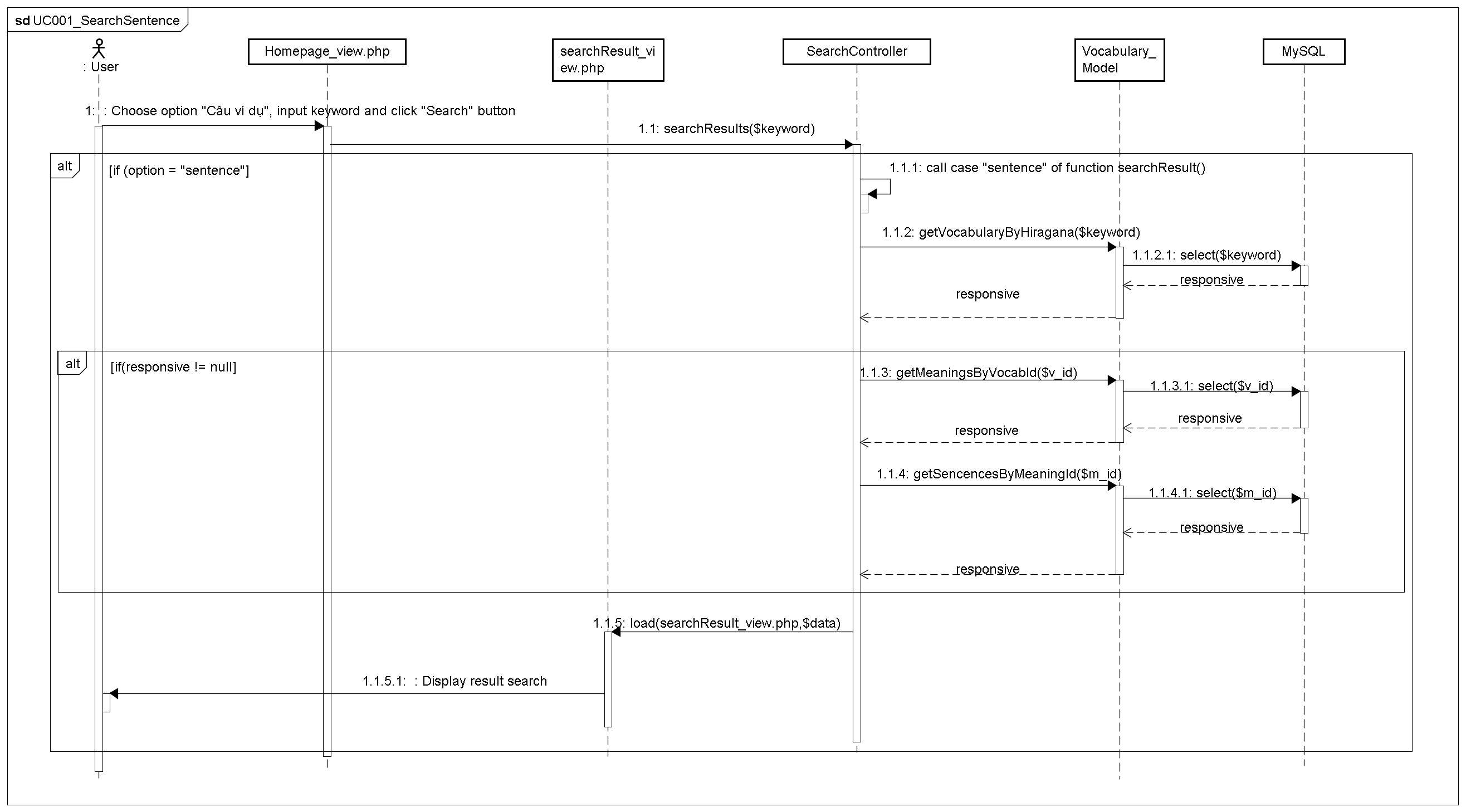
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 |  |  |  |  |  |

#### Methods

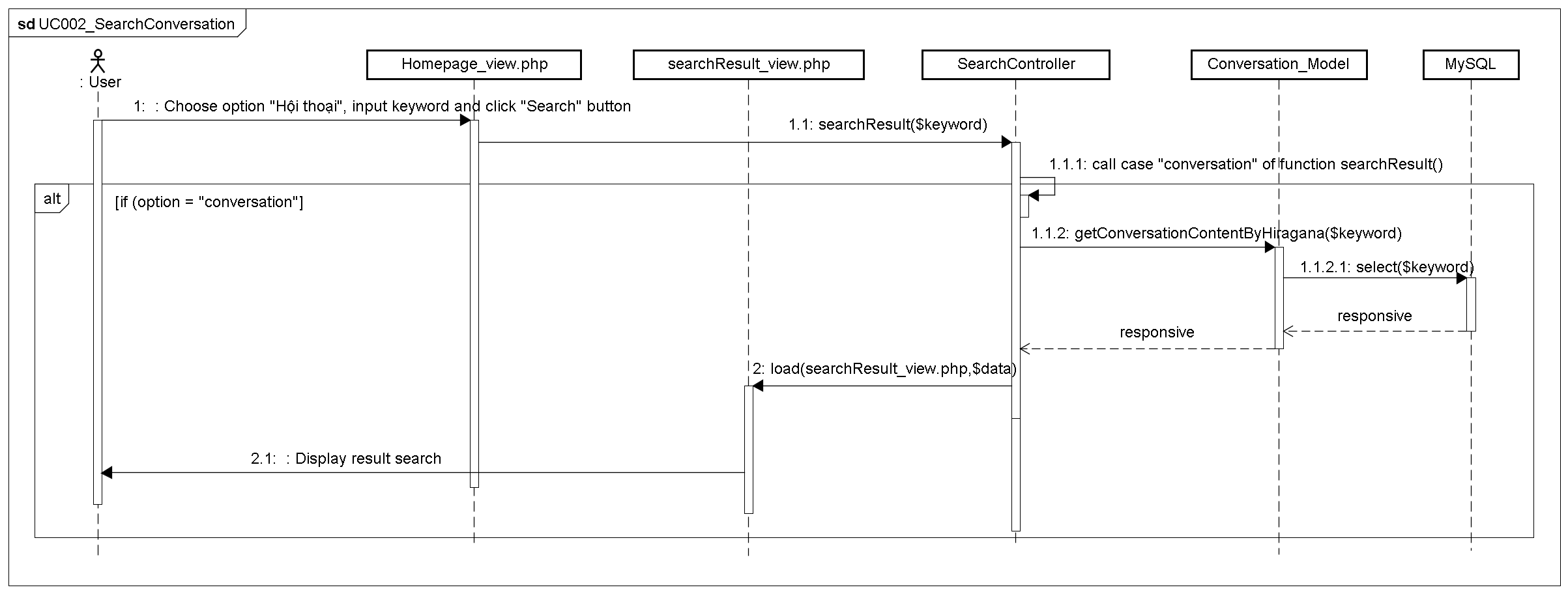
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | searchResults() | Display result search |

### Common Sequence Diagram

#### UC001\_SearchSentence



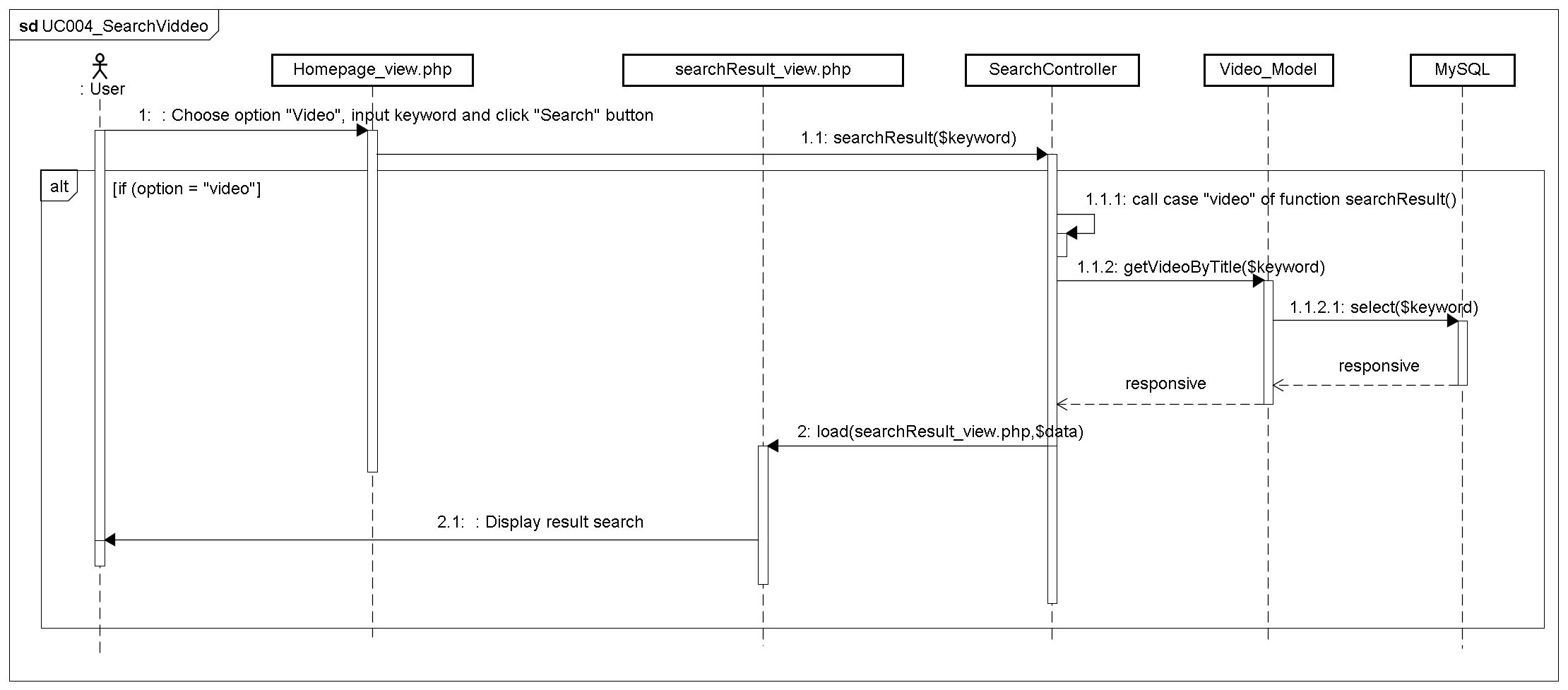
#### UC002\_SearchConversation



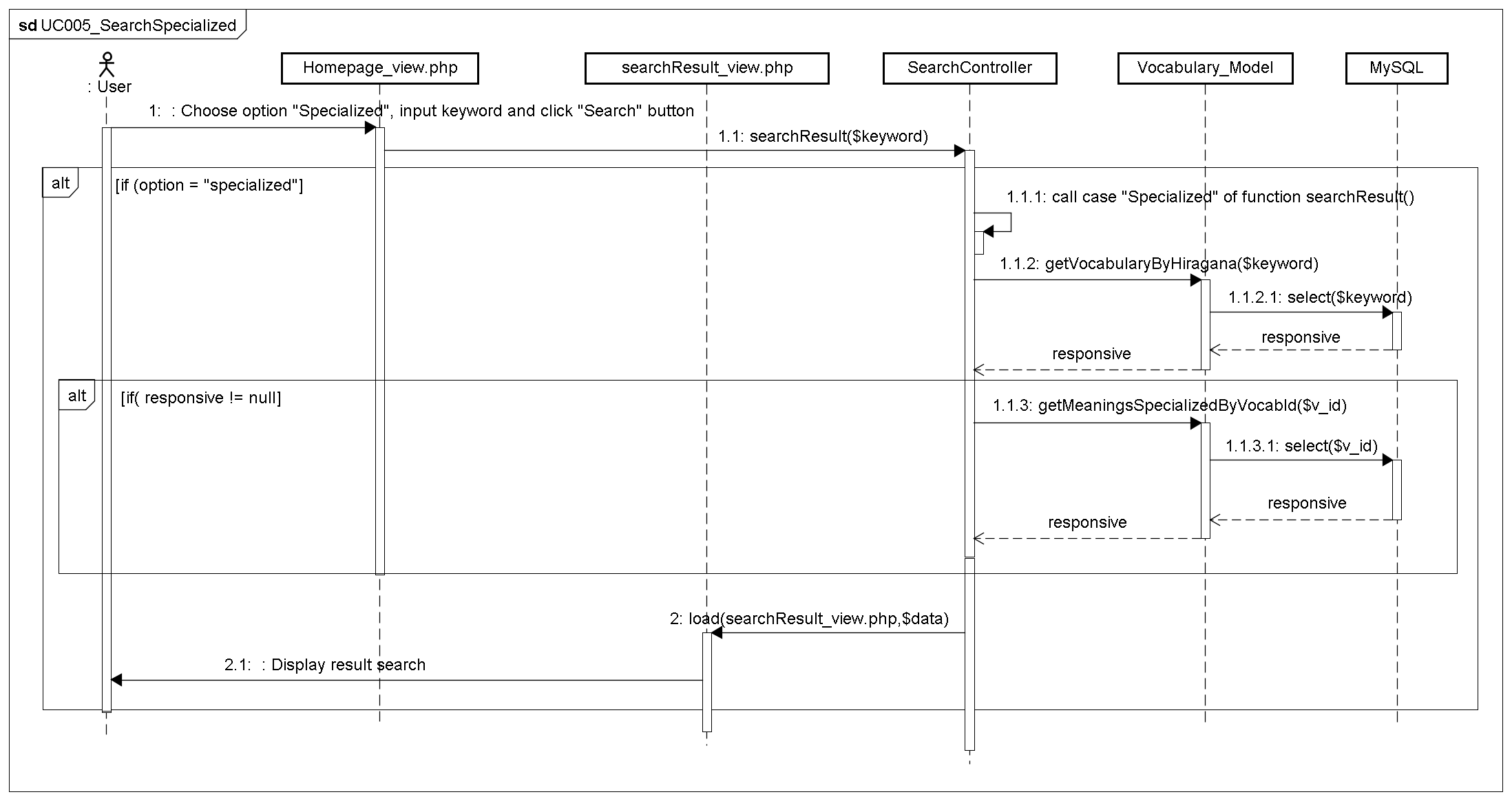
#### UC003\_SearchGrammar



#### UC004\_SearchVideo

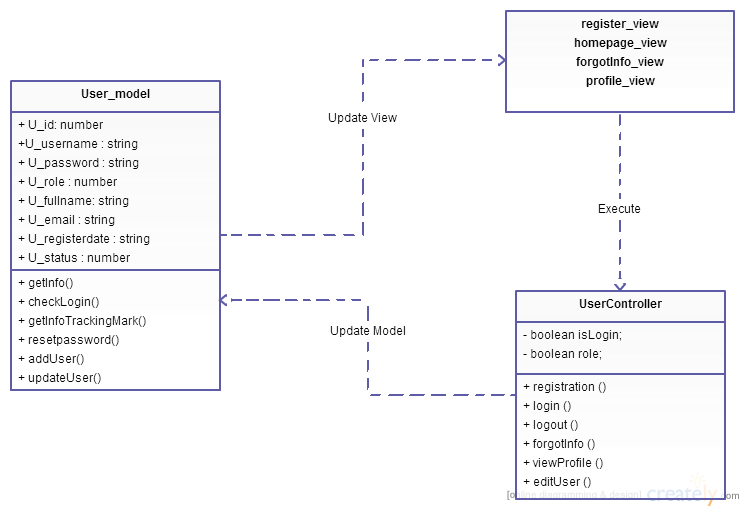


#### UC005\_SearchSpecialized



## Account management Package

### Class diagram



**Figure 2: Class diagram user package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | User\_model | Include method interact with database |
| 2 | UserController | Include method interact with model |

### Model\_User class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | u\_id | Number |  | private |  |
| 2 | u\_username | String |  | private |  |
| 3 | u\_password | String |  | private |  |
| 4 | u\_role | Number |  | private |  |
| 5 | u\_fullname | String |  | private |  |
| 6 | u\_email | String |  | private |  |
| 7 | u\_registerdate | String |  | private |  |
| 8 | u\_status | Number |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | addUser () | Interact with database: create a new account that has user’s information as information input |
|  | getInfo () | Interact with database: get information of user when they logged in. |
|  | checkLogin() | Interact with database: check information of user when they want login to website. |
|  | Resetpassword() | Interact with database: reset password of account that has email as email input. |
|  | updateUser() | Interact with database: update information of user. |

### UserController class

#### Attributes

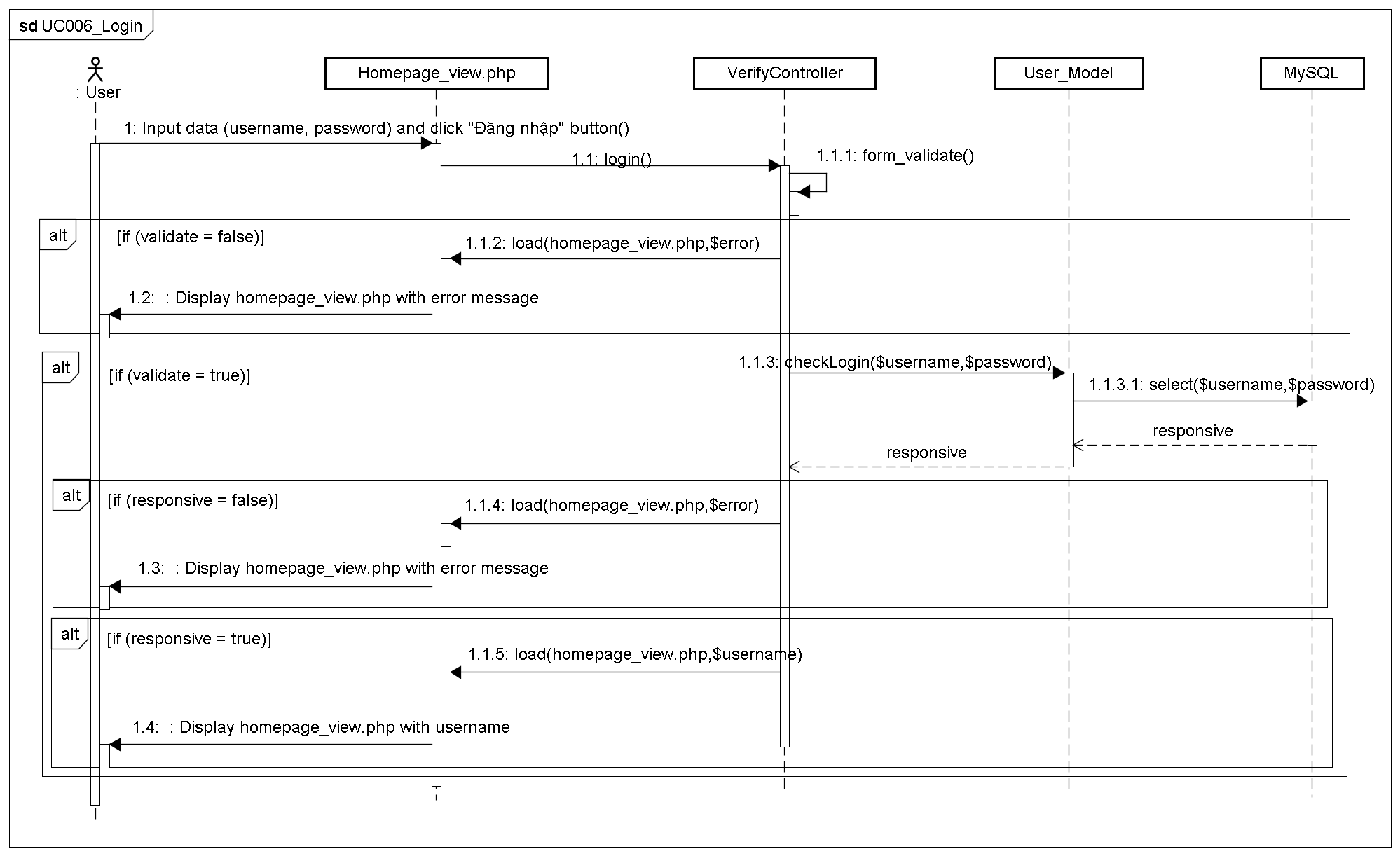
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 |  |  |  |  |  |

#### Methods

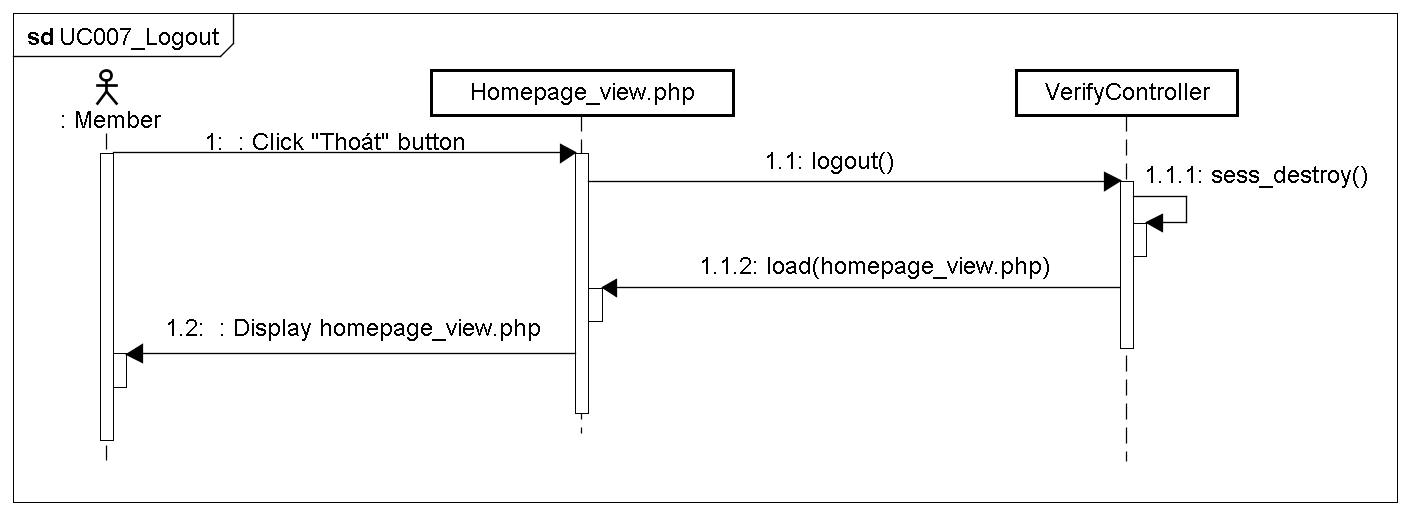
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | registration () | Register new account |
|  | Login() | Login to website |
|  | Logout() | Logout website |
|  | forgotInfo() | Reset password |
|  | viewProfile() | View Profile |
|  | editUser() | Edit account |

### Sequence Diagram

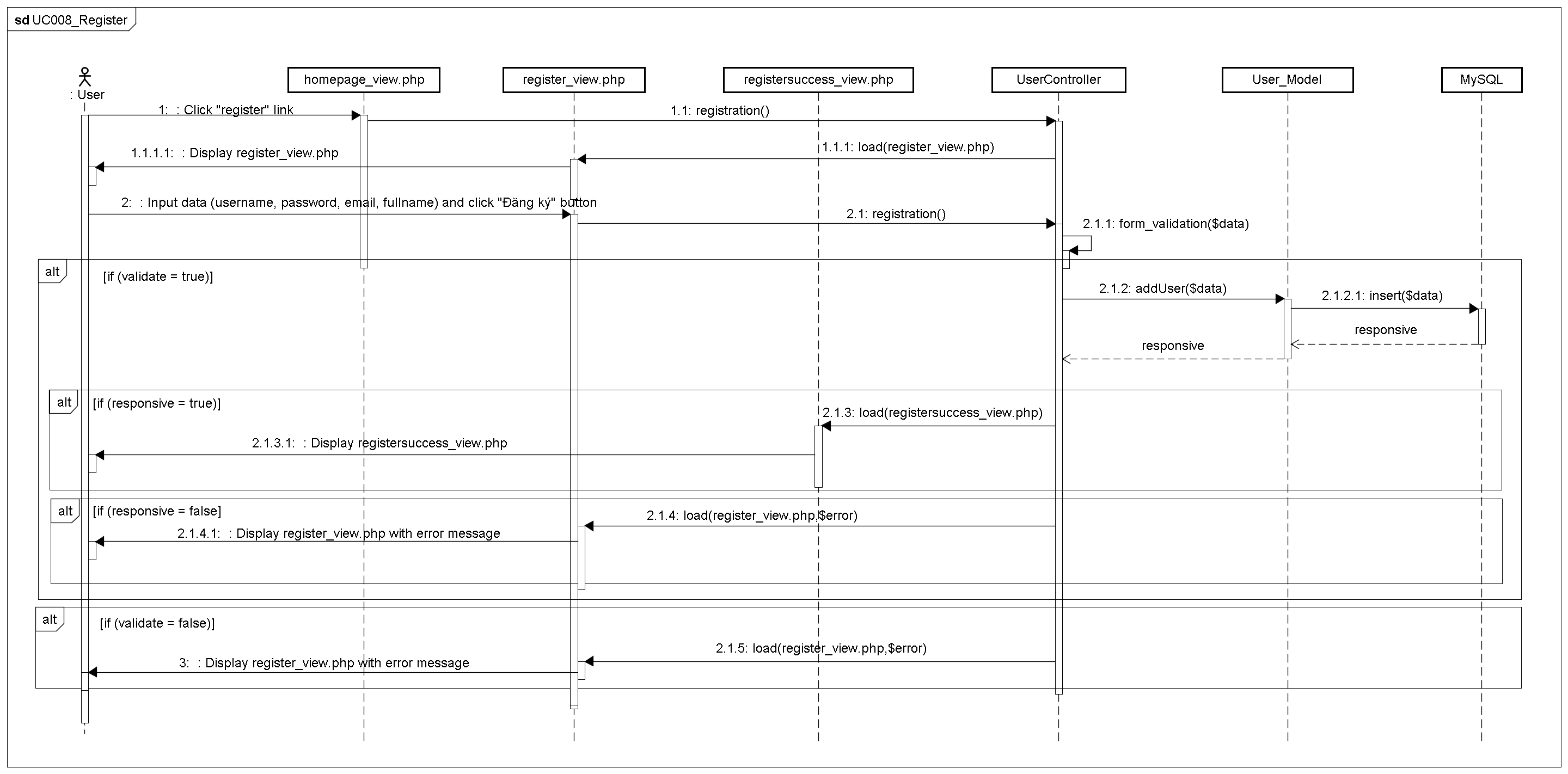
#### UC006\_Login



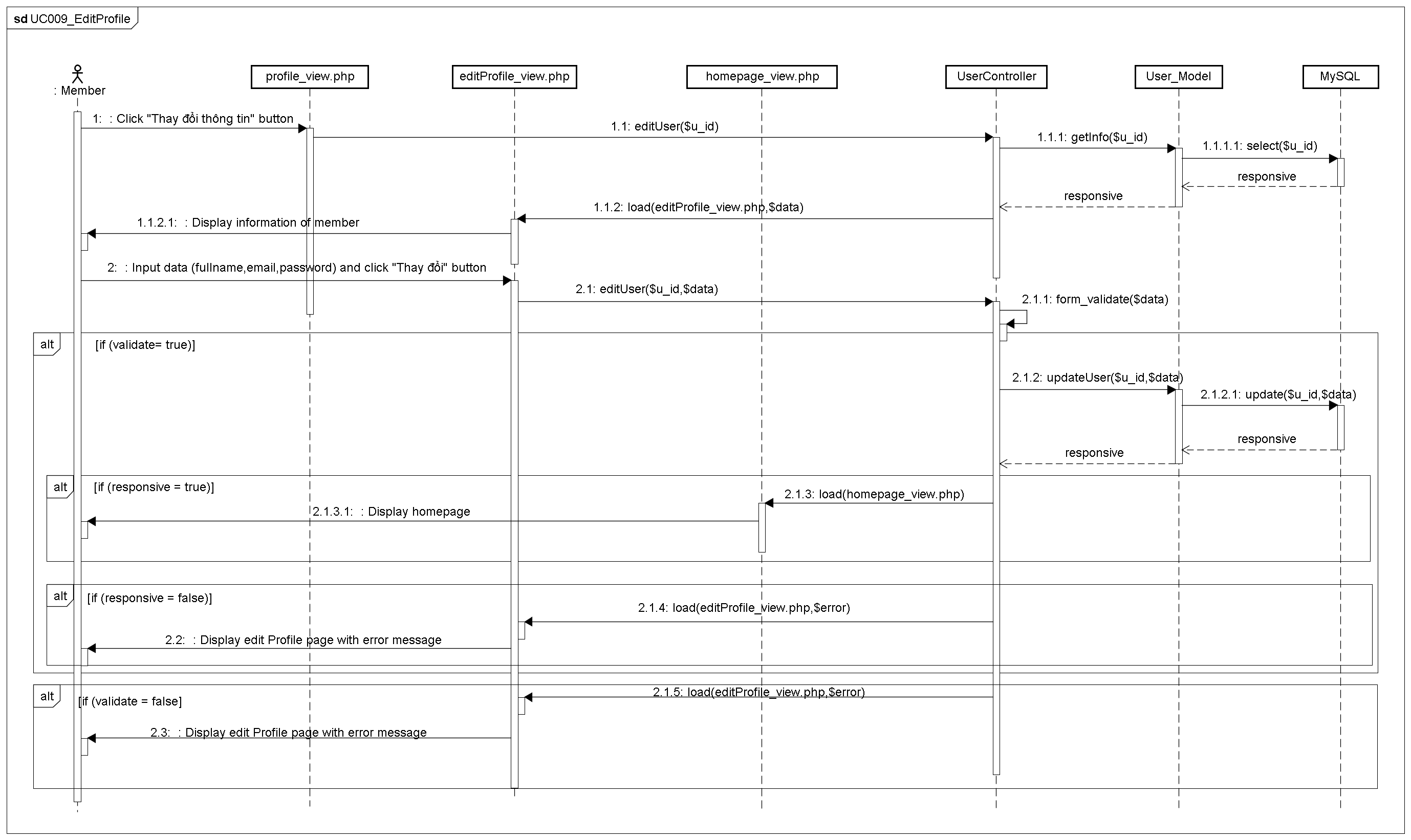
#### UC007\_Logout



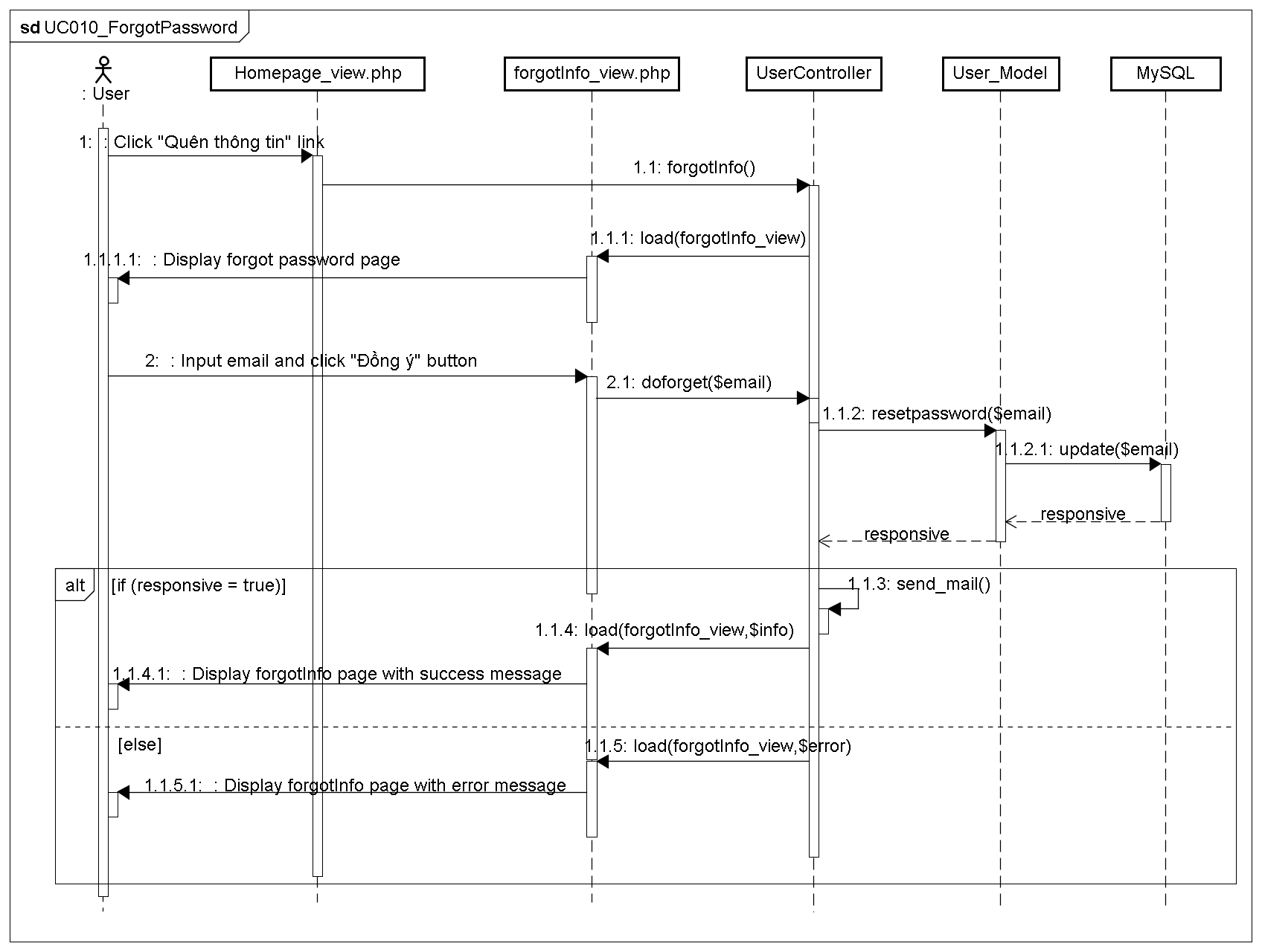
#### UC008\_Register



#### UC009\_Edit profile

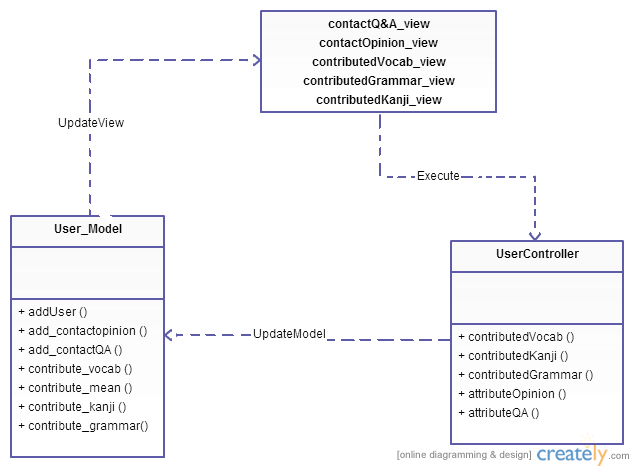


#### UC010\_ForgotPassword



## Contact Package

### Class diagram



**Figure 3: Class diagram Contact package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | User\_model | Include method interact with database |
| 2 | UserController | Include method interact with model |

### Model\_User class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 |  |  |  |  |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | add\_contactopinion () | Interact with database: save opinion of user to database that user was input. |
|  | add\_contactQA () | Interact with database: save Q&A of user to database that user was input. |
|  | contribute\_vocab () | Interact with database: save vocabulary of user to database that user was input. |
|  | contribute\_mean () | Interact with database: save vocabulary’s meaning of user to database that user was input. |
|  | contribute\_kanji () | Interact with database: save kanji of user to database that user was input. |
|  | contribute\_grammar() | Interact with database: save grammar of user to database that user was input. |

### UserController class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 |  |  |  |  |  |

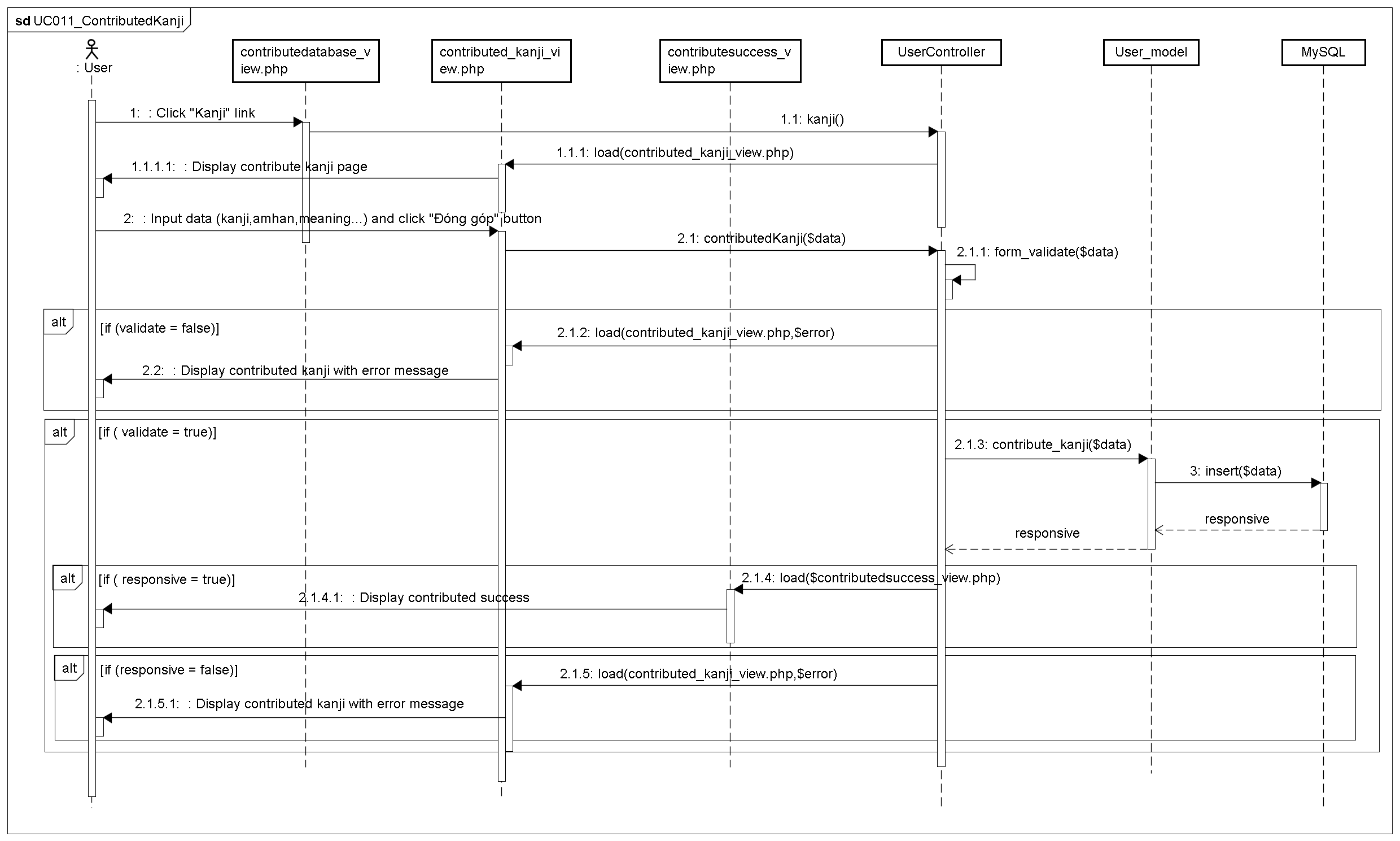
#### Methods

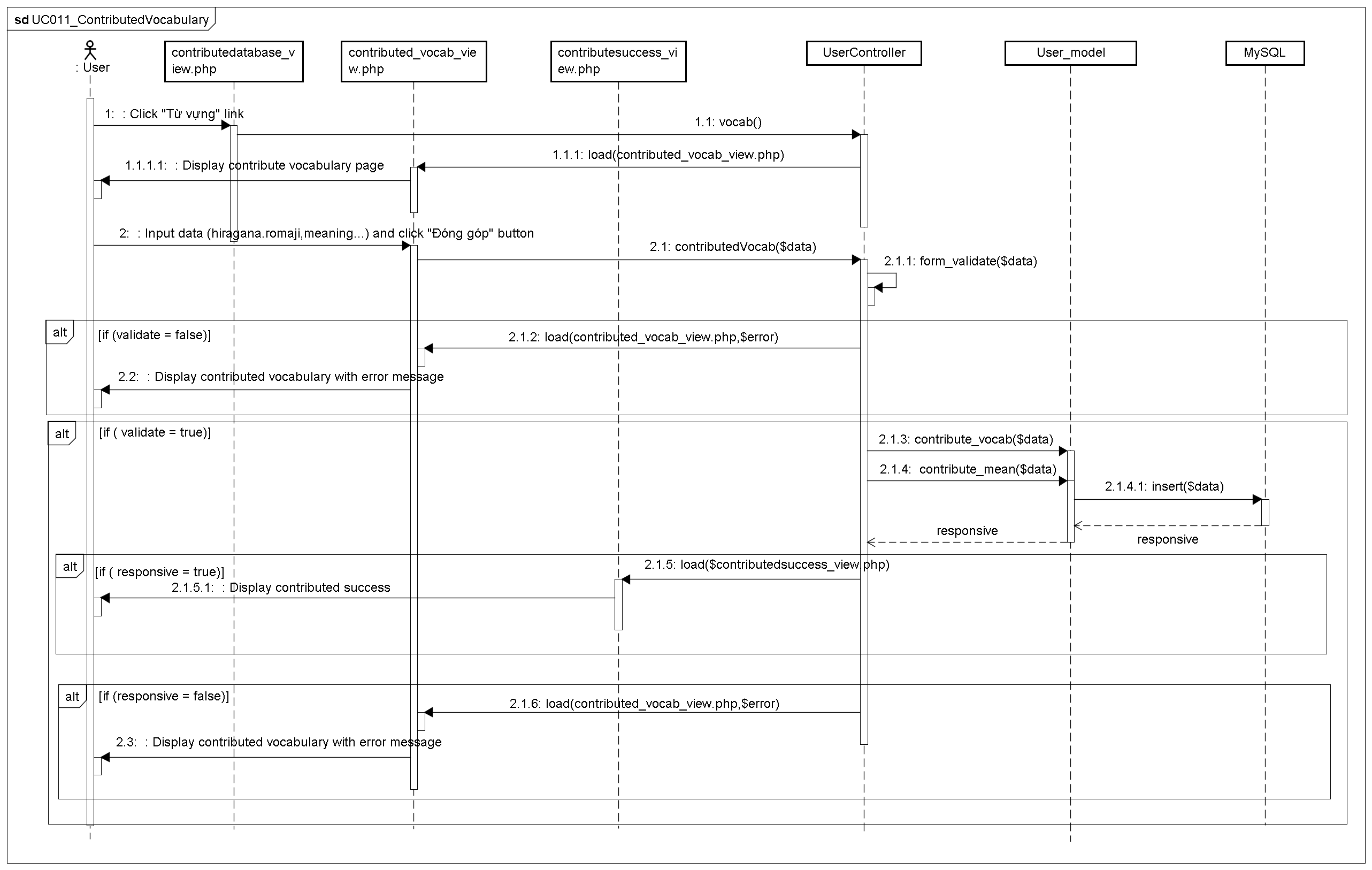
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | contributedVocab () | Contributed Vocabulary |
|  | contributedKanji () | Contributed Kanji |
|  | contributedGrammar () | Contributed Grammar |
|  | attributeOpinion () | Contributed Opinion |
|  | attributeQA () | Contributed QA |

### Sequence diagram

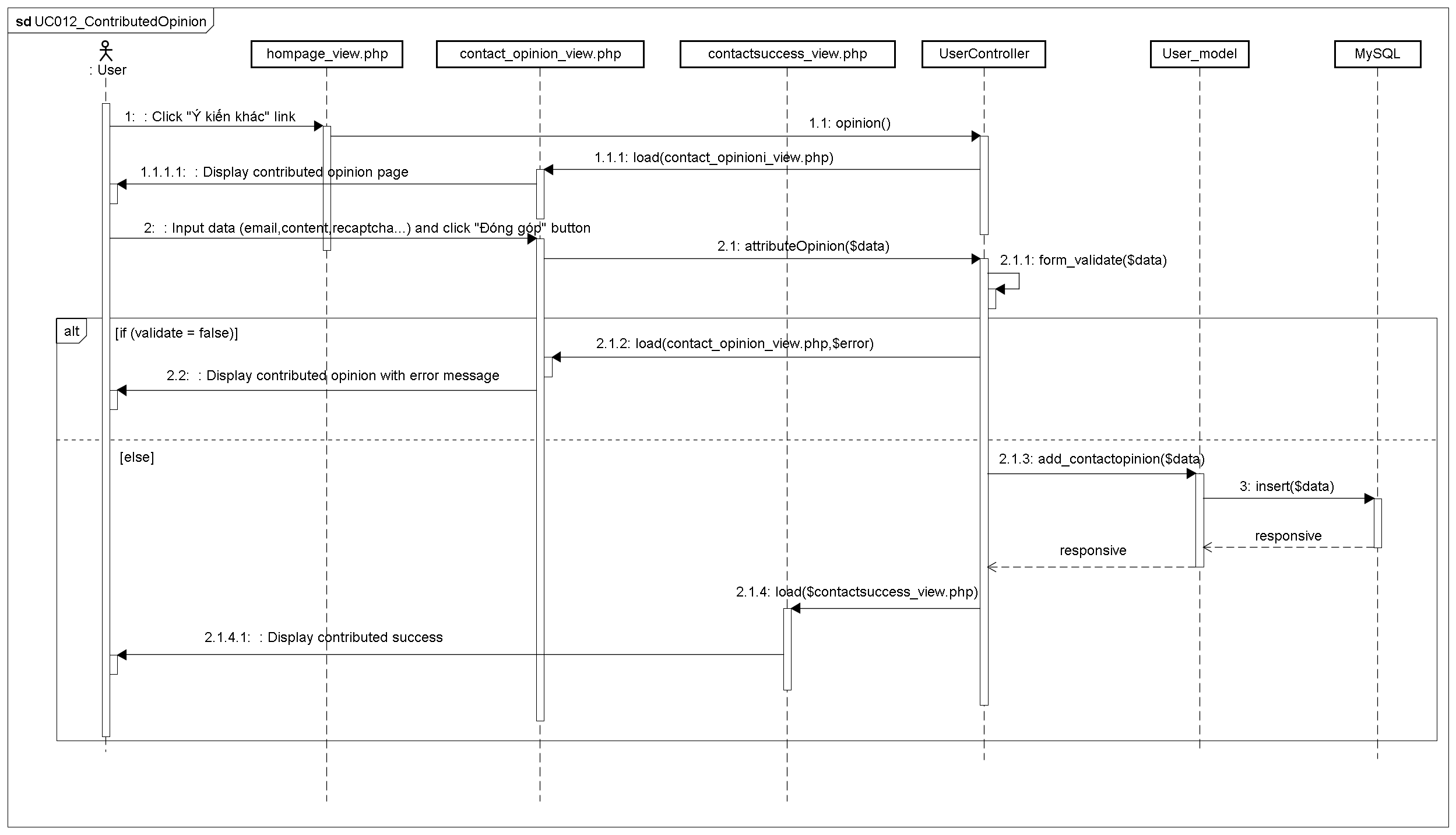
#### UC011\_ContributedContent



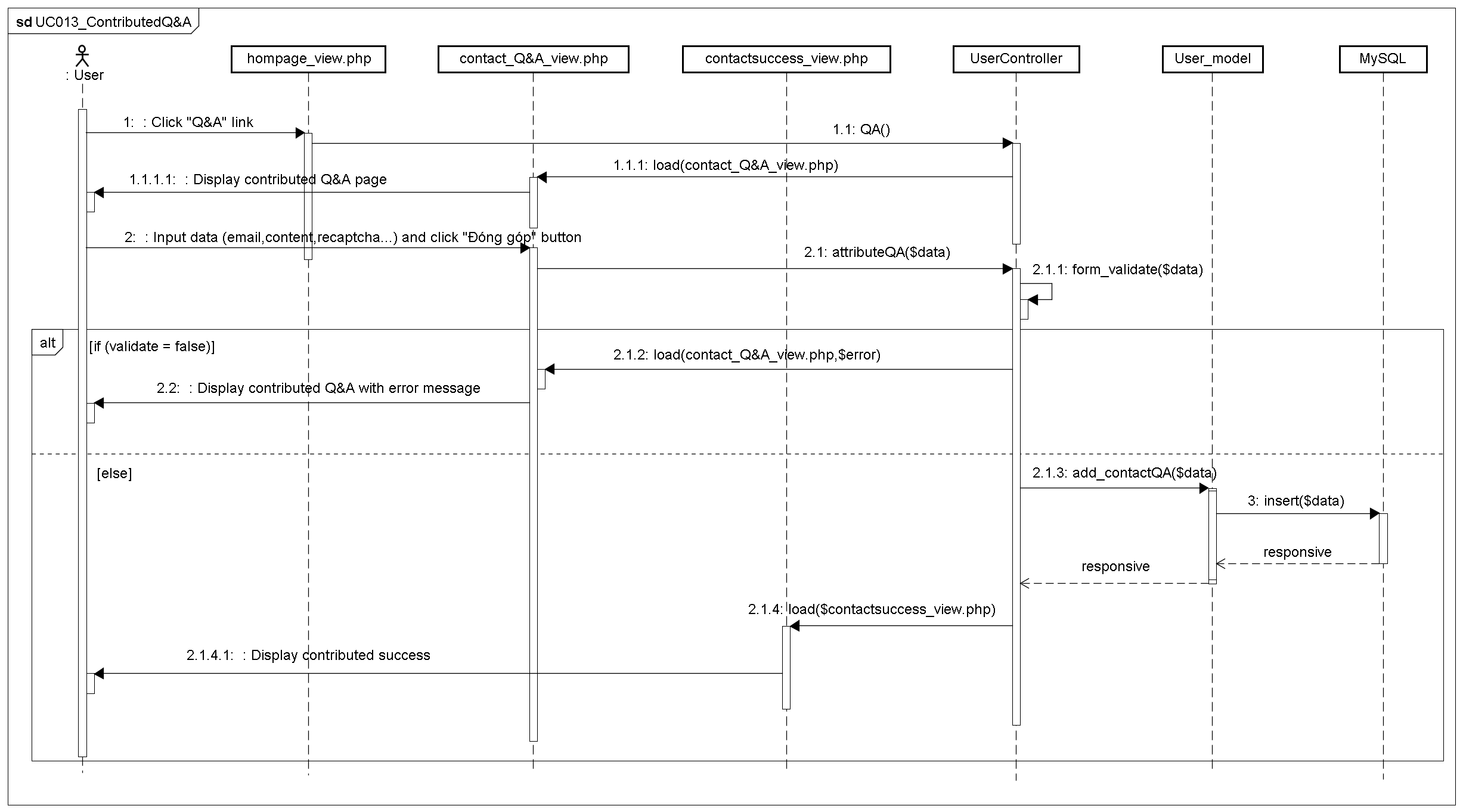




#### UC012\_ContributedOpinion

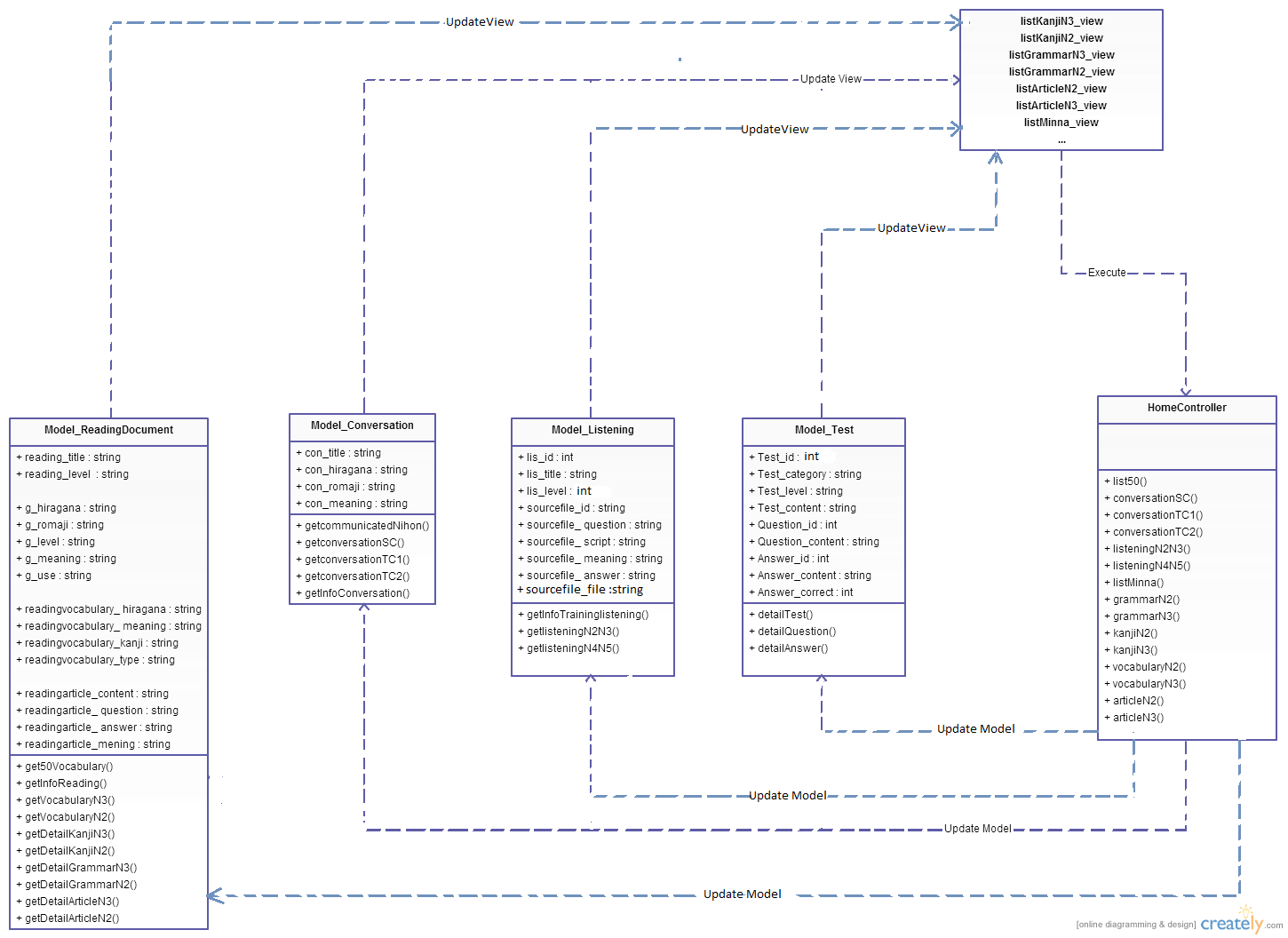


#### UC013\_ContributedQ&A



## Practice management Package

### Class diagram



***Figure 4: Class diagram Practice management package***

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_ReadingDocument | Include method interact with database |
| 2 | Model\_Conversation | Include method interact with database |
| 3 | Model\_Listening | Include method interact with database |
| 4 | Model\_Test | Include method interact with database |
| 5 | ReadingDocumentController | Include method interact with models |

### Model ReadingDocument class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | reading\_title | String |  | private |  |
| 1. 2 | reading\_level | String |  | private |  |
| 1. 3 | g\_hiragana | String |  | private |  |
|  | g\_romaji | String |  | private |  |
|  | g\_level | String |  | private |  |
|  | g\_meaning | String |  | private |  |
|  | g\_use | String |  | private |  |
|  | readingvocabulary\_ hiragana | String |  | private |  |
|  | readingvocabulary\_ meaning | String |  | private |  |
|  | readingvocabulary\_kanji | String |  | private |  |
|  | readingvocabulary\_type | String |  | private |  |
|  | readingarticle\_content | String |  | private |  |
|  | readingarticle\_ question | String |  | private |  |
|  | readingarticle\_ answer | String |  | private |  |
|  | readingarticle\_mening | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | get50Vocabulary() | Interact with database: get vocabulary of 50 lessons Minna Nihon in database. |
|  | getInfoReading() | Interact with database: get detail of reading document when reading was know |
|  | getVocabularyN3() | Interact with database: get vocabulary in database that has level N3. |
|  | getVocabularyN2() | Interact with database: get vocabulary in database that has level N2. |
|  | getDetailKanjiN3() | Interact with database: get kanji in database that has level N3. |
|  | getDetailKanjiN2() | Interact with database: get kanji in database that has level N2. |
|  | getDetailGrammarN3() | Interact with database: get detail of grammar in database that has level N3. |
|  | getDetailGrammarN2() | Interact with database: get detail of grammar in database that has level N2. |
|  | getDetailArticleN3() | Interact with database: get detail of article in database that has level N3. |
|  | getDetailArticleN2() | Interact with database: get detail of article in database that has level N2. |

### Model Conversation class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | C\_id | Number |  | private |  |
| 1. 2 | C\_level | String |  | private |  |
| 1. 3 | C\_title | String |  | private |  |
|  | C\_image | String |  | private |  |
|  | Con\_id | Number |  | private |  |
|  | Con\_hiragana | String |  | private |  |
|  | Con\_romaji | String |  | private |  |
|  | Con\_meaning | String |  | private |  |
|  | Con\_file | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getcommunicatedNihon() | Interact with database: get conversational communication in database. |
|  | getconversationSC() | Interact with database: get conversation in database that has level SC. |
|  | getconversationTC1() | Interact with database: get conversation in database that has level TC1. |
|  | getconversationTC2() | Interact with database: get conversation in database that has level TC2. |
|  | getInfoConversation() | Interact with database: get detail of conversation in database that id of conversation was known. |

### Model Listening class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | Lis\_id | Number |  | private |  |
| 1. 2 | Lis\_title | String |  | private |  |
|  | Lis\_level | String |  | private |  |
| 1. 3 | Sourcefile\_id | Number |  | private |  |
| 1. 3 | Sourcefile\_ question | String |  | private |  |
|  | Sourcefile\_ script | String |  | private |  |
|  | Sourcefile\_ meaning | String |  | private |  |
|  | Sourcefile\_file | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getInfoTraininglistening() | Interact with database: get detail of listening in database that id of listening was known. |
|  | getlisteningN2N3() | Interact with database: get listening in database that has level N2N3. |
|  | getlisteningN4N5() | Interact with database: get listening in database that has level N4N5. |

### Model Test class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | Test\_id | Number |  | Private |  |
| 1. 2 | Test\_category | String |  | Private |  |
| 1. 3 | Test\_level | String |  | Private |  |
|  | Test\_content | String |  | Private |  |
|  | Question\_id | String |  | Private |  |
|  | Question\_content | String |  | Private |  |
|  | Answer\_id | Number |  | Private |  |
|  | Answer\_content | String |  | Private |  |
|  | Answer\_correct | Number |  | Private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | detailTest() | Interact with database: get detail of test when id of test was known. |
| 2 | detailQuestion() | Interact with database: get detail of question when id of test was known. |
| 3 | detailAnswer() | Interact with database: get detail of answer when id of question was known. |

### HomeController class

#### Attributes

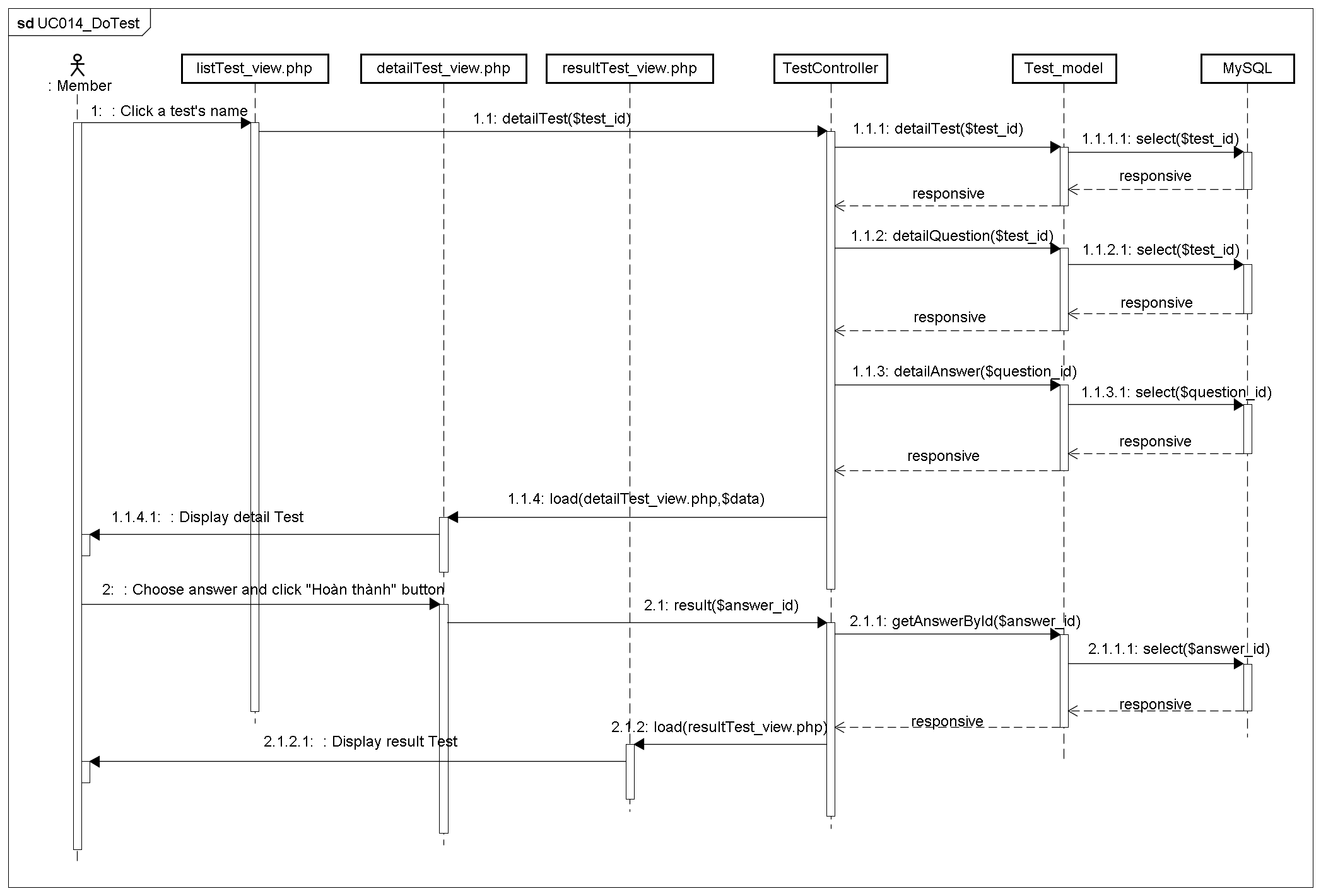
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 |  |  |  |  |  |

#### Methods

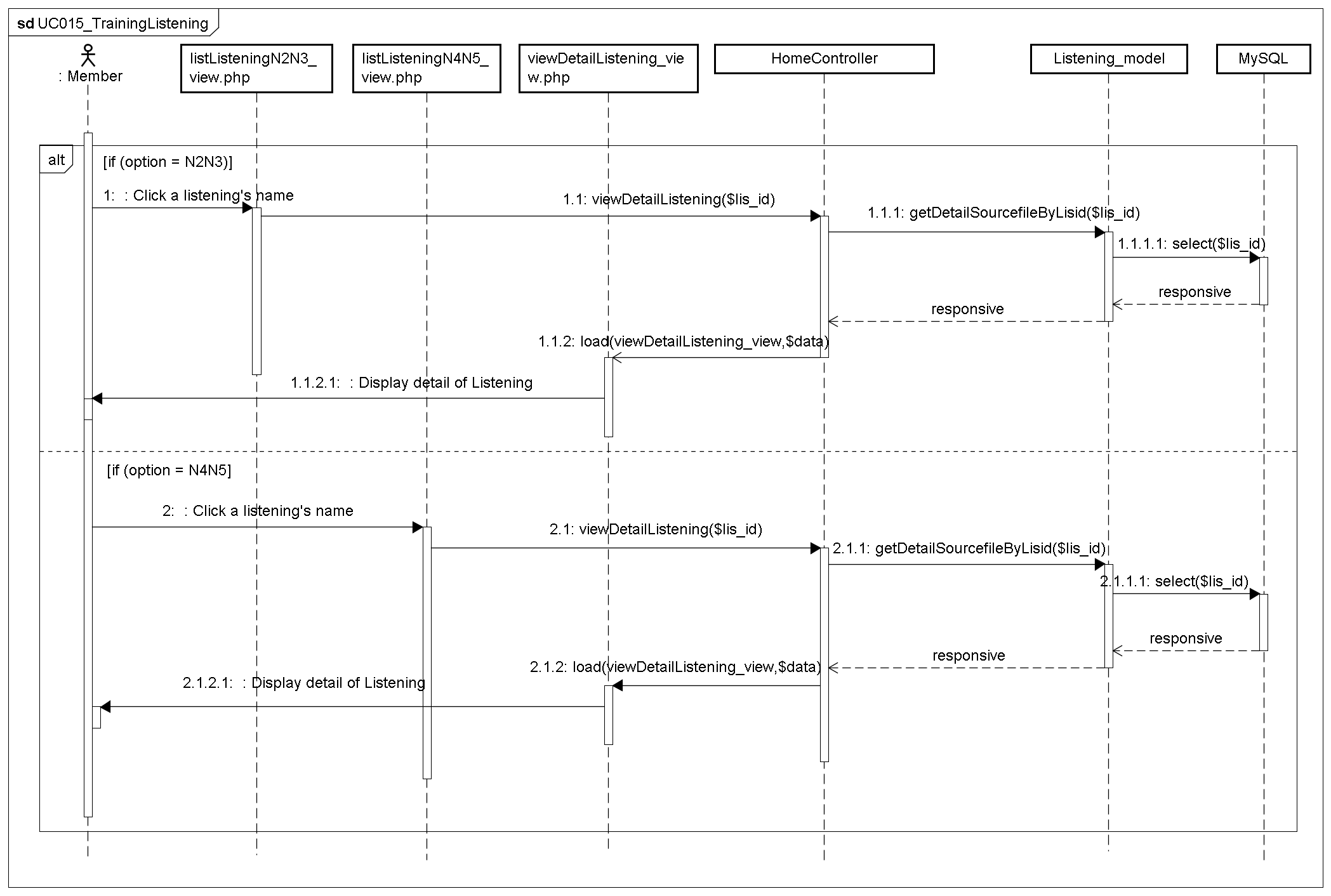
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | list50() | List 50 vocabulary of minanihon |
|  | conversationSC() | List Conversation level elementary |
|  | conversationTC1() | List Conversation level intermediate |
|  | conversationTC2() | List Conversation level intermediate |
|  | listeningN2N3() | List Listening level N2&N3 |
|  | listeningN4N5() | List Listening level N4&N5 |
|  | listMinna() | List minanihon |
|  | grammarN2() | List Grammar level N2 |
|  | grammarN3() | List Grammar level N3 |
|  | kanjiN2() | List Kanji level N2 |
|  | kanjiN3() | List Kanji level N3 |
|  | vocabularyN2() | List Vocabulary level N2 |
|  | vocabularyN3() | List Vocabulary level N3 |
|  | articleN2() | List Article level N2 |
|  | articleN3() | List Article level N3 |

### Sequence Diagram

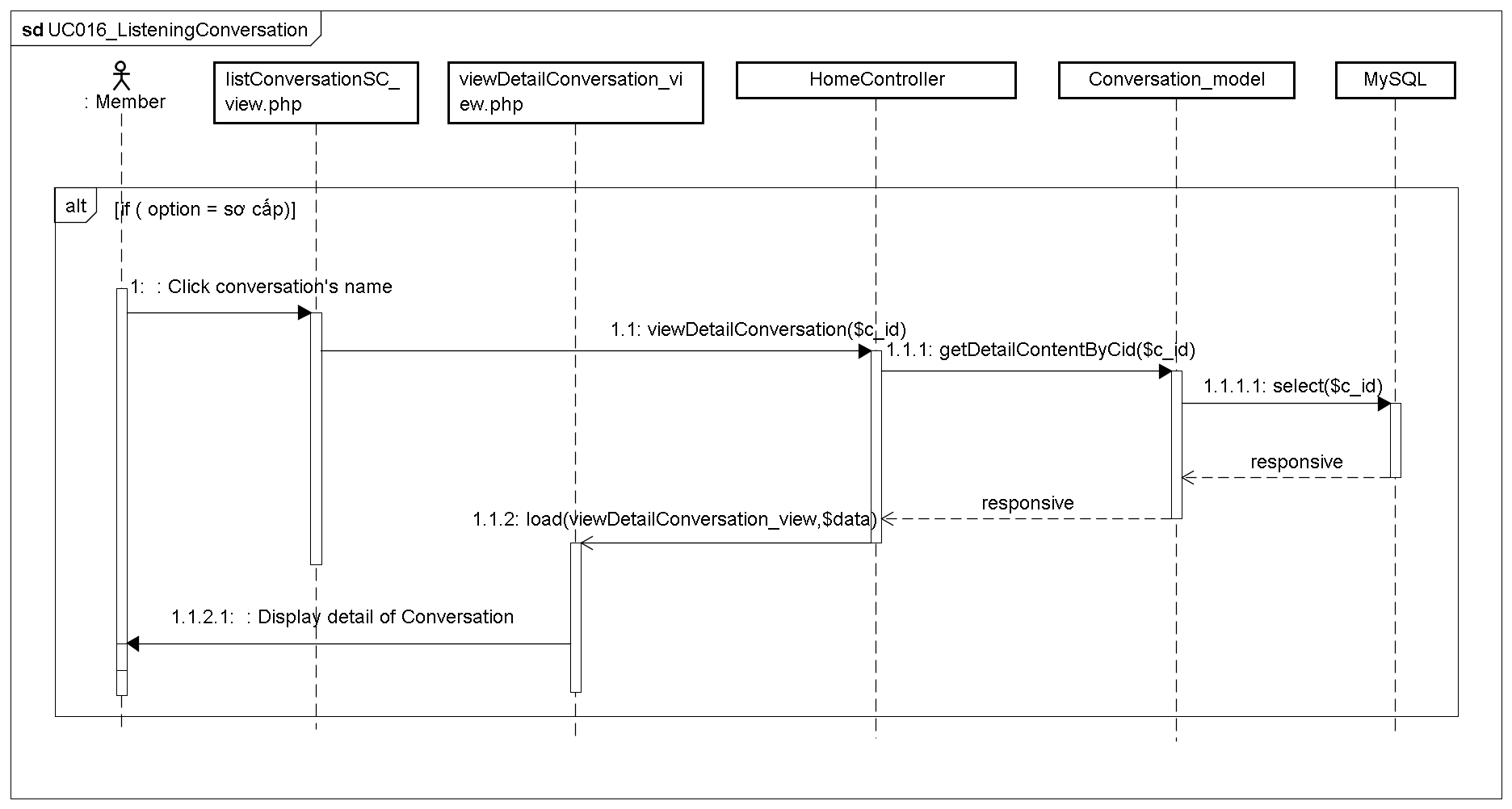
#### UC014\_DoTest



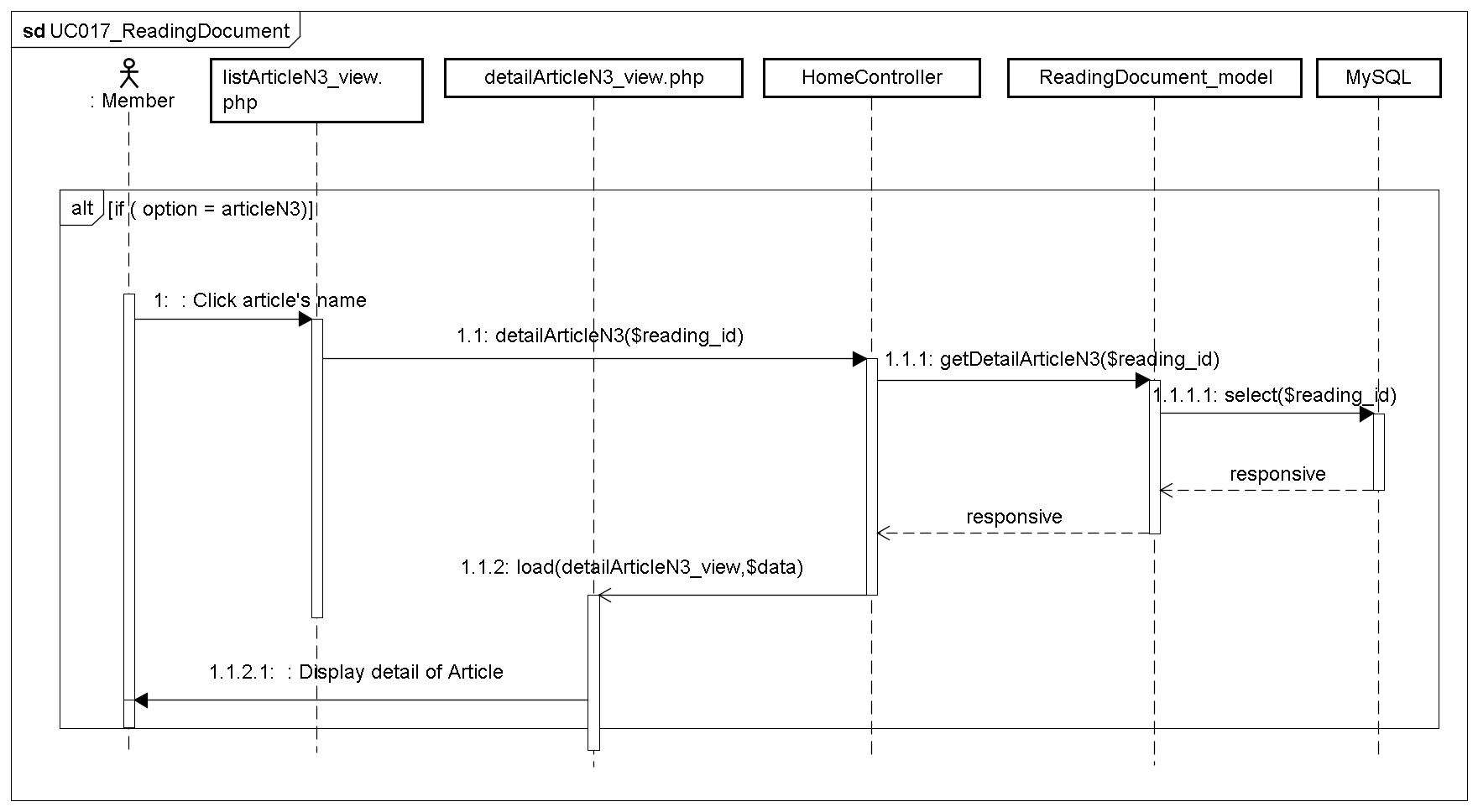
#### UC015\_TrainingListening



#### UC016\_ListeningConversation

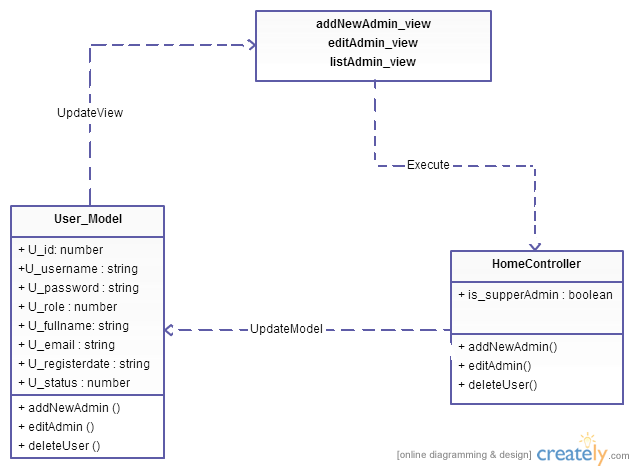


#### UC017\_ReadingDocument



## Admin’s account management Package

### Class diagram



**Figure 5: Class diagram Admin’s account management package**

|  |  |  |
| --- | --- | --- |
| NNo | Class Name | Description |
| 1 | Model\_User | Include method interact with database |
| 2 | HomeController | Include method interact with model |

### Model\_User class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | u\_id | Number |  | private |  |
| 2 | u\_username | String |  | private |  |
| 3 | u\_password | String |  | private |  |
| 4 | u\_role | Number |  | private |  |
| 5 | u\_fullname | String |  | private |  |
| 6 | u\_email | String |  | private |  |
| 7 | u\_registerdate | String |  | private |  |
| 8 | u\_status | Number |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | addNewAdmin () | Interact with database: create a new account with role as admin and save to database. |
|  | editAdmin () | Interact with database: update information of account into database. |
|  | deleteUser () | Interact with database: delete account in database that id of account was known. |

### HomeController class

#### Attributes

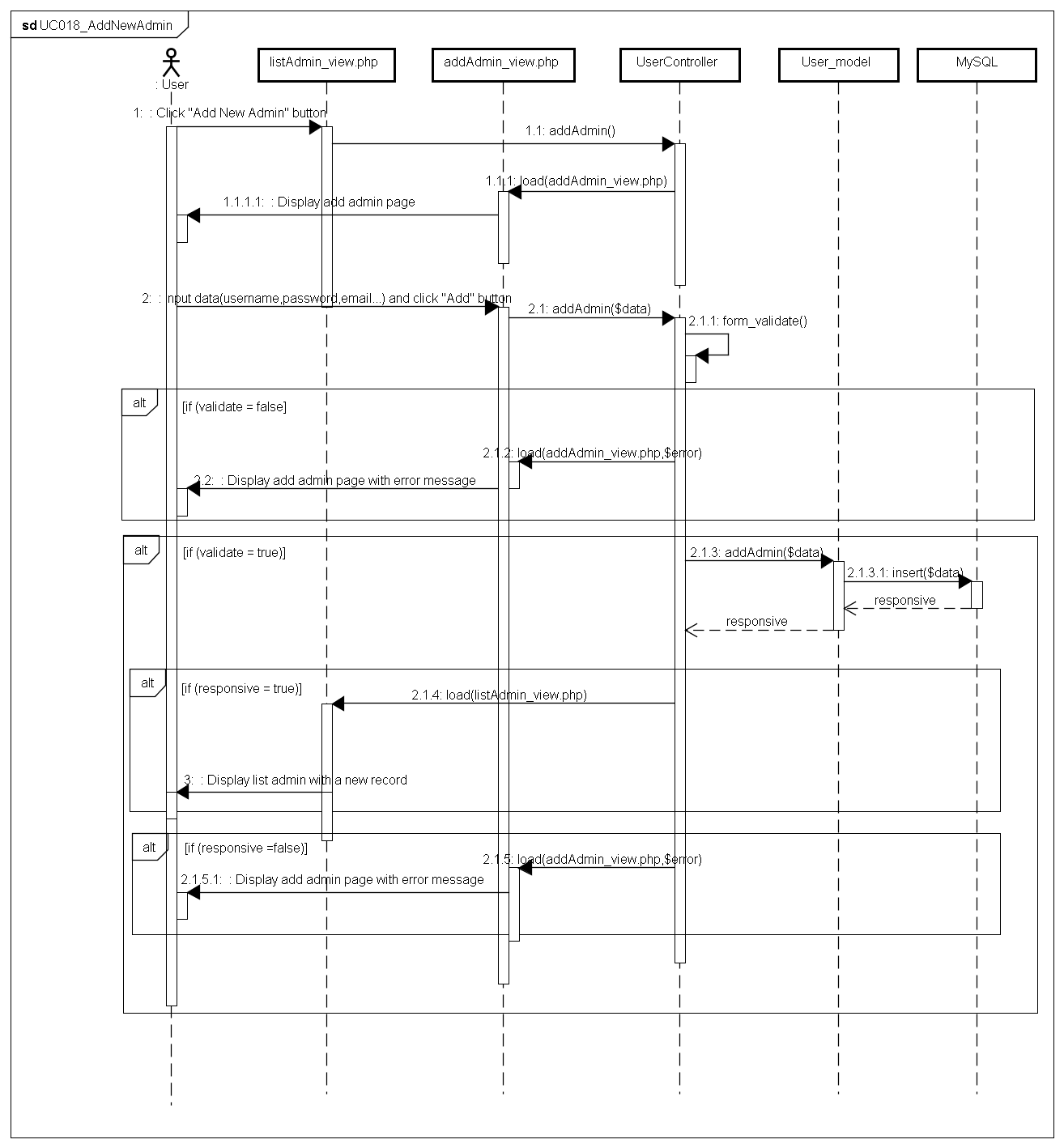
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | Is\_supperAdmin | boolean |  |  | Check role admin |

#### Methods

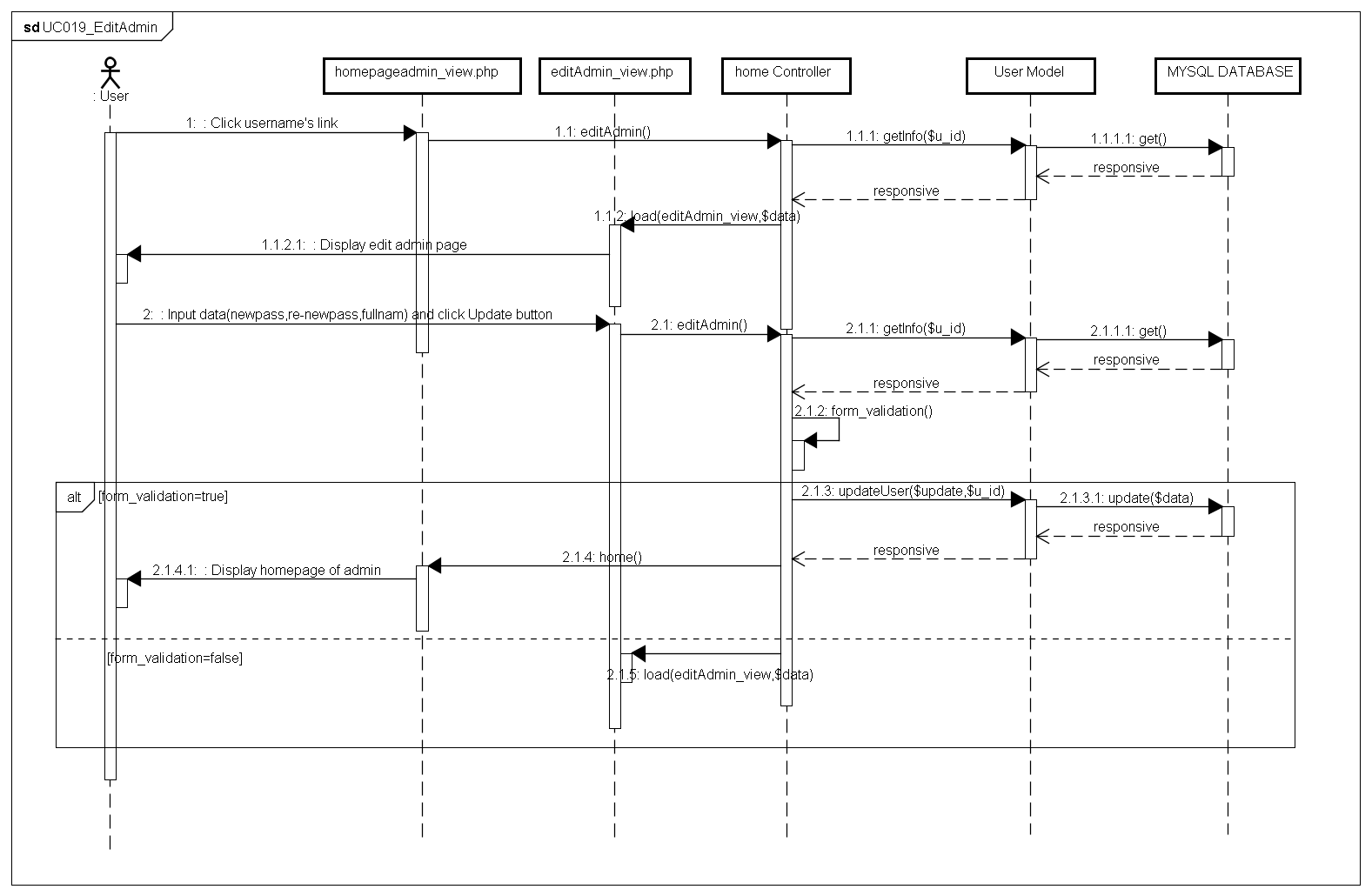
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | addNewAdmin() | Add a new account with role is admin |
|  | editAdmin() | Edit information |
|  | deleteUser() | Delete Admin |

### Sequence Diagram

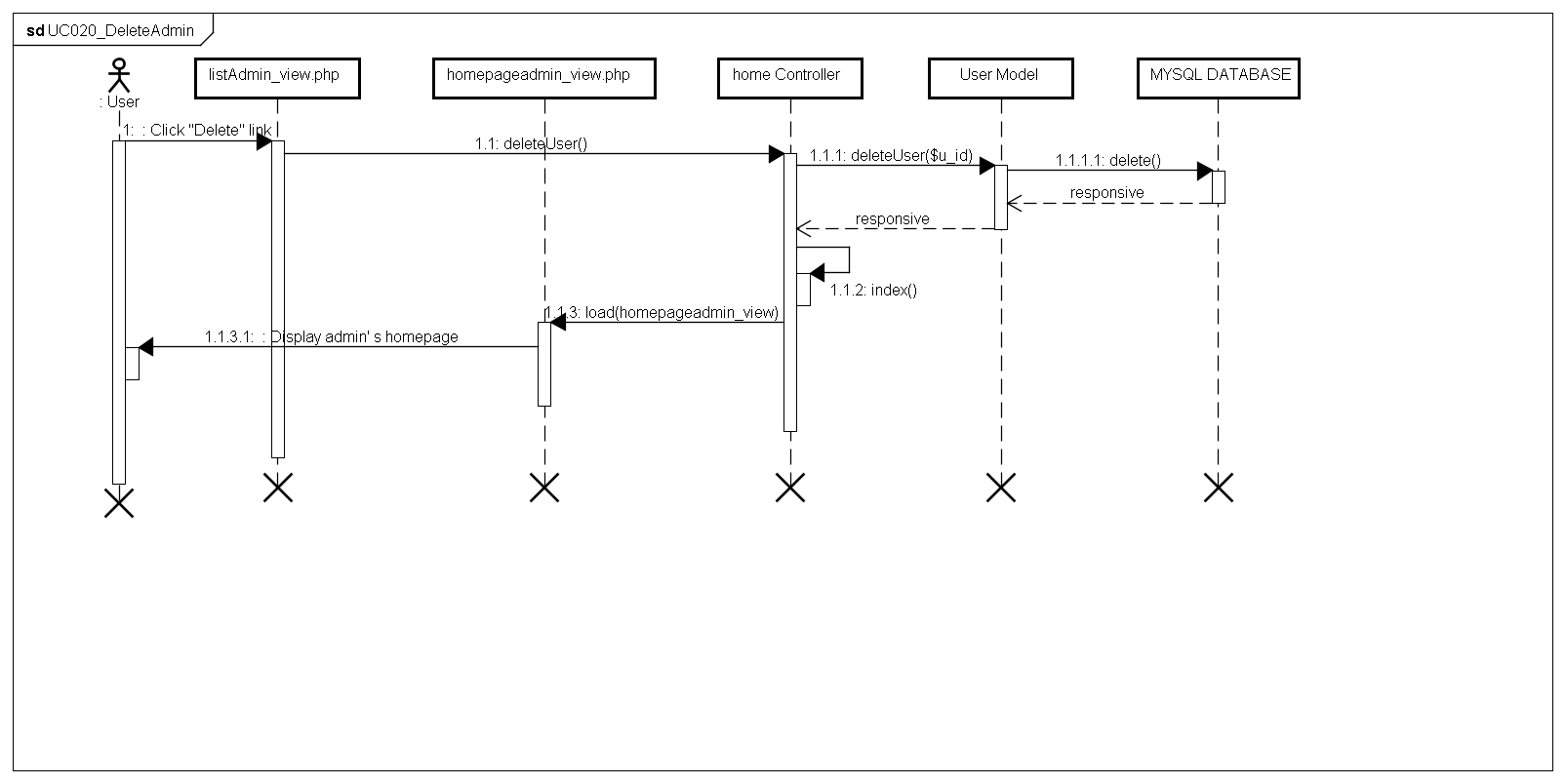
#### UC018\_AddNewAdmin



#### UC019\_EditAdmin

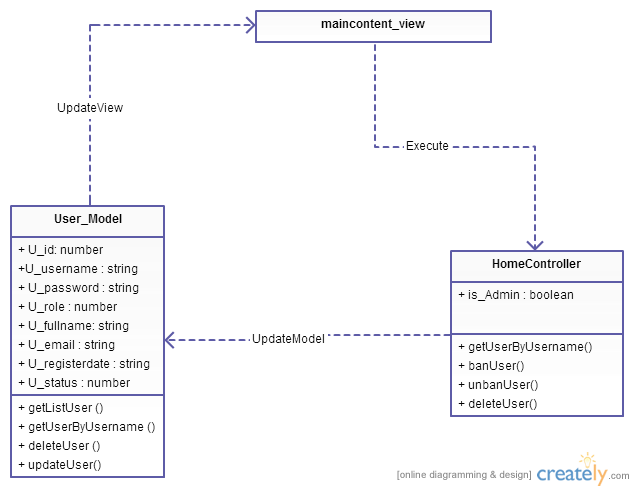


#### UC020\_DeleteAdmin



## Management Member’s account

### Class diagram



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

|  |  |  |
| --- | --- | --- |
| NNo | Class Name | Description |
| 1 | Model\_User | Include method interact with database |
| 2 | HomeController | Include method interact with model |

### Model\_User class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | u\_id | Number |  | Private |  |
| 2 | u\_username | String |  | Private |  |
| 3 | u\_password | String |  | Private |  |
| 4 | u\_role | Number |  | Private |  |
| 5 | u\_fullname | String |  | Private |  |
| 6 | u\_email | String |  | Private |  |
| 7 | u\_registerdate | String |  | Private |  |
| 8 | u\_status | Number |  | Private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getListUser () | Interact with database: get all accounts in database that has role as member. |
|  | getUserByUsername () | Interact with database: get information of account in database when username was known. |
|  | deleteUser () | Interact with database: delete account in database. |
|  | updateUser() | Interact with database: update information of account in database. |

### HomeController class

#### Attributes

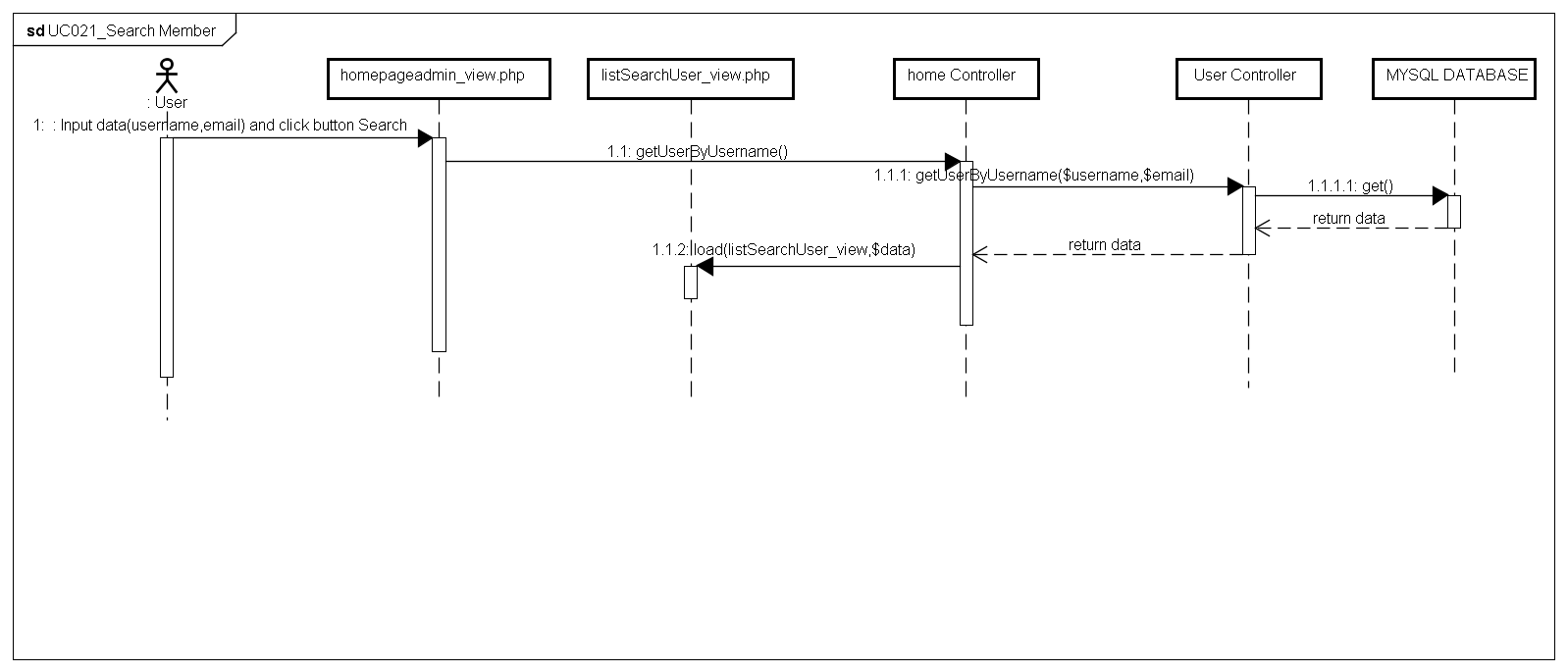
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | Is\_Admin | Boolean |  |  | Check role admin |

#### Methods

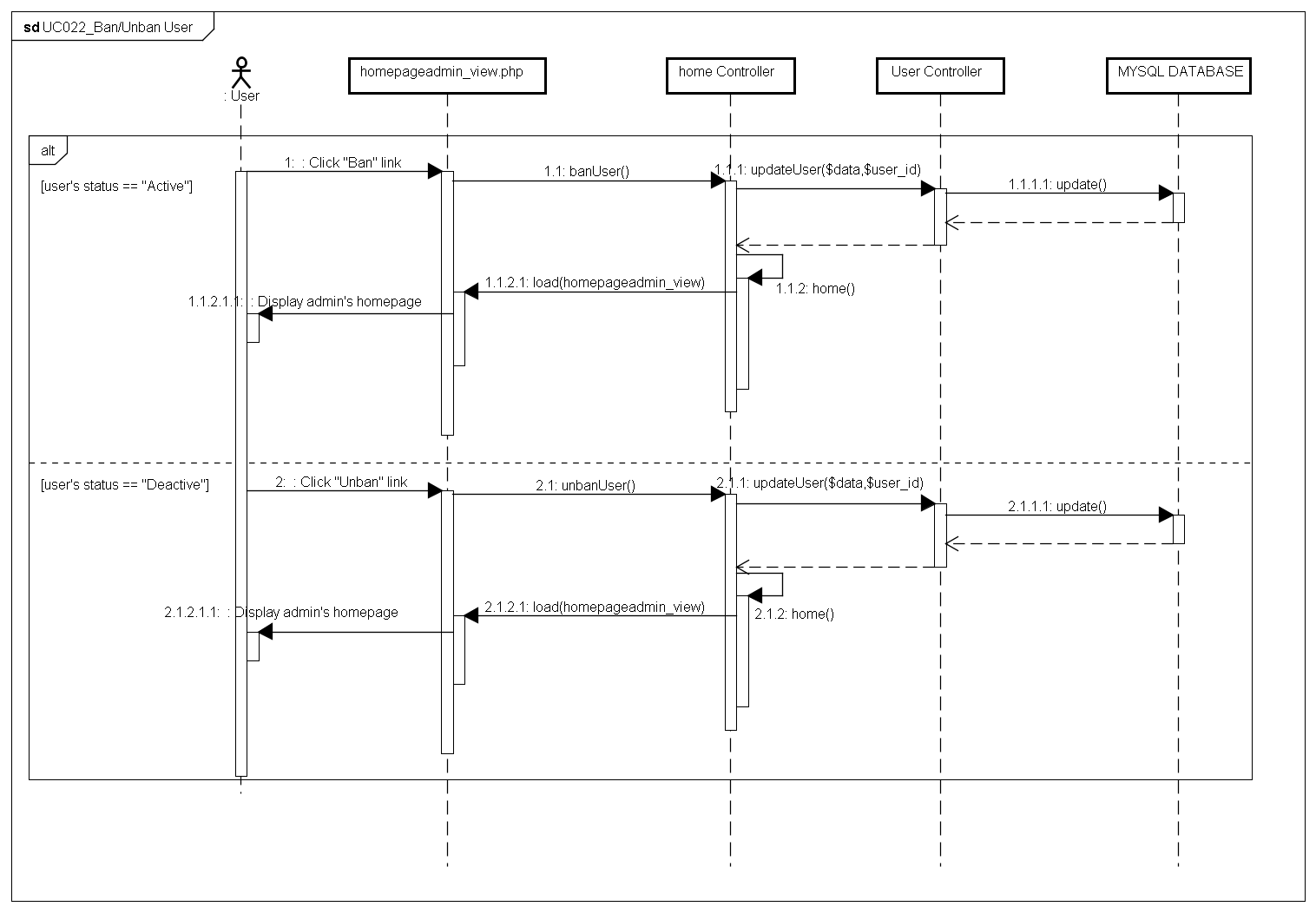
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | banUser() | Deactive user. |
|  | unbanUser () | Active user |
|  | deleteUser() | Delete User |

### Sequence Diagram

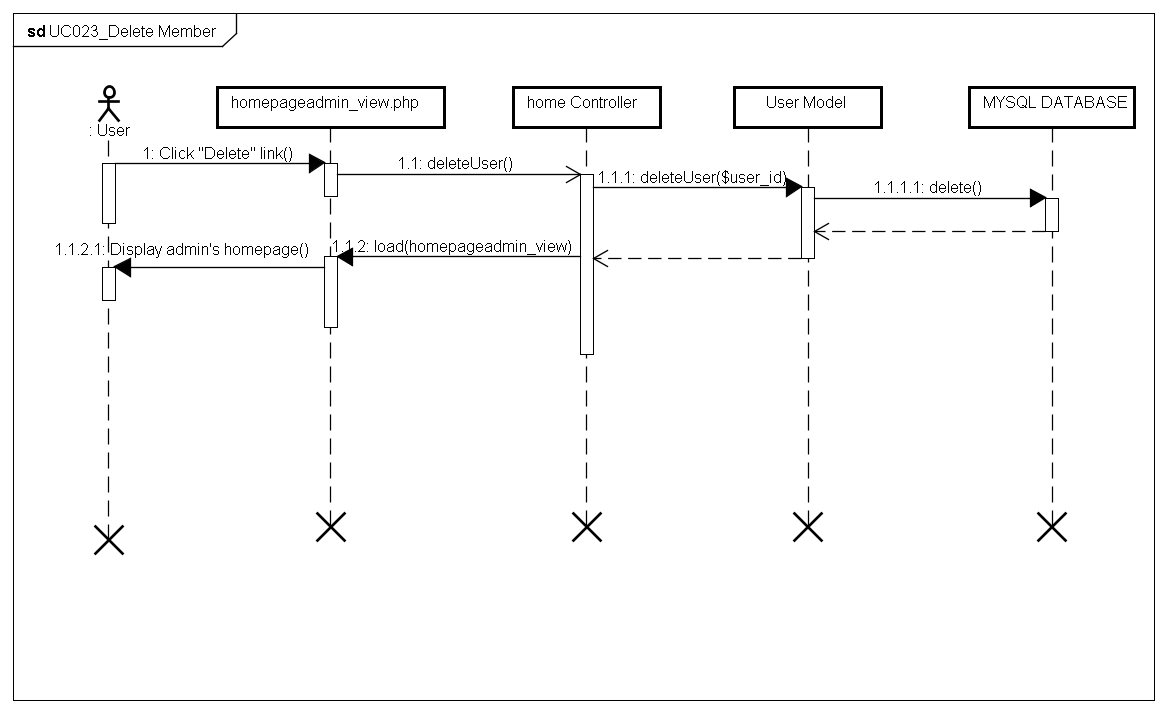
#### UC021\_SearchMember



#### UC022\_Ban/UnBanMember

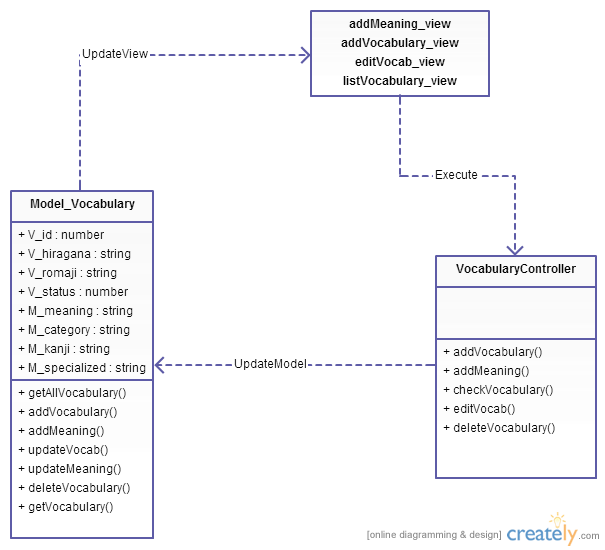


#### UC023\_DeleteMember



## Vocabulary Management Package

### Class diagram



**Figure 7: Class diagram Vocabulary management package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_Vocabulary | Include method interact with database |
| 2 | VocabularyController | Include method interact with model |

### Model\_Vocabulary class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | V\_id | Number |  | private |  |
| 2 | V\_hiragana | String |  | private |  |
| 3 | V\_romaji | String |  | private |  |
| 5 | V\_status | Number |  | private |  |
| 6 | M\_id | Number |  | private |  |
| 7 | M\_meaningvn | String |  | private |  |
| 8 | M\_category | String |  | private |  |
| 9 | M\_kanji | String |  | private |  |
| 10 | M\_specialized | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | getAllVocabulary() | Interact with database: get all vocabulary in database. |
| 2 | addVocabulary() | Interact with database: save vocabulary to database that created |
| 3 | addMeaning() | Interact with database: save meaning of vocabulary to database that created |
| 4 | updateVocab() | Interact with database: update vocabulary to database. |
| 5 | updateMeaning() | Interact with database: update meaning of vocabulary to database. |
| 6 | deleteVocabulary() | Interact with database: delete vocabulary in database. |
| 7 | getVocabulary() | Interact with database: get detail of vocabulary in database. |

### VocabularyController class

#### Attributes

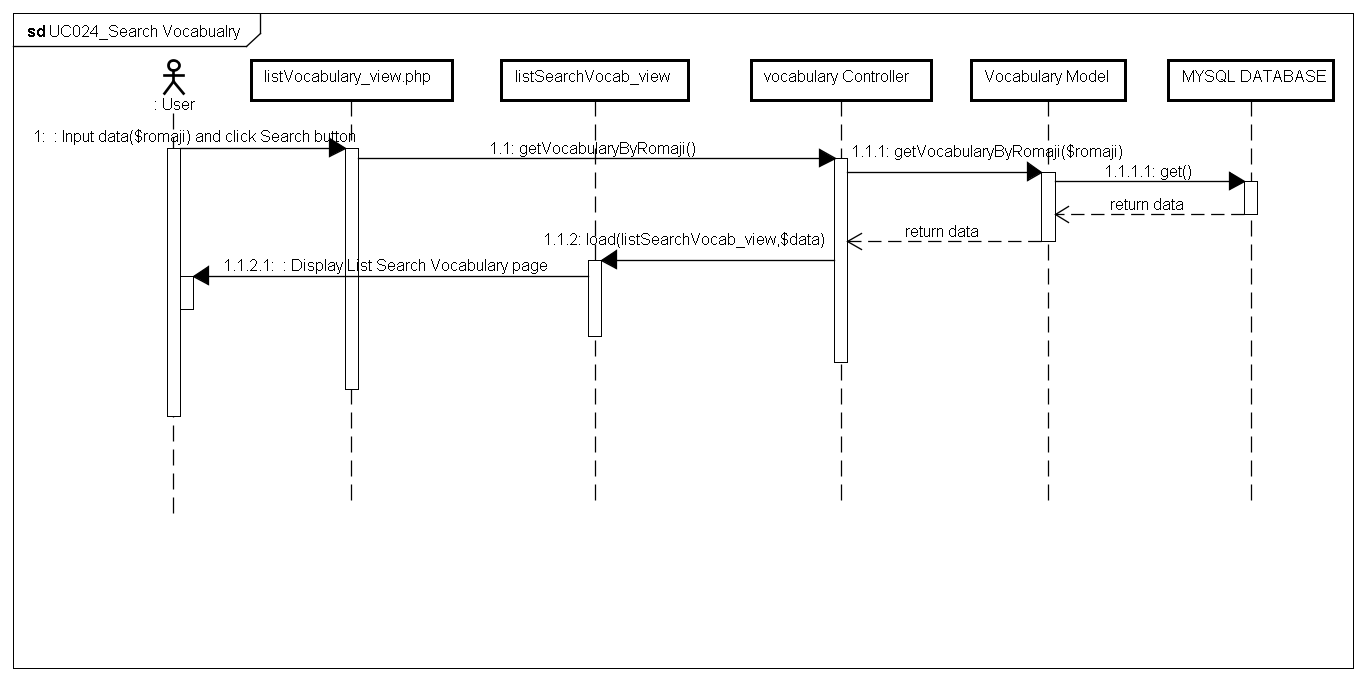
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
|  |  |  |  |  |  |

#### Methods

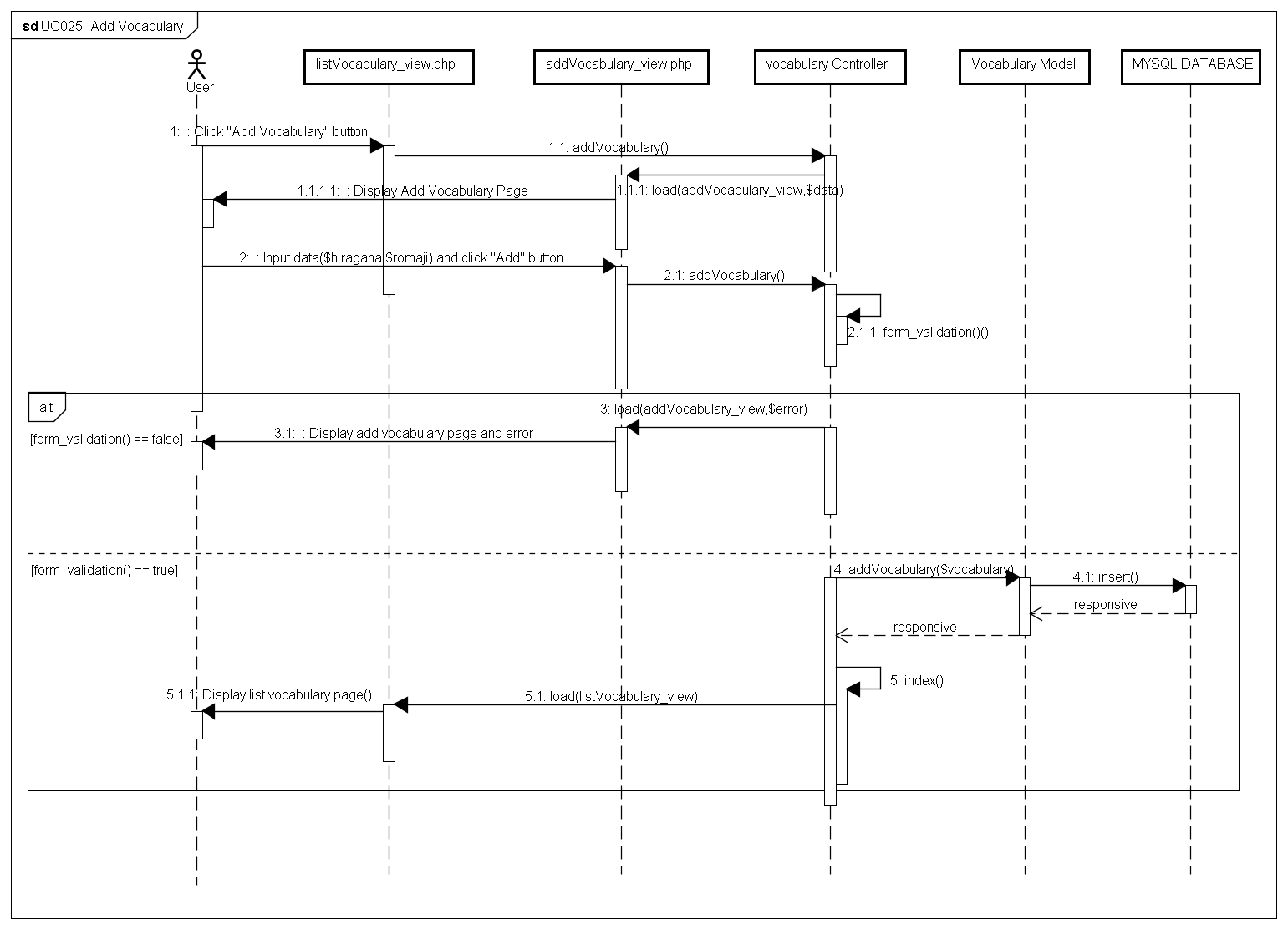
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | addVocabulary() | Create vocabulary |
|  | addMeaning() | Add meaning of vocabulary |
|  | checkVocabulary() | Check exits vocabulary |
|  | editVocab() | Edit vocabulary |
|  | deleteVocabulary() | Delete Vocabulary |

### Sequence Diagram

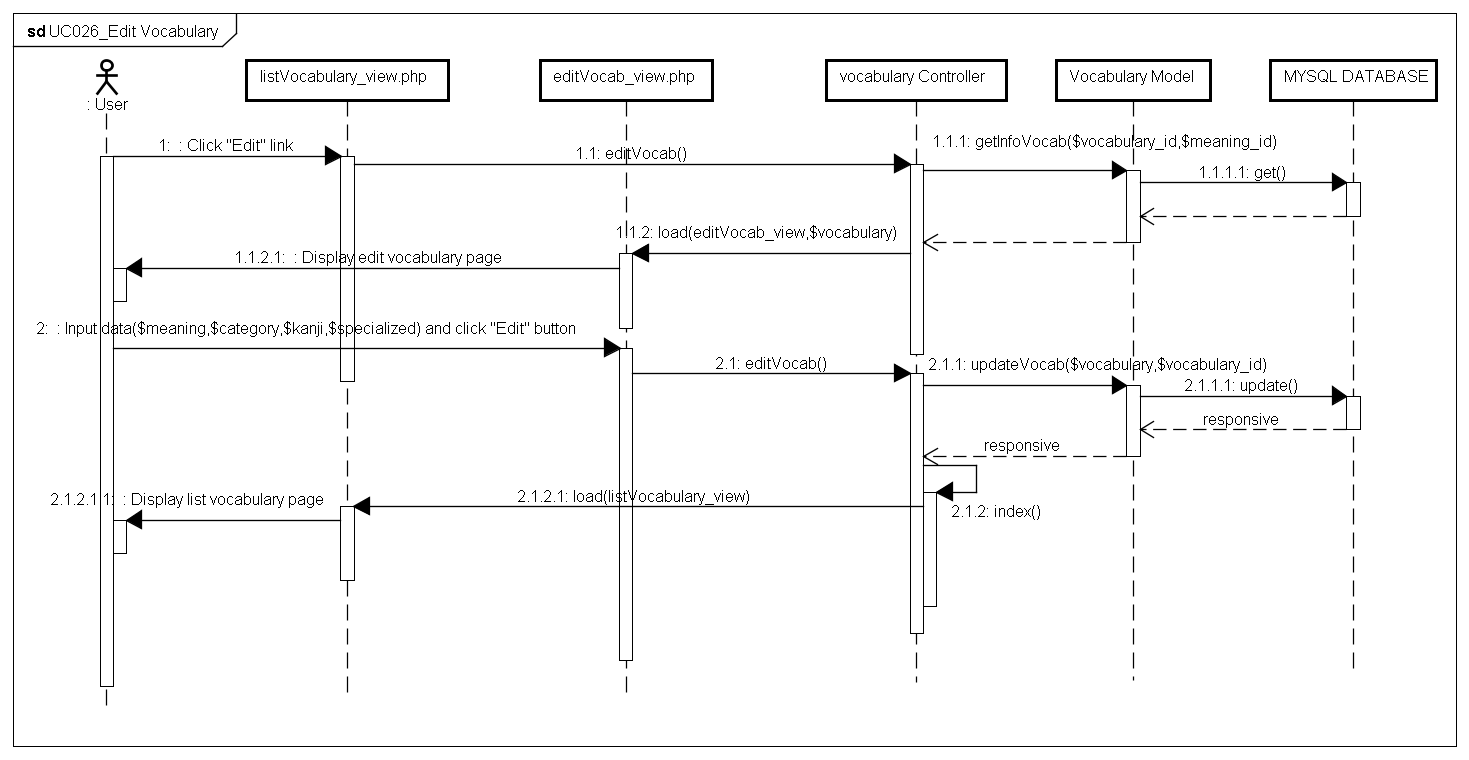
#### UC024\_SearchVocabulary



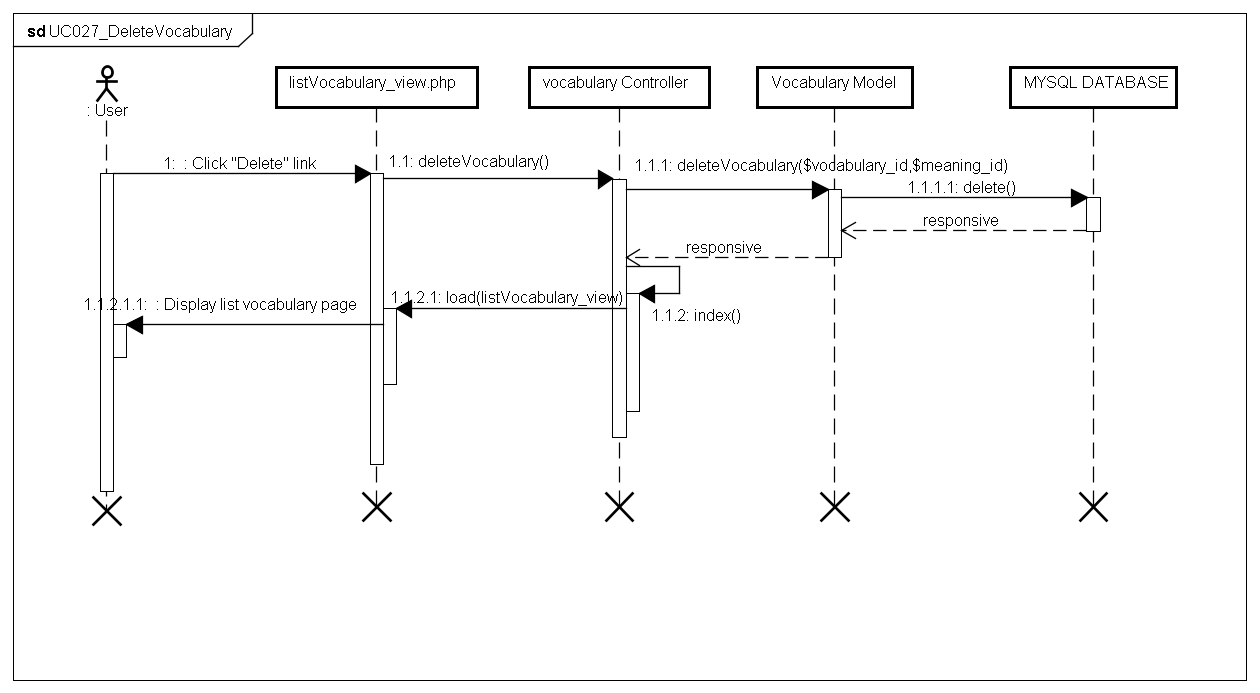
#### UC025\_AddVocabulary



#### UC026\_EditVocabulary

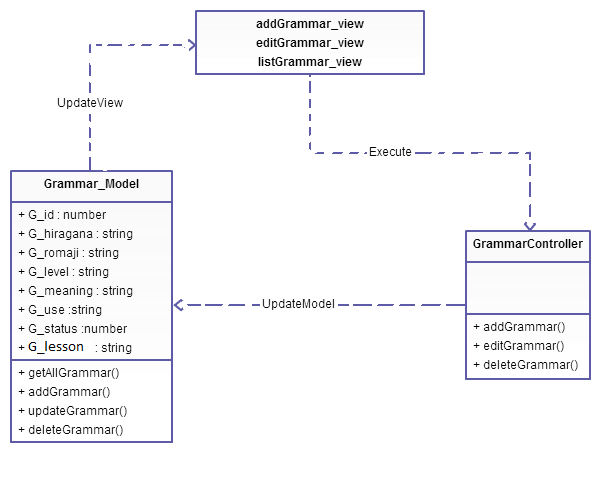


#### UC027\_DeleteVocabulary



## Grammar Management Package

### Class diagram



**Figure 8: Class diagram Grammar management package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_Grammar | Include method interact with model |
| 2 | GrammarController | Include method interact with database |

### Model\_Grammar class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | G\_id | Number |  | Private |  |
| 1. 2 | G\_hiragana | String |  | Private |  |
| 1. 3 | G\_romaji | String |  | Private |  |
| 1. 3 | G\_level | String |  | Private |  |
|  | G\_meaning | String |  | Private |  |
|  | G\_use | String |  | Private |  |
|  | G\_status | Number |  | Private |  |
|  | G\_lesson | String |  | Private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getAllGrammar() | Interact with database: get all grammar in database. |
|  | addGrammar() | Interact with database: save grammar to database that created |
|  | updateGrammar() | Interact with database: update grammar to database. |
|  | deleteGrammar() | Interact with database: delete grammar in database. |

### GrammarController class

#### Attributes

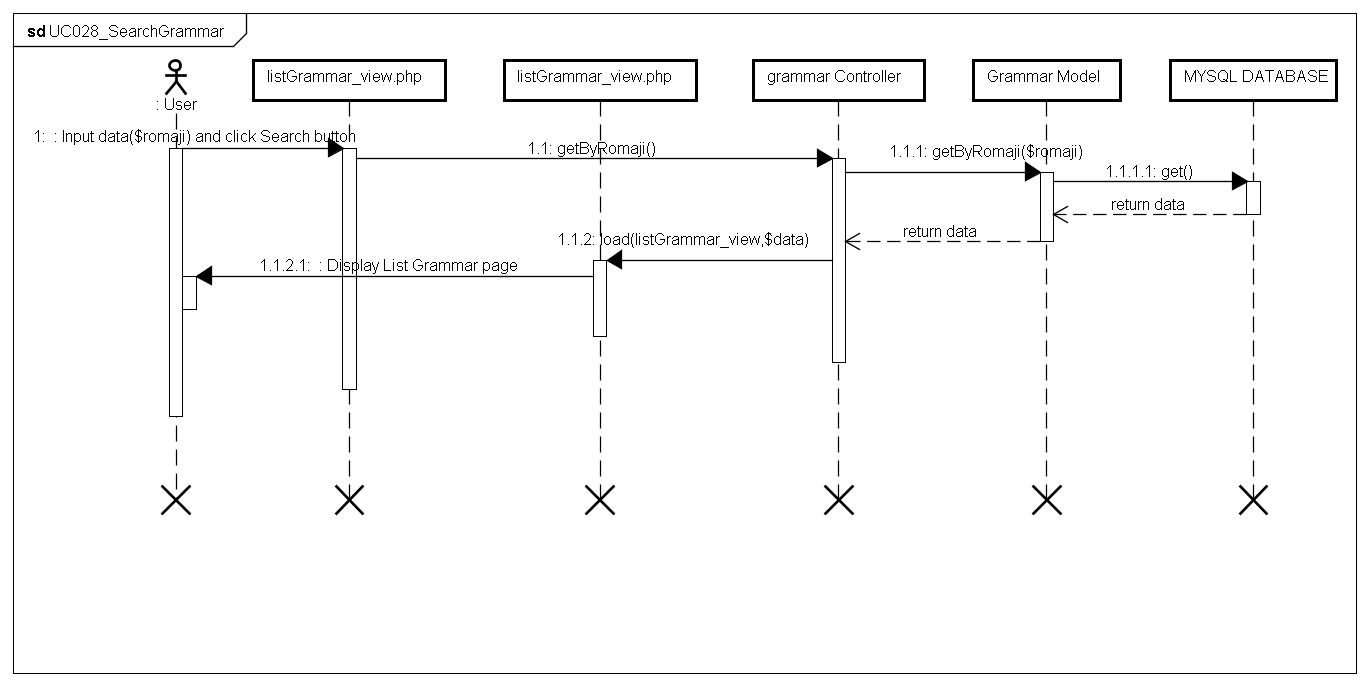
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
|  |  |  |  |  |  |

#### Methods

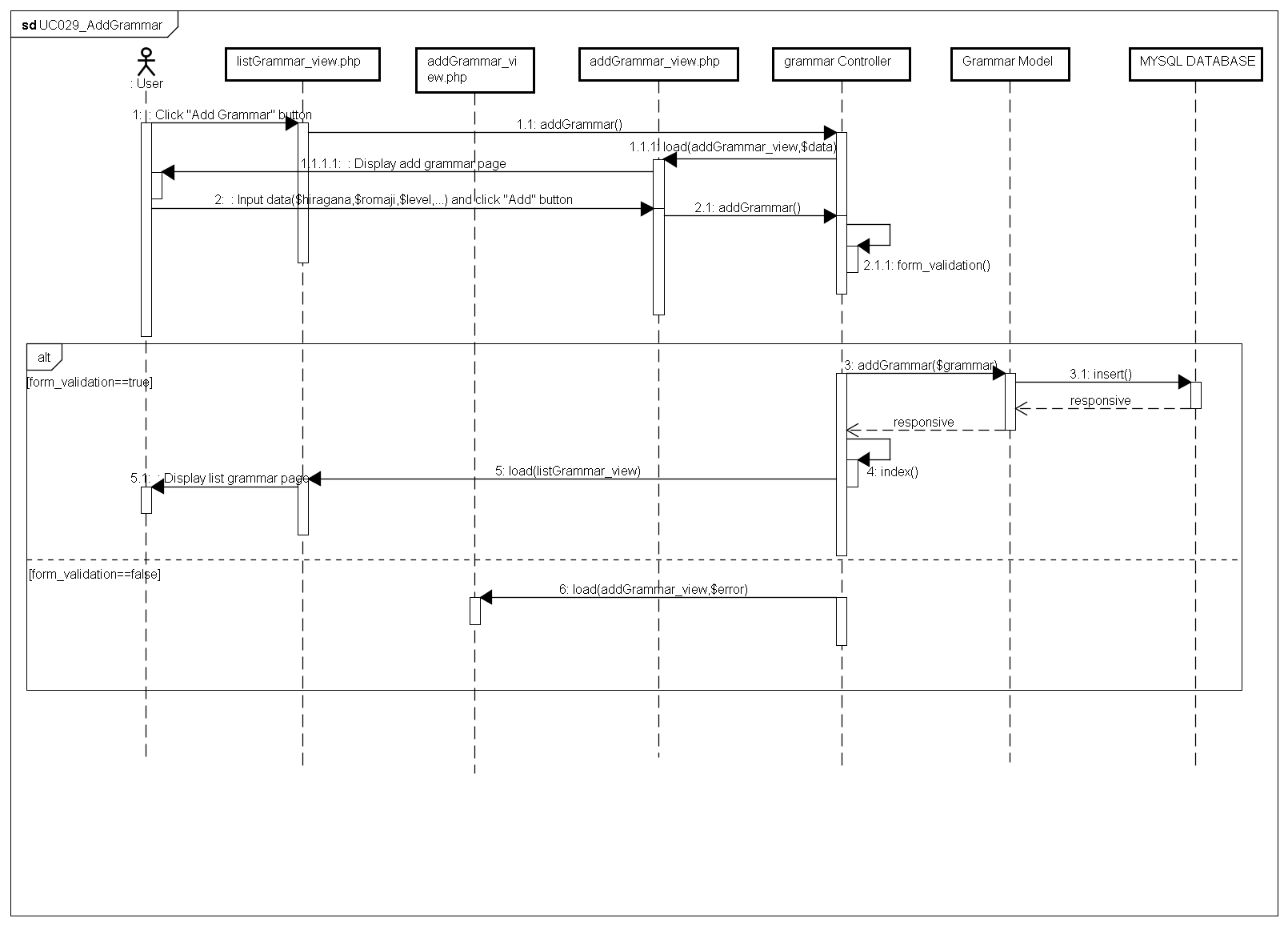
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | addGrammar() | Create grammar |
|  | editGrammar() | Edit grammar |
|  | deleteGrammar() | Delete grammar |
|  | Index() | List grammar |

### Sequence Diagram

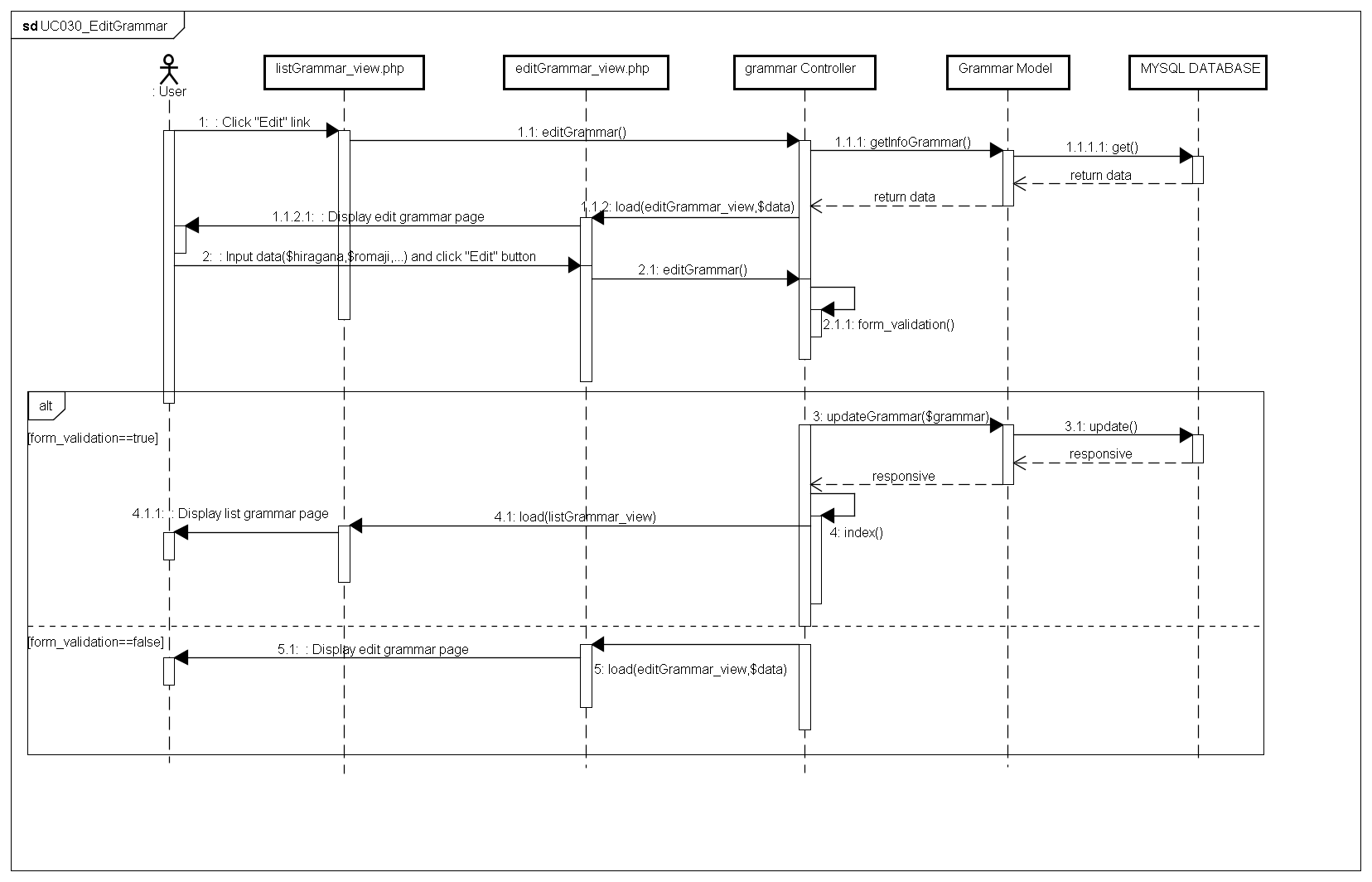
#### UC028\_SearchGrammar



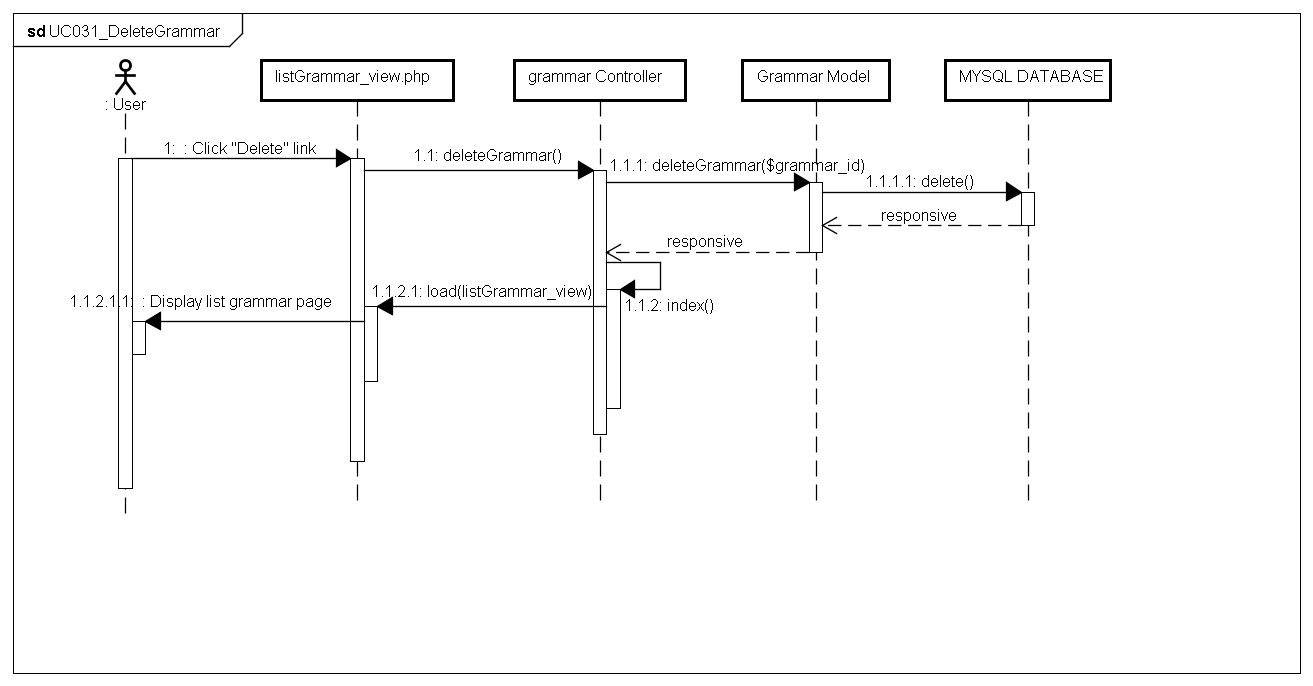
#### UC029\_AddGrammar



#### UC030\_EditGrammar

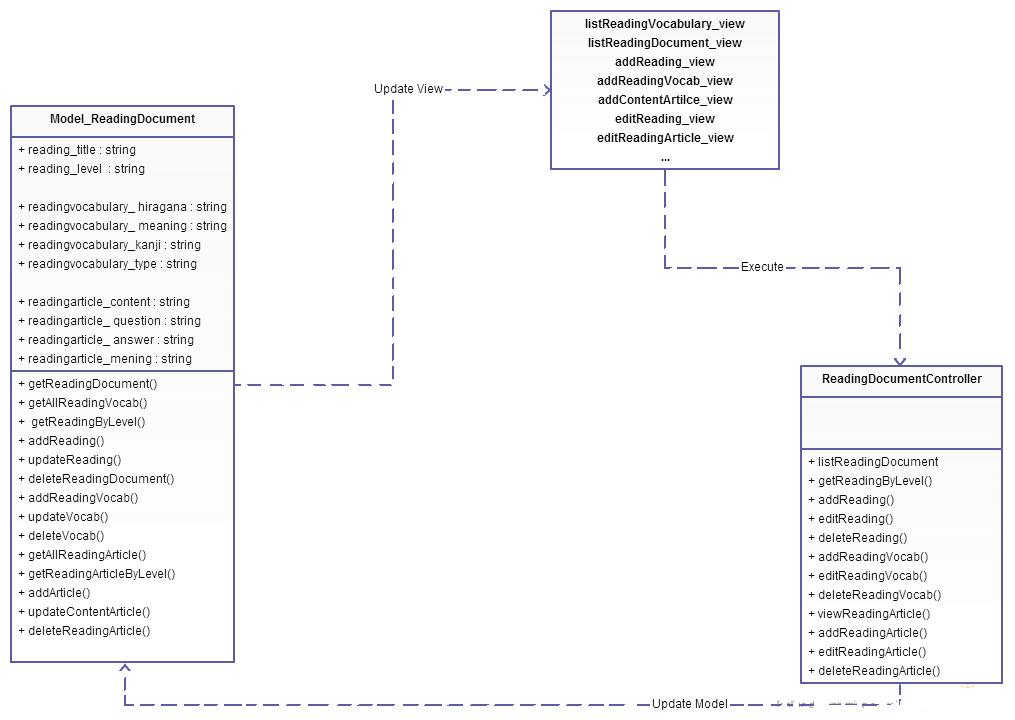


#### UC031\_DeleteGrammar



## ReadingDocument Management Package

### Class diagram



**Figure 9: Class diagram ReadingDocument management package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_ReadingDocument | Include method interact with database |
| 2 | ReadingDocumentController | Include method interact with model |

### Model ReadingDocument class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | reading\_title | String |  | private |  |
| 2 | reading\_level | String |  | private |  |
| 3 | readingvocabulary\_ hiragana | String |  | private |  |
| 4 | readingvocabulary\_ meaning | String |  | private |  |
| 5 | readingvocabulary\_kanji | String |  | private |  |
| 6 | readingvocabulary\_type | String |  | private |  |
| 7 | readingarticle\_content | String |  | private |  |
| 8 | readingarticle\_ question | String |  | private |  |
| 9 | readingarticle\_ answer | String |  | private |  |
| 10 | readingarticle\_mening | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | getReadingDocument() | Interact with database: get all reading document in database. |
| 2 | getAllReadingVocab() | Interact with database: get all vocabulary of reading document in database. |
| 3 | getReadingByLevel() | Interact with database: get reading document in database that has level as keyword input. |
| 4 | addReading() | Interact with database: save reading document to database that created. |
| 5 | updateReading() | Interact with database: update reading document to database. |
| 6 | deleteReadingDocument() | Interact with database: delete reading document in database. |
| 7 | addReadingVocab() | Interact with database: save vocabulary of reading document to database that created. |
| 8 | updateVocab() | Interact with database: update vocabulary of reading document to database. |
| 9 | deleteVocab() | Interact with database: delete vocabulary of reading document in database. |
| 10 | getAllReadingArticle() | Interact with database: get all article of reading document in database. |
| 11 | getReadingArticleByLevel() | Interact with database: get article of reading document in database that has level as keyword input |
| 12 | addArticle() | Interact with database: save article to database that created. |
| 13 | updateContentArticle() | Interact with database: update article to database. |
| 14 | deleteReadingArticle() | Interact with database: delete article in database. |

### ReadingDocumentController class

#### Attributes

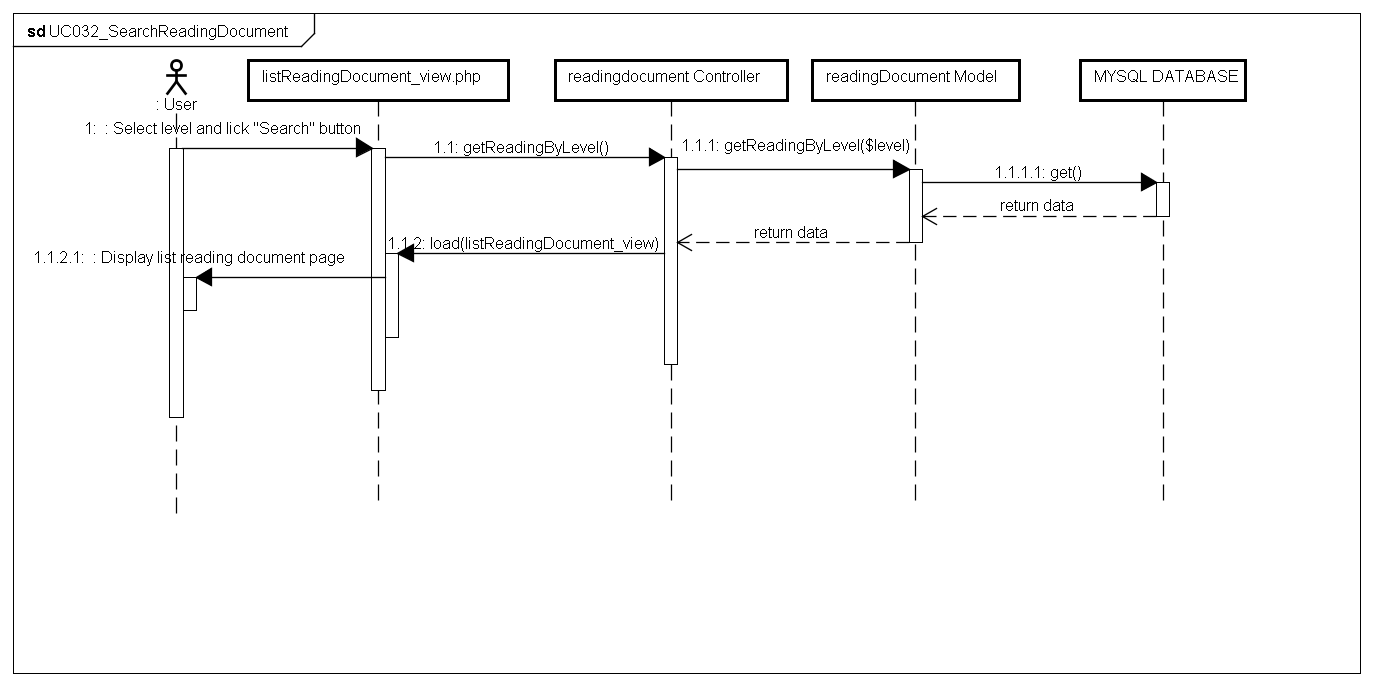
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 |  |  |  |  |  |

#### Methods

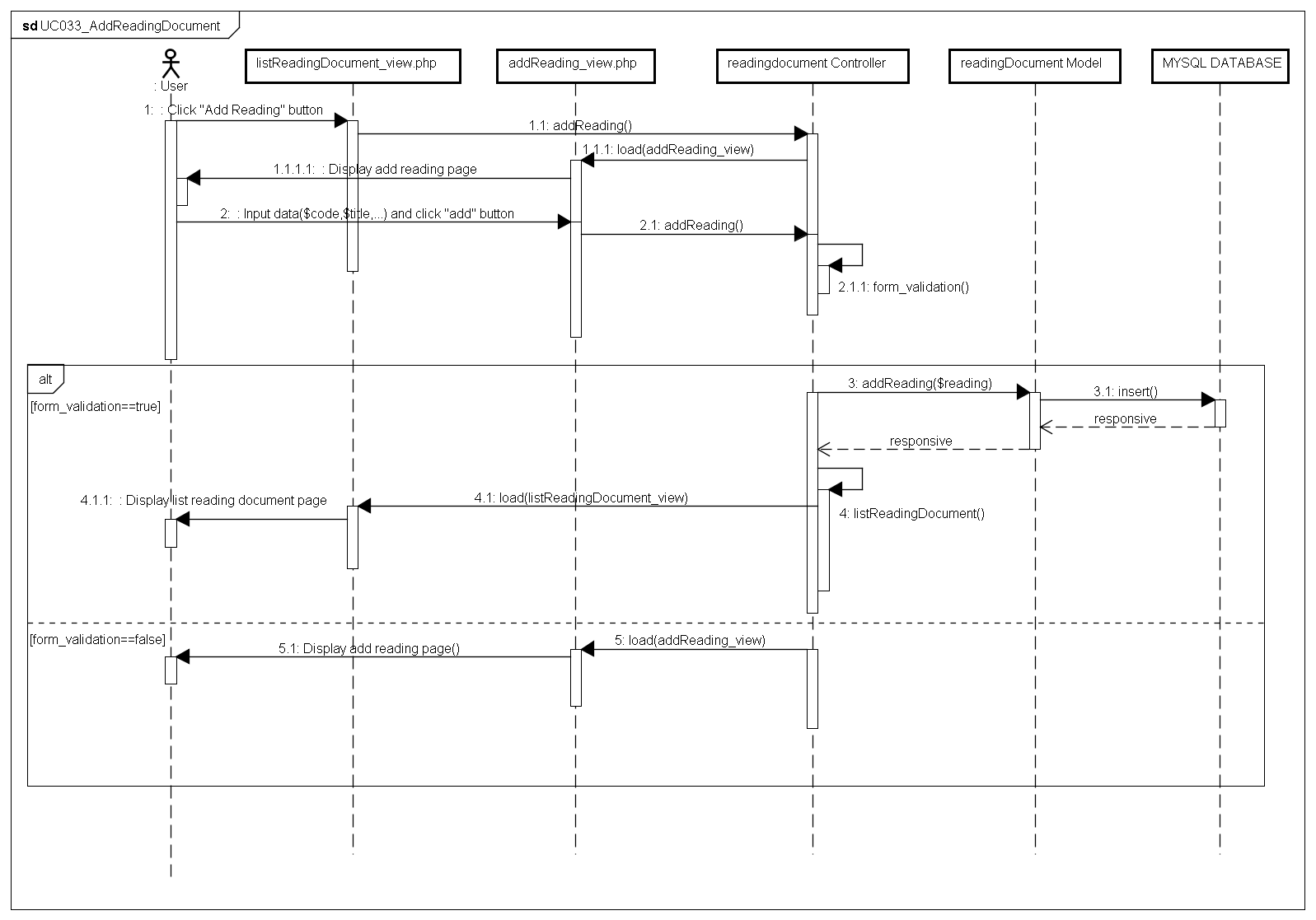
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | listReadingDocument () | List Reading Document |
|  | getReadingByLevel() | Search reading document |
|  | addReading() | Add Reading document |
|  | editReading() | Edit Reading document |
|  | deleteReading() | Delete Reading document |
|  | addReadingVocab() | Add vocabulary of reading document |
|  | editReadingVocab() | Edit vocabulary of reading document |
|  | deleteReadingVocab() | Delete vocabulary of reading document |
|  | viewReadingArticle() | View detail Article |
|  | addReadingArticle() | Add content of Article |
|  | editReadingArticle() | Edit Article |
|  | deleteReadingArticle() | Delete Article |

### Sequence Diagram

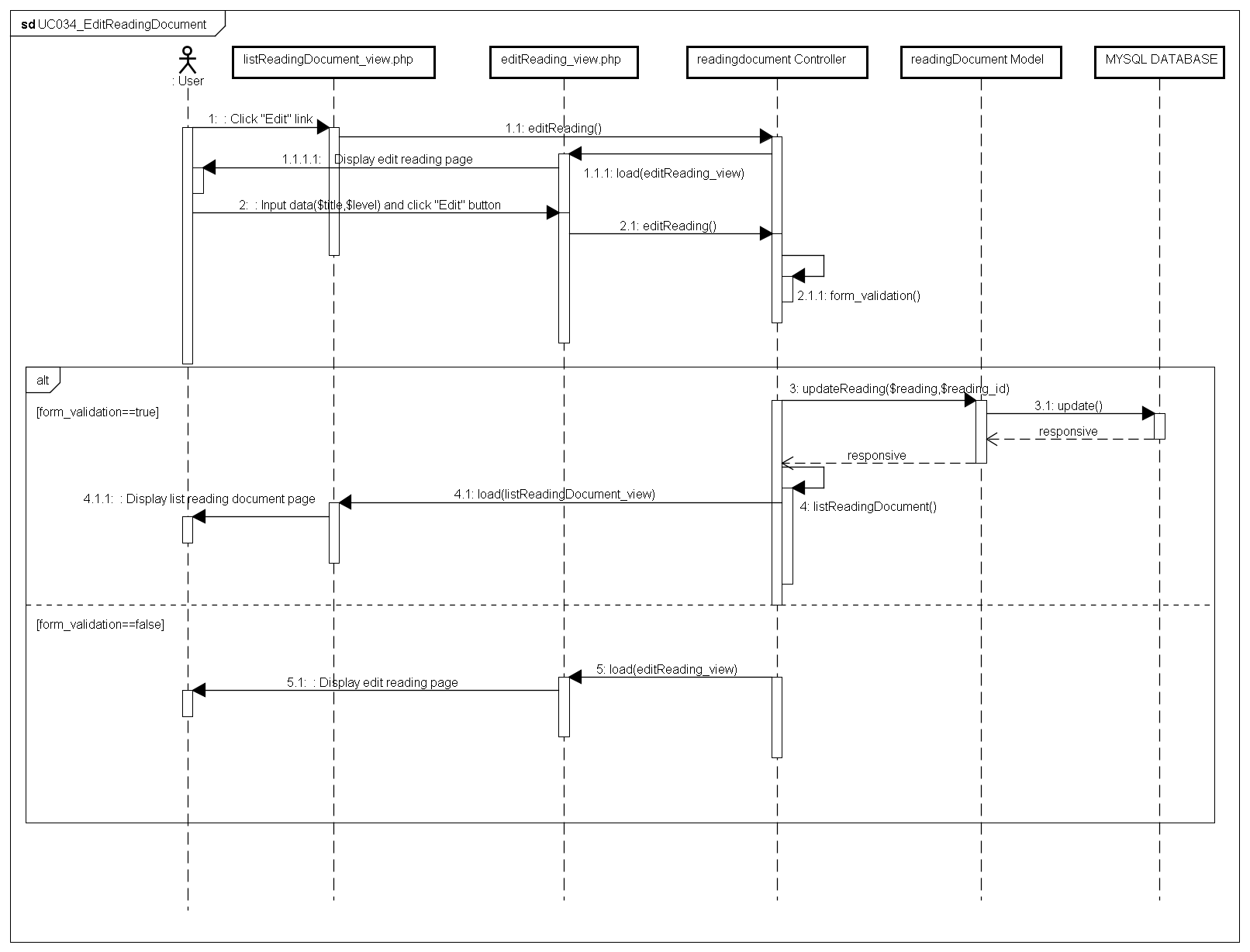
#### UC032\_SearchReadingDocument



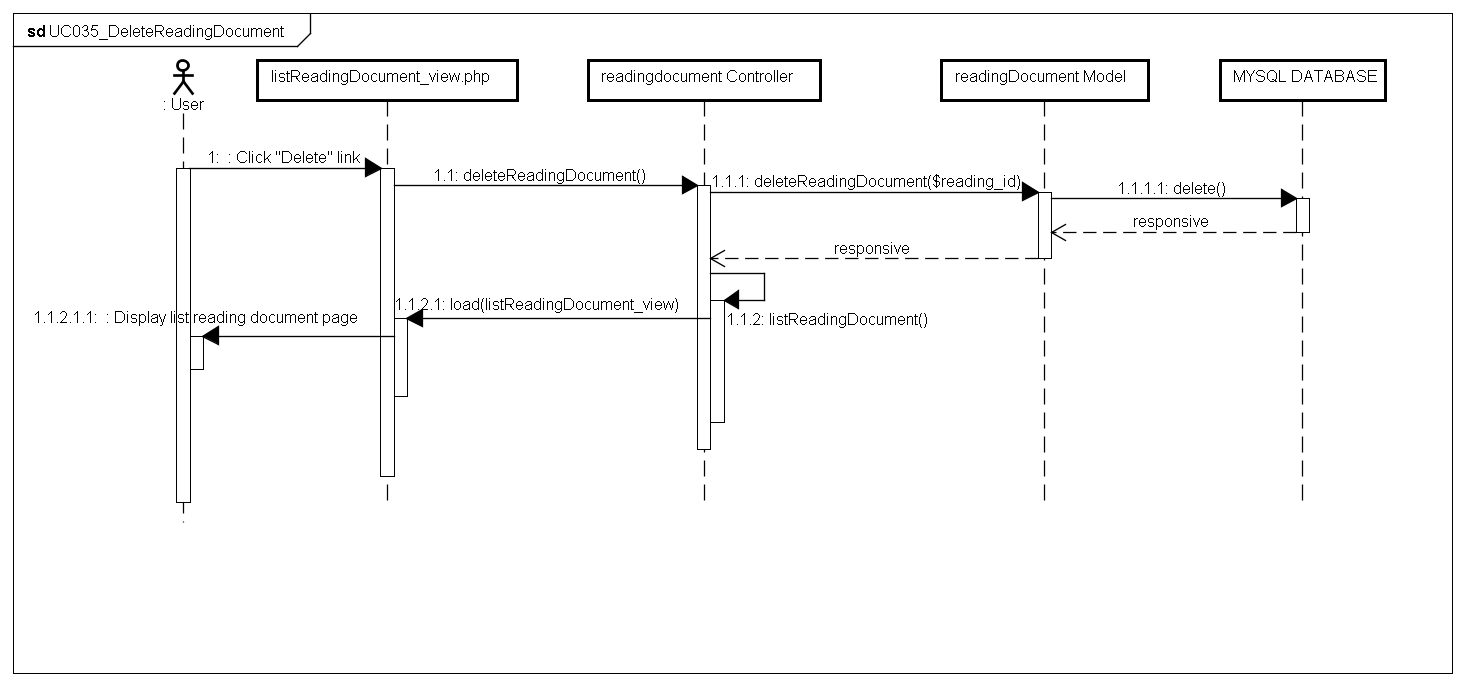
#### UC033\_AddReadingDocument



#### UC034\_EditReadingDocument

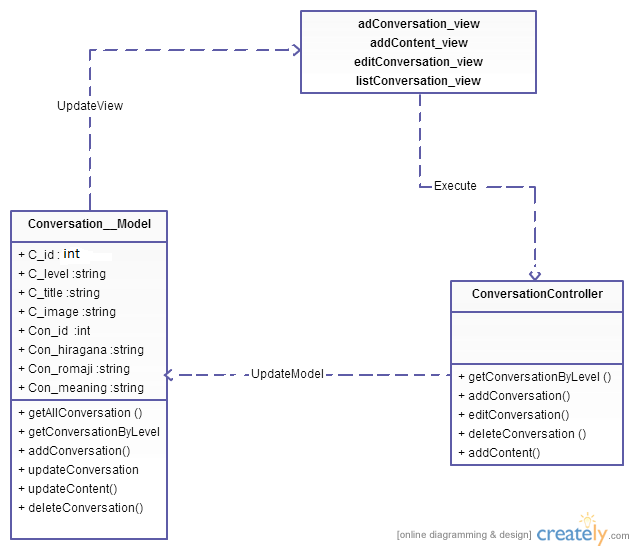


#### UC035\_DeleteReadingDocument



## Conversation Management Package

### Class diagram



**Figure 10: Class diagram Conversation package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_Conversation | Include method interact with database |
| 2 | Conversation Controller | Include method interact with model |

### Model\_Conversation class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | C\_id | Number |  | private |  |
| 2 | C\_level | String |  | private |  |
| 3 | C\_title | String |  | private |  |
| 4 | C\_image | String |  | private |  |
| 5 | Con\_id | Number |  | private |  |
| 6 | Con\_hiragana | String |  | private |  |
| 7 | Con\_romaji | String |  | private |  |
| 8 | Con\_meaning | String |  | private |  |
| 9 | Con\_file | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | getAllConversation () | Interact with database: get all conversation in database. |
| 2 | getConversationByLevel() | Interact with database: get conversation in database that has level as keyword input. |
| 3 | addConversation() | Interact with database: save conversation to database that created. |
| 4 | updateConversation() | Interact with database: update conversation to database. |
| 5 | updateContent() | Interact with database: update content of conversation to database. |
| 6 | deleteConversation() | Interact with database: delete conversation in database. |

### ConversationController

#### Attributes

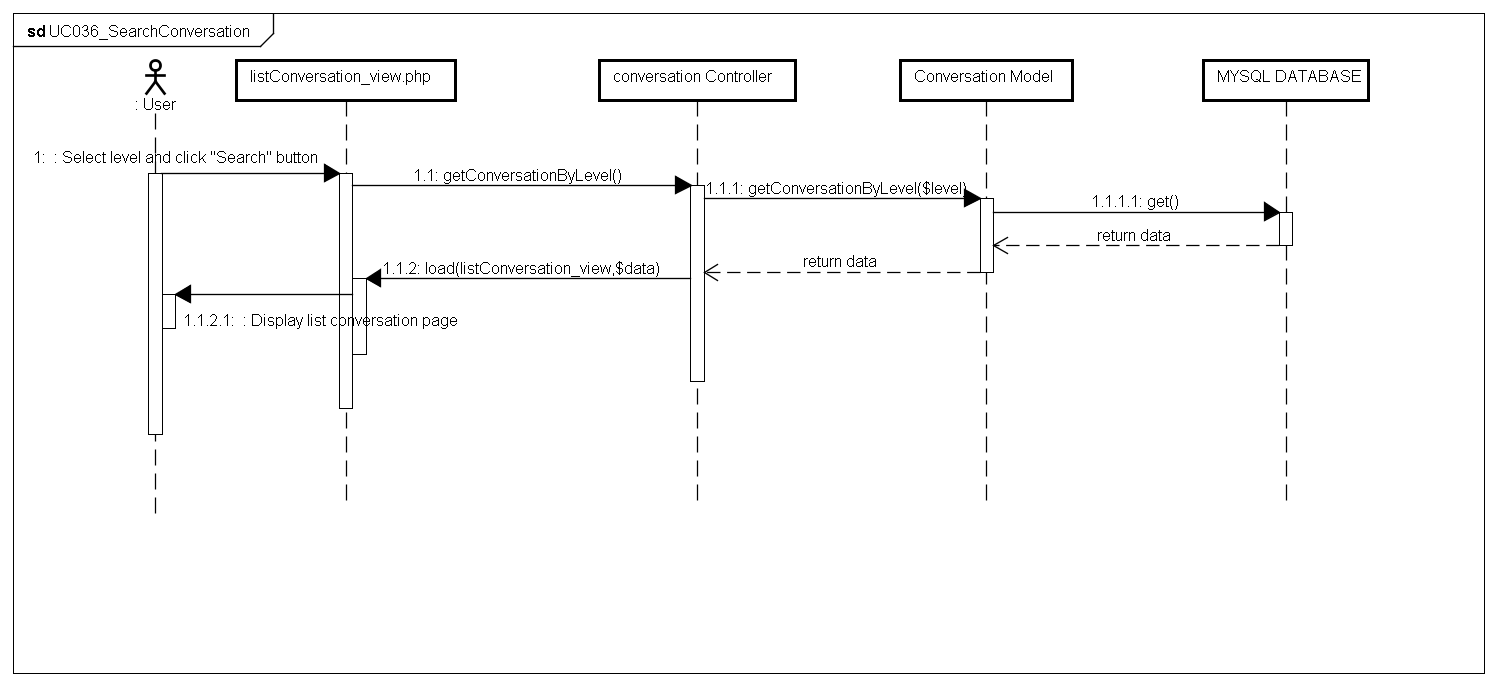
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
|  |  |  |  |  |  |

#### Methods

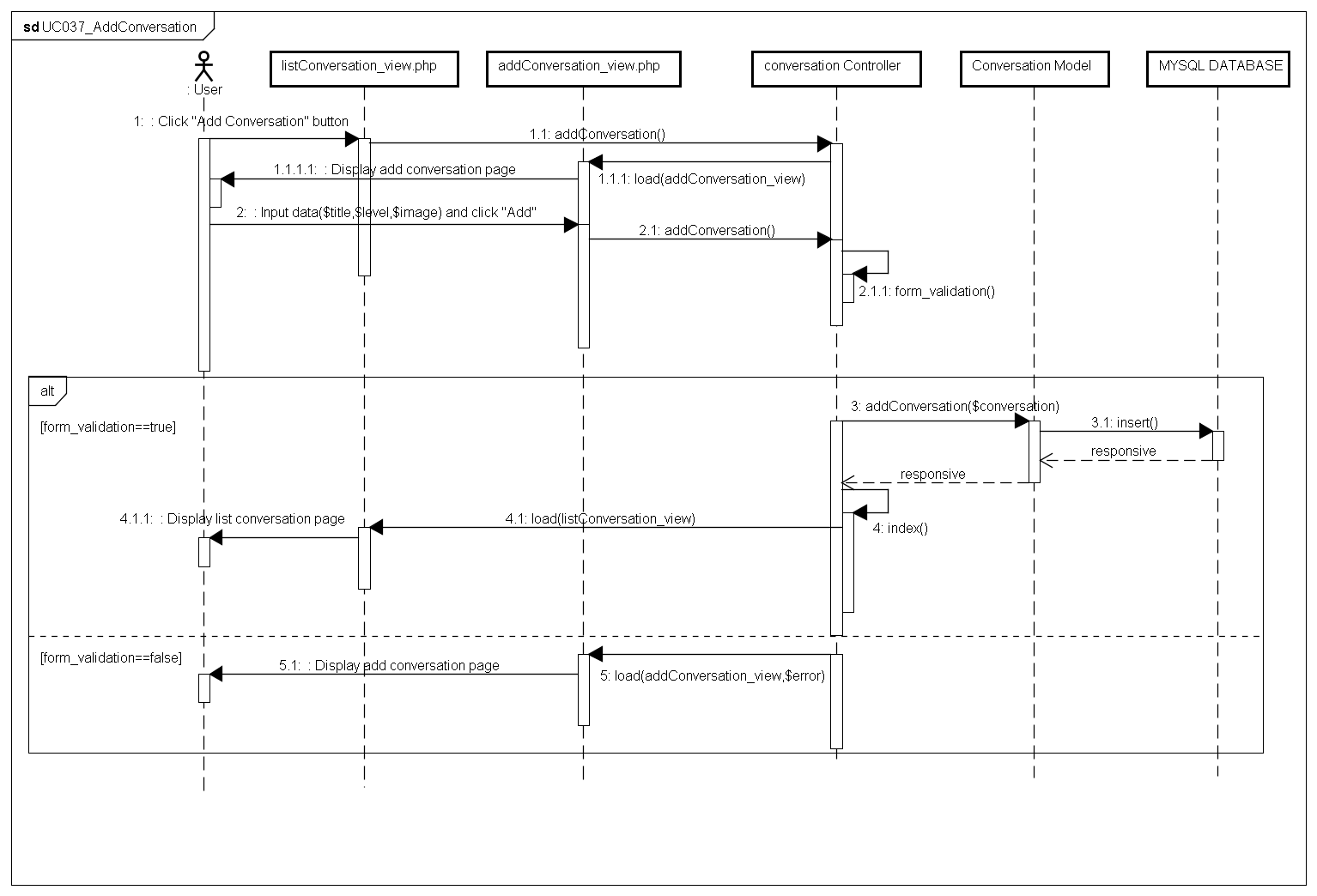
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getConversationByLevel () | Search Conversation |
|  | addConversation() | Add Conversation |
|  | editConversation() | Edit Conversation |
|  | deleteConversation () | Delete Conversation |
|  | addContent() | Add Content of Conversation |

### Sequence Diagram

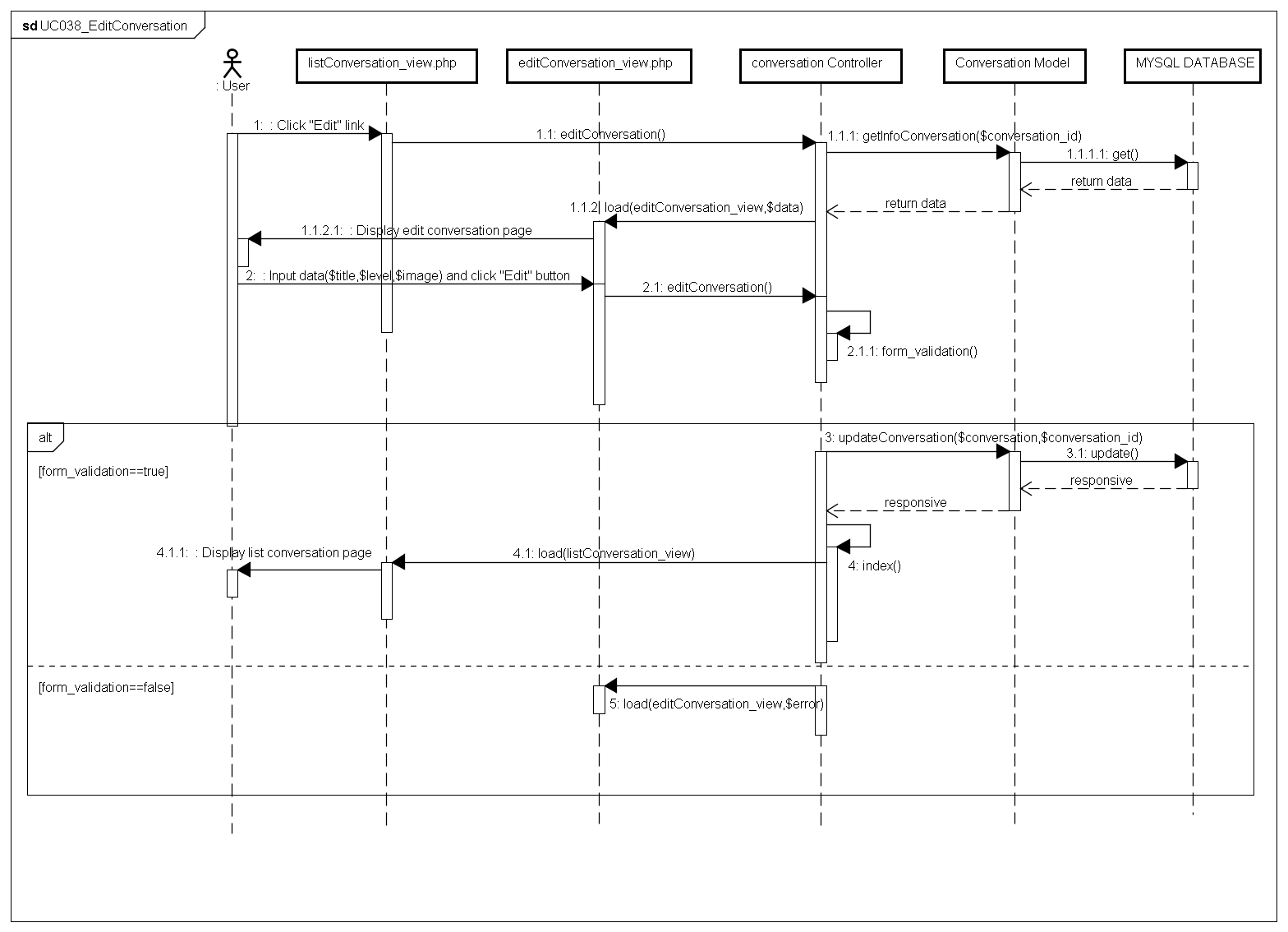
#### UC036\_SearchConversation



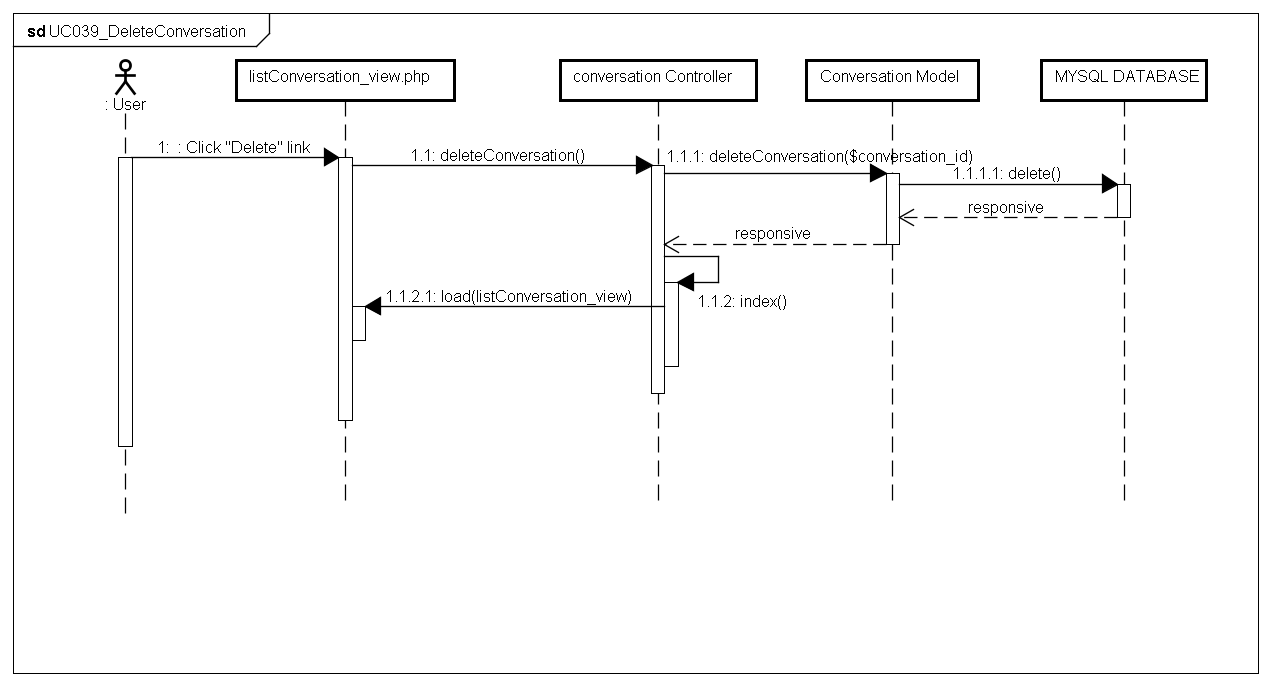
#### UC037\_AddConversation



#### UC038\_EditConversation

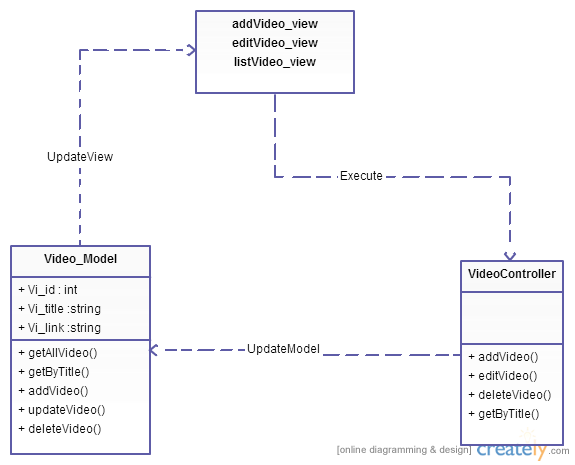


#### UC039\_DeleteConversation



## Video Package

### Class diagram



**Figure 11: Class diagram Video package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_Video | Include method interact with database |
| 2 | VideoController | Include method interact with model |

### Model\_Video class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | Vi\_id | Number |  | private |  |
| 1. 2 | Vi\_title | String |  | private |  |
| 1. 3 | Vi\_link | String |  | Private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getAllVideo() | Interact with database: get all video in database. |
|  | getByTitle() | Interact with database: get video in database that has title as keyword input. |
|  | addVideo() | Interact with database: save video to database that created. |
|  | updateVideo() | Interact with database: update video to database. |
|  | deleteVideo() | Interact with database: delete video in database. |

### VideoController

#### Attributes

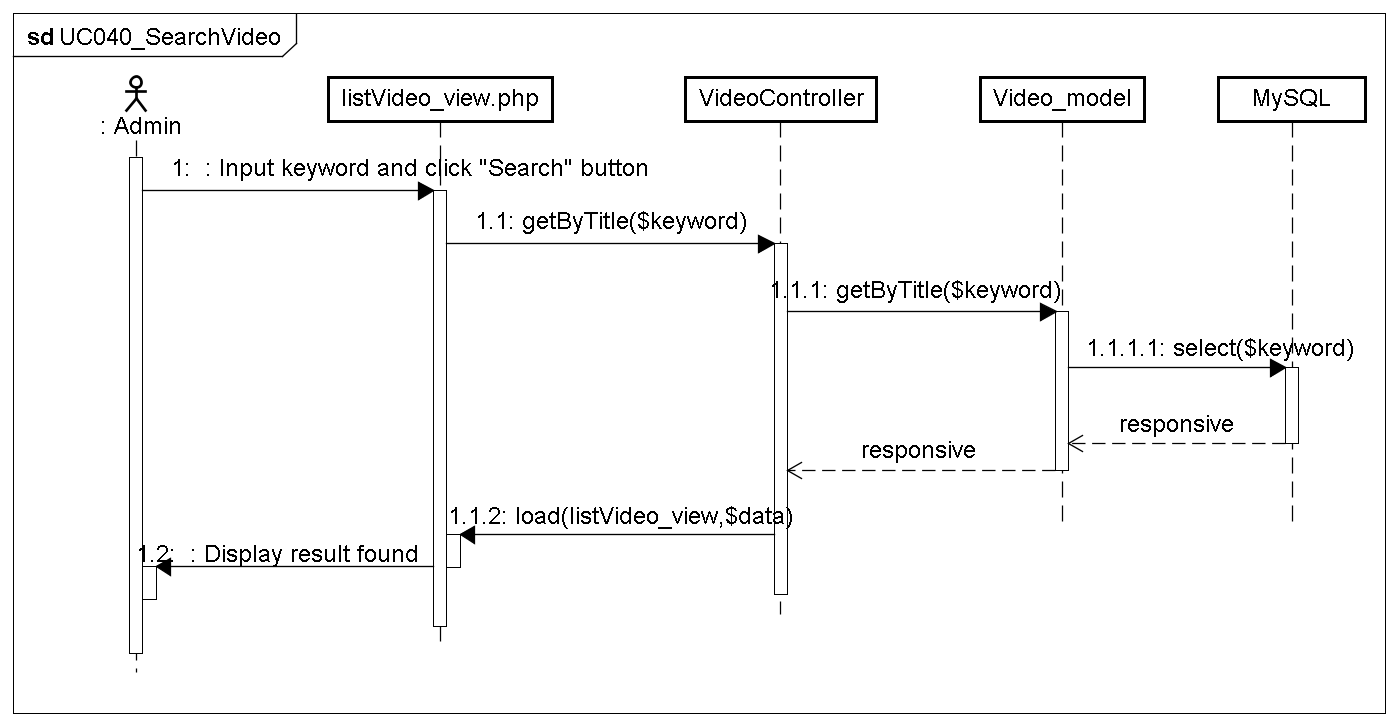
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
|  |  |  |  |  |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | addVideo() | Create Video |
|  | editVideo() | Edit Video |
|  | deleteVideo() | Delete Video |
|  | getByTitle() | Search Video |

### Sequence Diagram

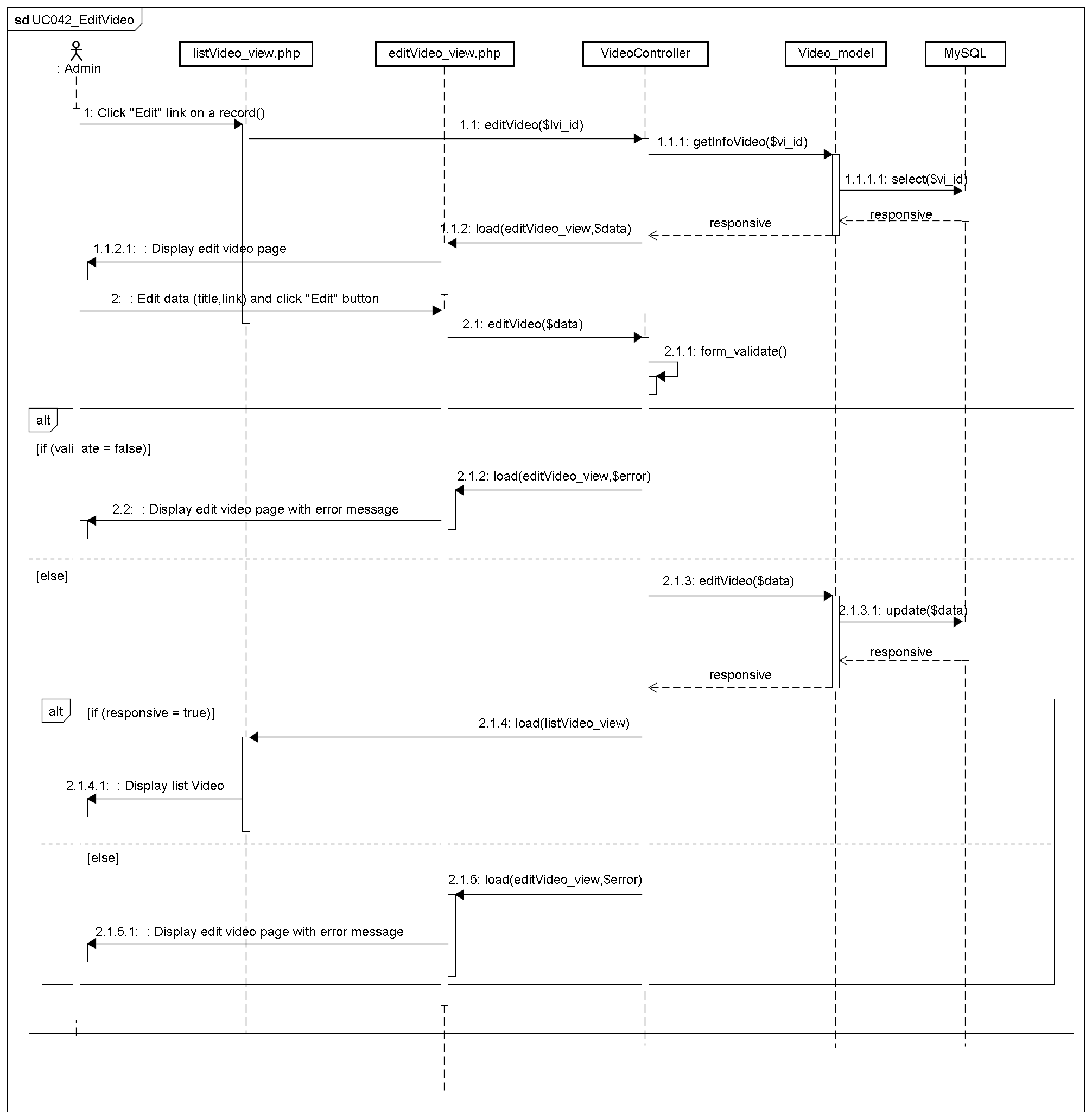
#### UC040\_SearchVideo



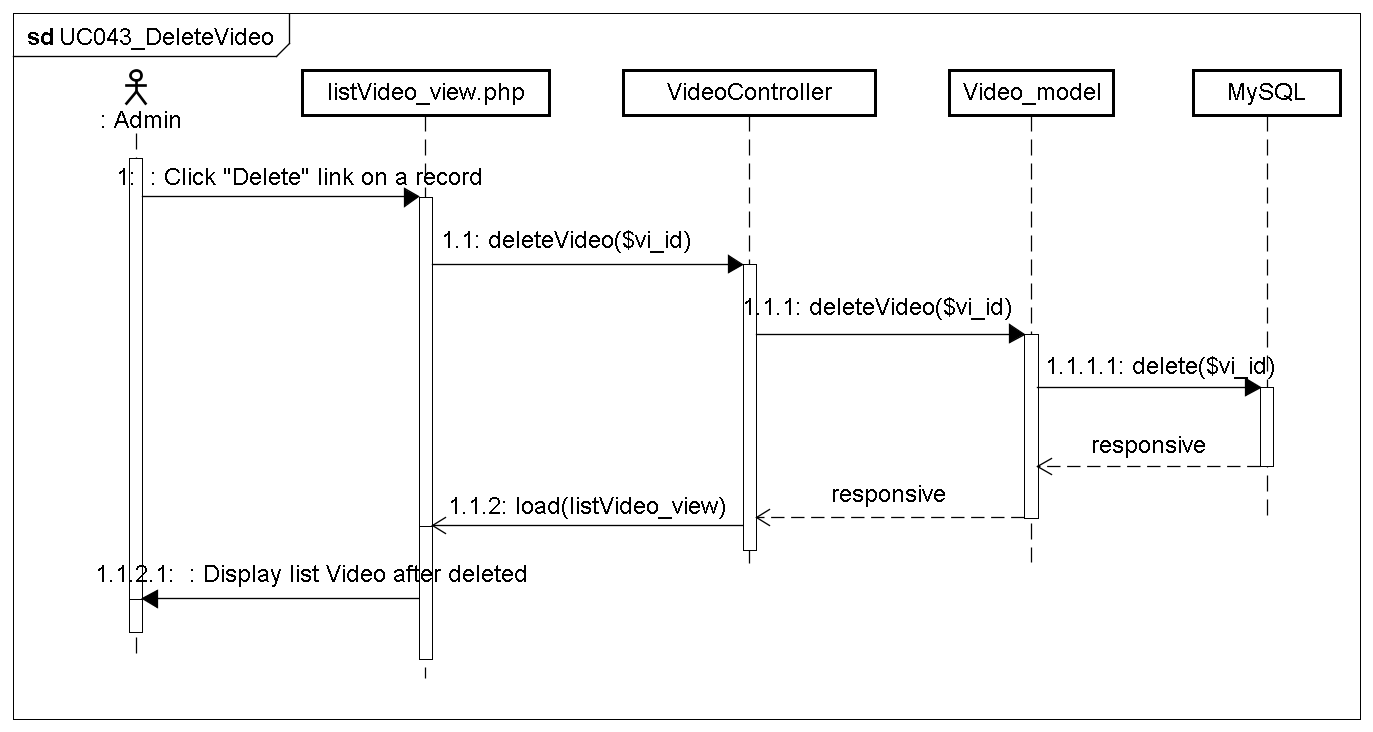
#### UC041\_AddVideo



#### UC042\_EditVideo

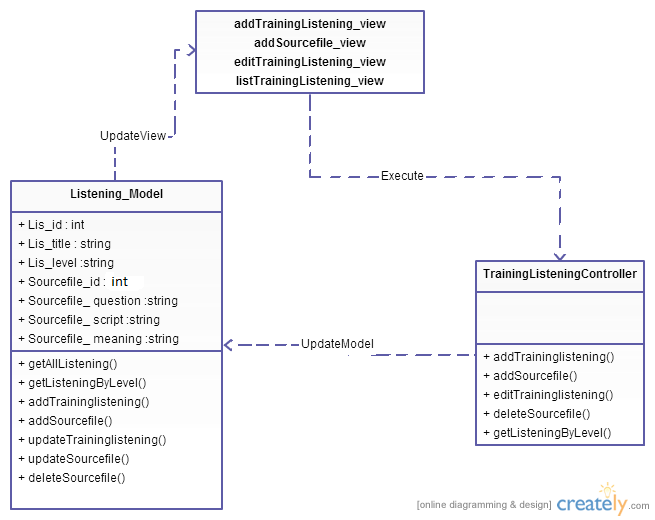


#### UC043\_DeleteVideo



## TrainingListening Package

### Class diagram



**Figure 12: Class diagram TrainingListening package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_TrainingListening | Include method interact with database |
| 2 | TrainingListening Controller | Include method interact with model |

### Model\_TraniningListening class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | Lis\_id | Number |  | private |  |
| 2 | Lis\_title | String |  | private |  |
| 3 | Lis\_level | String |  | Private |  |
| 4 | Sourcefile\_id | String |  | Private |  |
| 5 | Sourcefile\_ question | String |  | Private |  |
| 6 | Sourcefile\_ script | String |  | Private |  |
| 7 | Sourcefile\_ meaning | String |  | Private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | getAllListening() | Interact with database: get all listening in database. |
| 2 | getListeningByLevel() | Interact with database: get listening in database that has level as keyword input. |
| 3 | addTraininglistening() | Interact with database: save listening to database that created. |
| 4 | addSourcefile() | Interact with database: save content of listening to database that created . |
| 5 | updateTraininglistening() | Interact with database: update listening to database. |
| 6 | updateSourcefile() | Interact with database: update content of listening to database. |
| 7 | deleteTrainingListening() | Interact with database: delete listening in database. |

### TrainingListeningController

#### Attributes

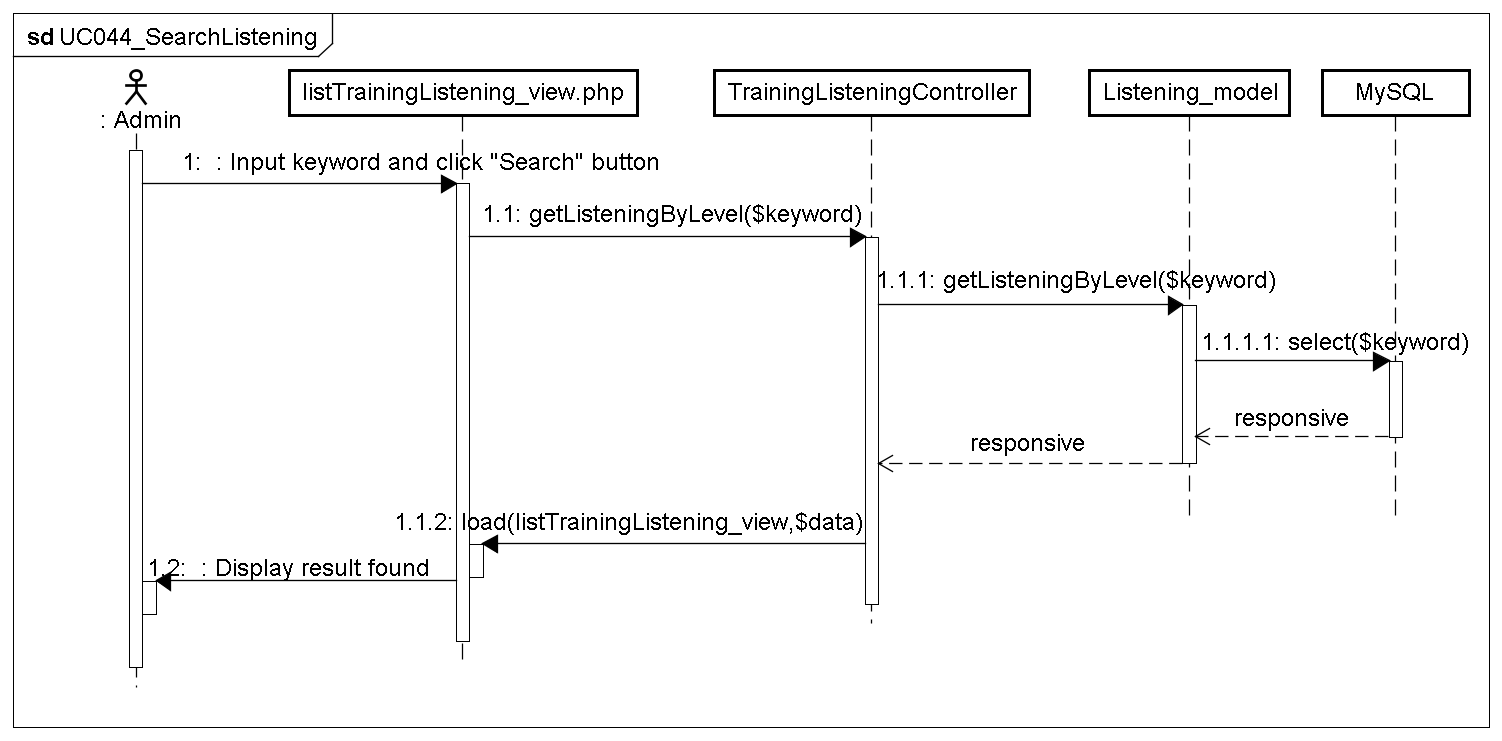
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
|  |  |  |  |  |  |

#### Methods

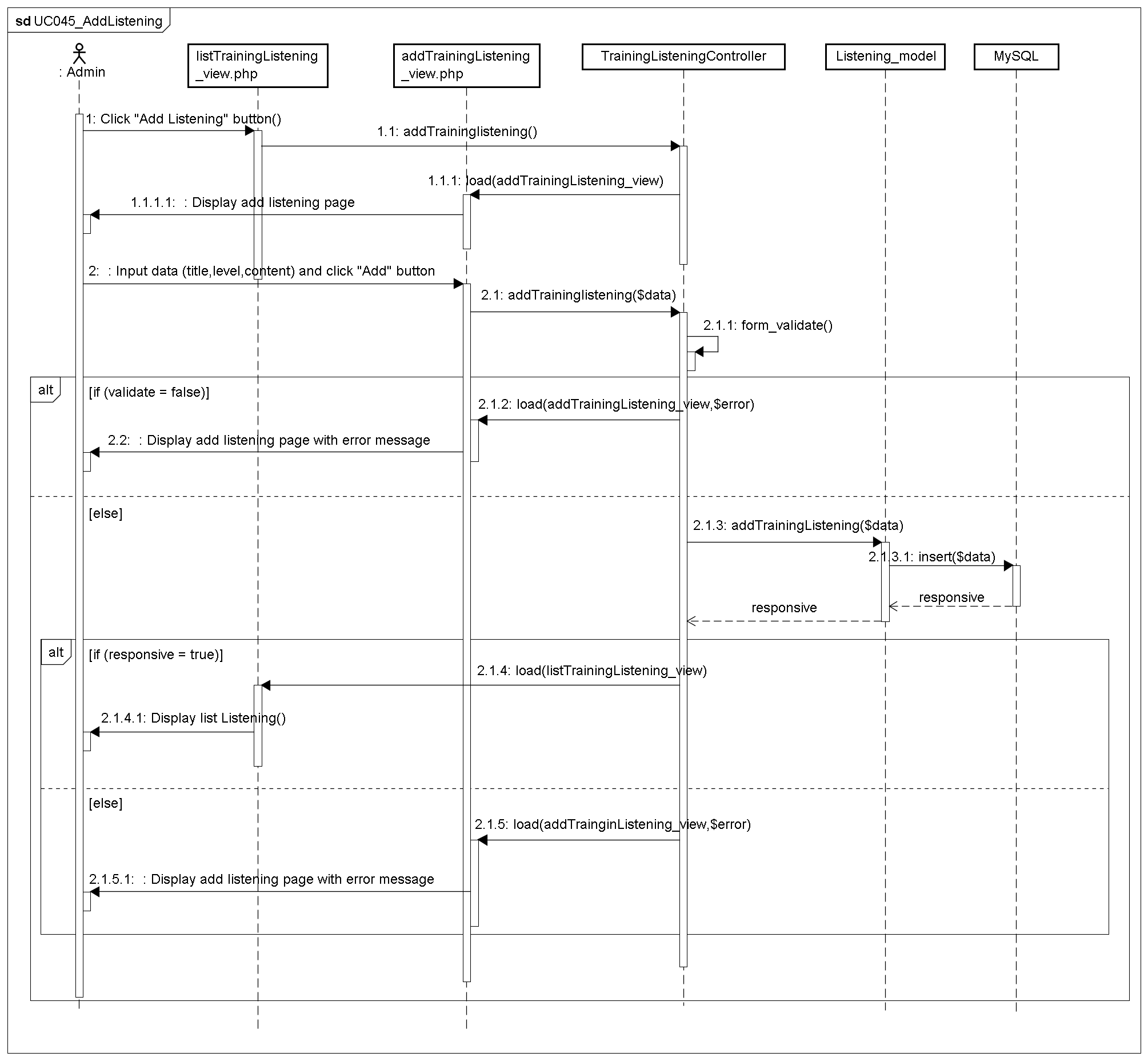
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | addTraininglistening() | Create Training Listening |
|  | addSourcefile() | Add Source file |
|  | editTraininglistening() | Edit Training Listening |
|  | deleteSourcefile() | Delete Training Listening |
|  | getListeningByLevel() | Search Training Listening |

### Sequence Diagram

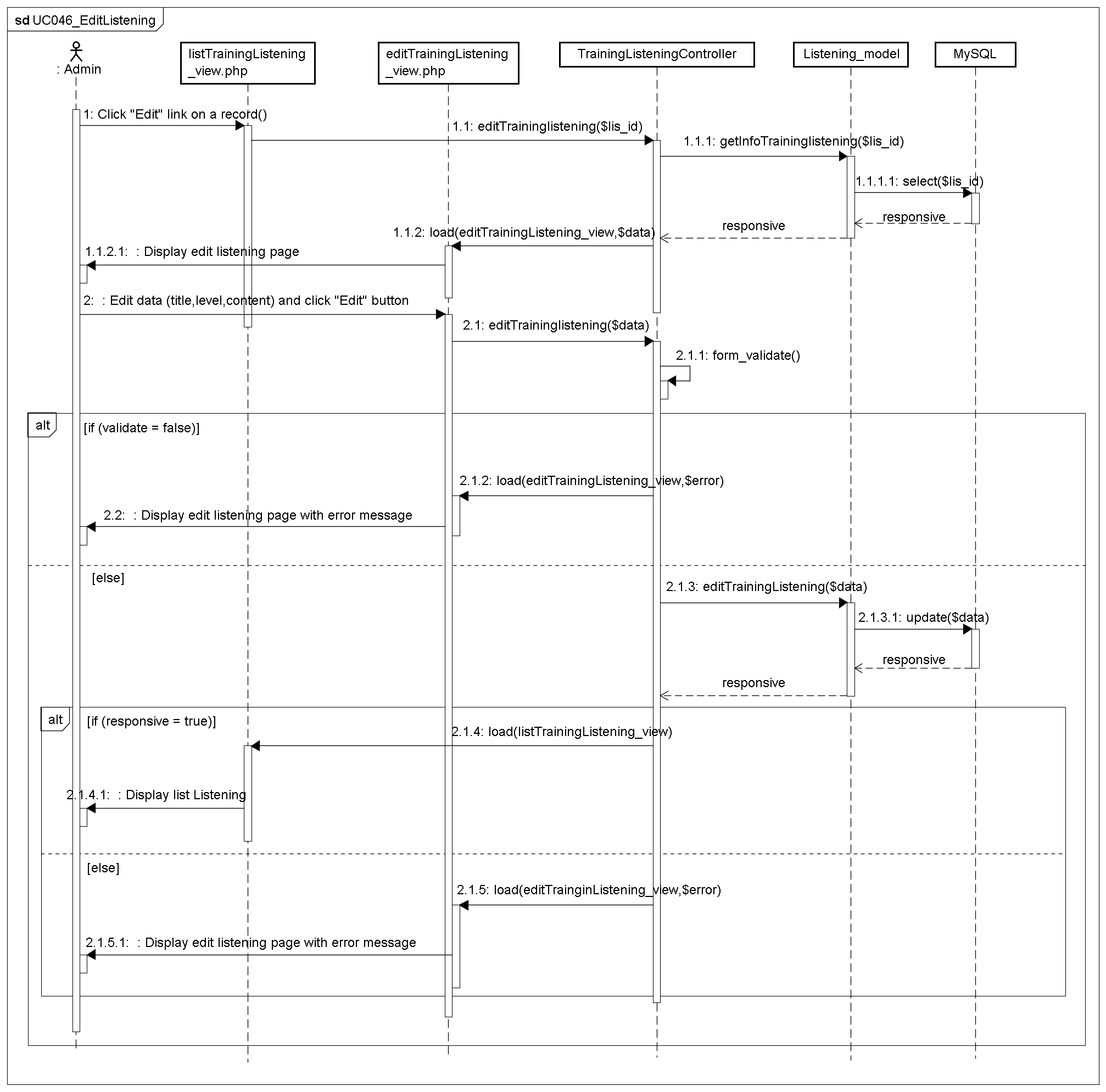
#### UC044\_SearchListening

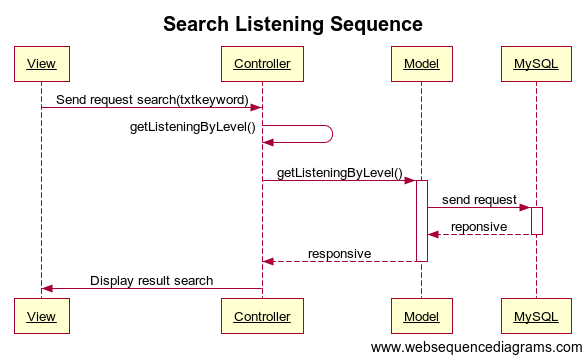


#### UC045\_AddListening

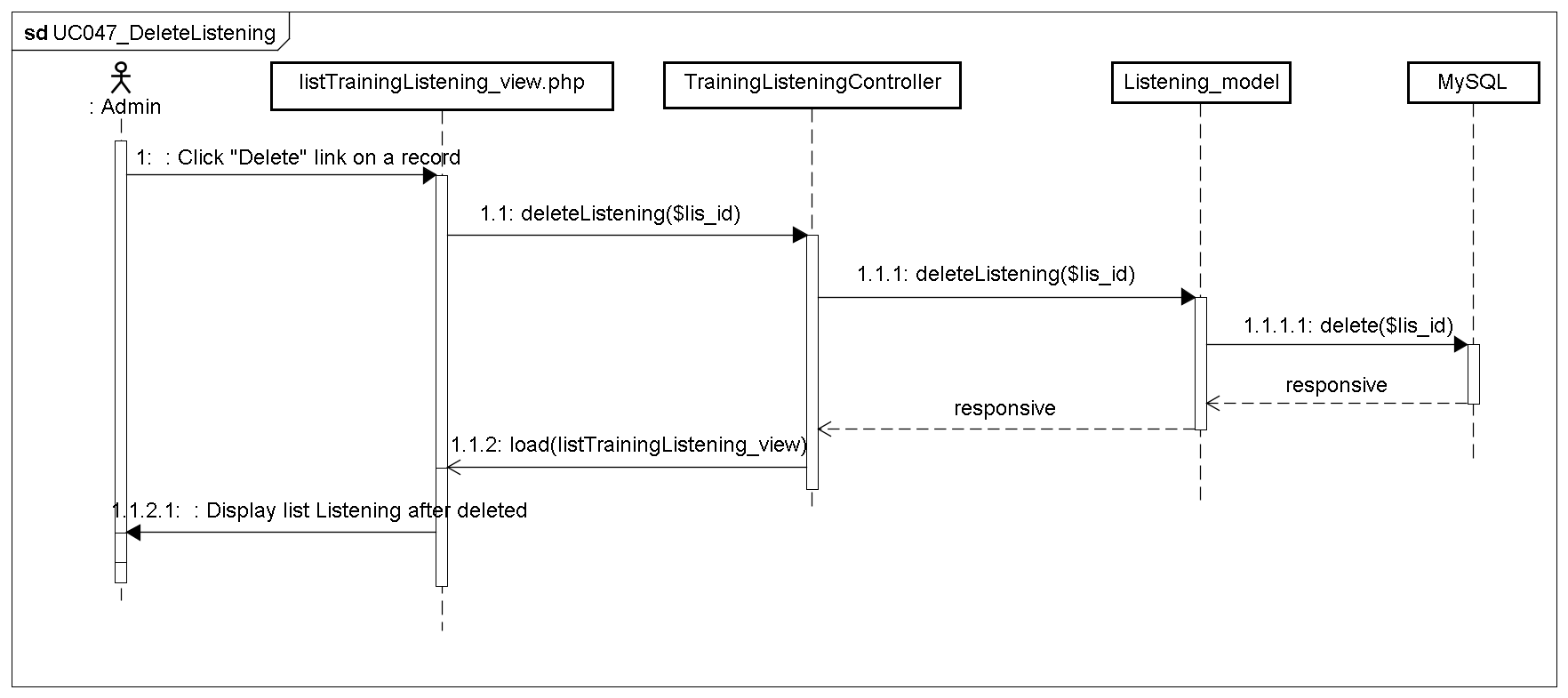


#### UC046\_EditListening



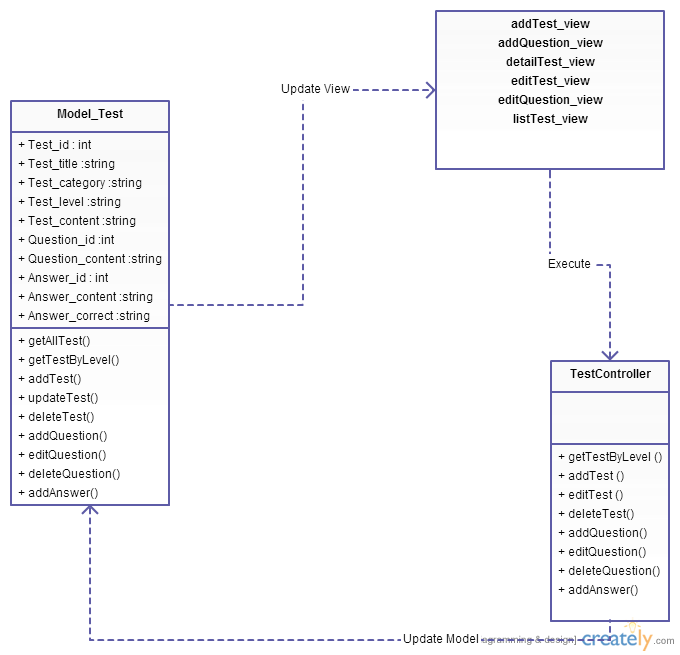


#### UC047\_DeleteListening



## Test Management Package

### Class diagram



**Figure 13: Class diagram Test package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_Test | Include method interact with database |
| 2 | Test Controller | Include method interact with model |

### Model\_Test class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 | Test\_id | Number |  | Private |  |
| 2 | Test\_title | String |  | Private |  |
| 3 | Test\_category | String |  | Private |  |
| 3 | Test\_level | String |  | Private |  |
| 4 | Test\_content | String |  | Private |  |
| 5 | Question\_id | String |  | Private |  |
| 6 | Question\_content | String |  | Private |  |
| 7 | Answer\_id | Number |  | Private |  |
| 8 | Answer\_content | String |  | Private |  |
| 9 | Answer\_correct | Number |  | Private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | getAllTest () | Interact with database: get all test in database. |
| 2 | getTestByLevel () | Interact with database: get test in database that has level as keyword input. |
| 3 | addTest () | Interact with database: save test to database that created |
| 4 | updateTest() | Interact with database: update test to database. |
| 5 | deleteTest() | Interact with database: delete test in database. |
| 6 | addQuestion() | Interact with database: save question of test to database that created |
| 7 | updateQuestion() | Interact with database: update question of test to database. |
| 8 | deleteQuestion() | Interact with database: delete question of test in database. |
| 9 | addAnswer() | Interact with database: save answer of question to database that created |

### TestController

#### Attributes

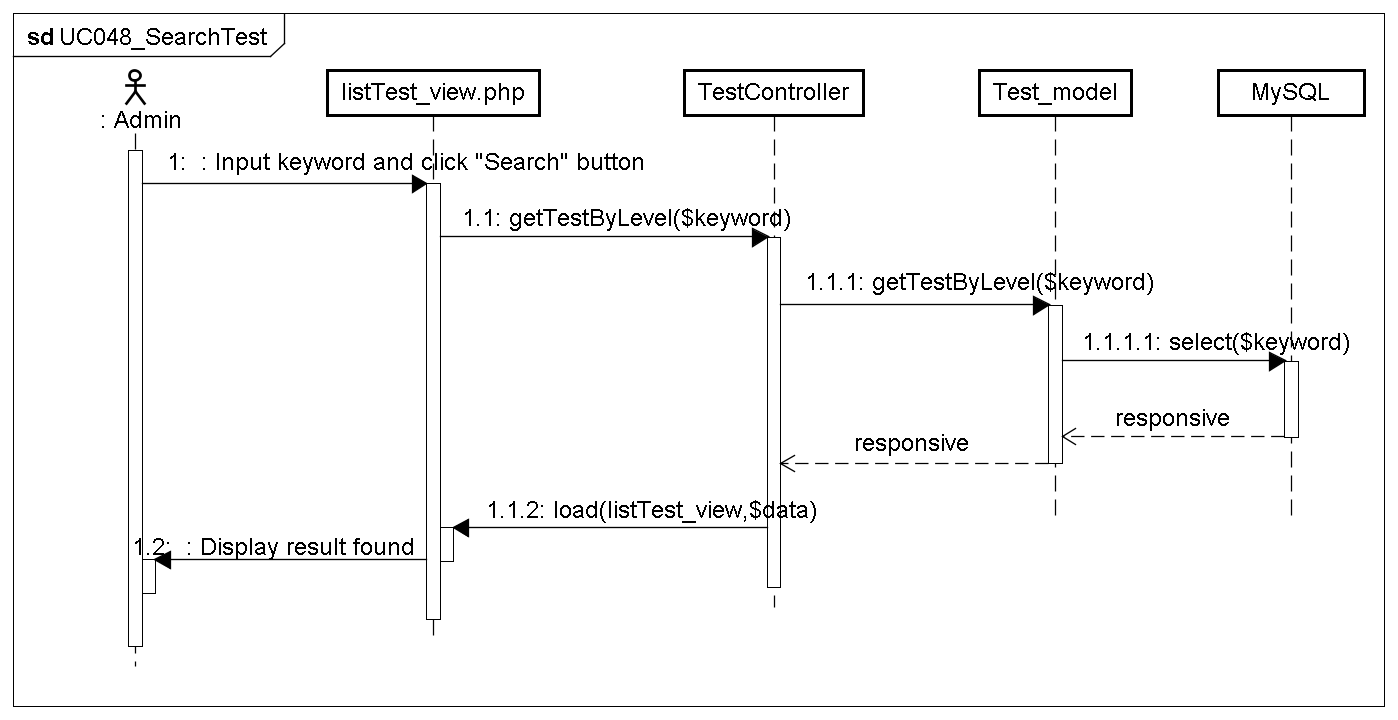
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
|  |  |  |  |  |  |

#### Methods

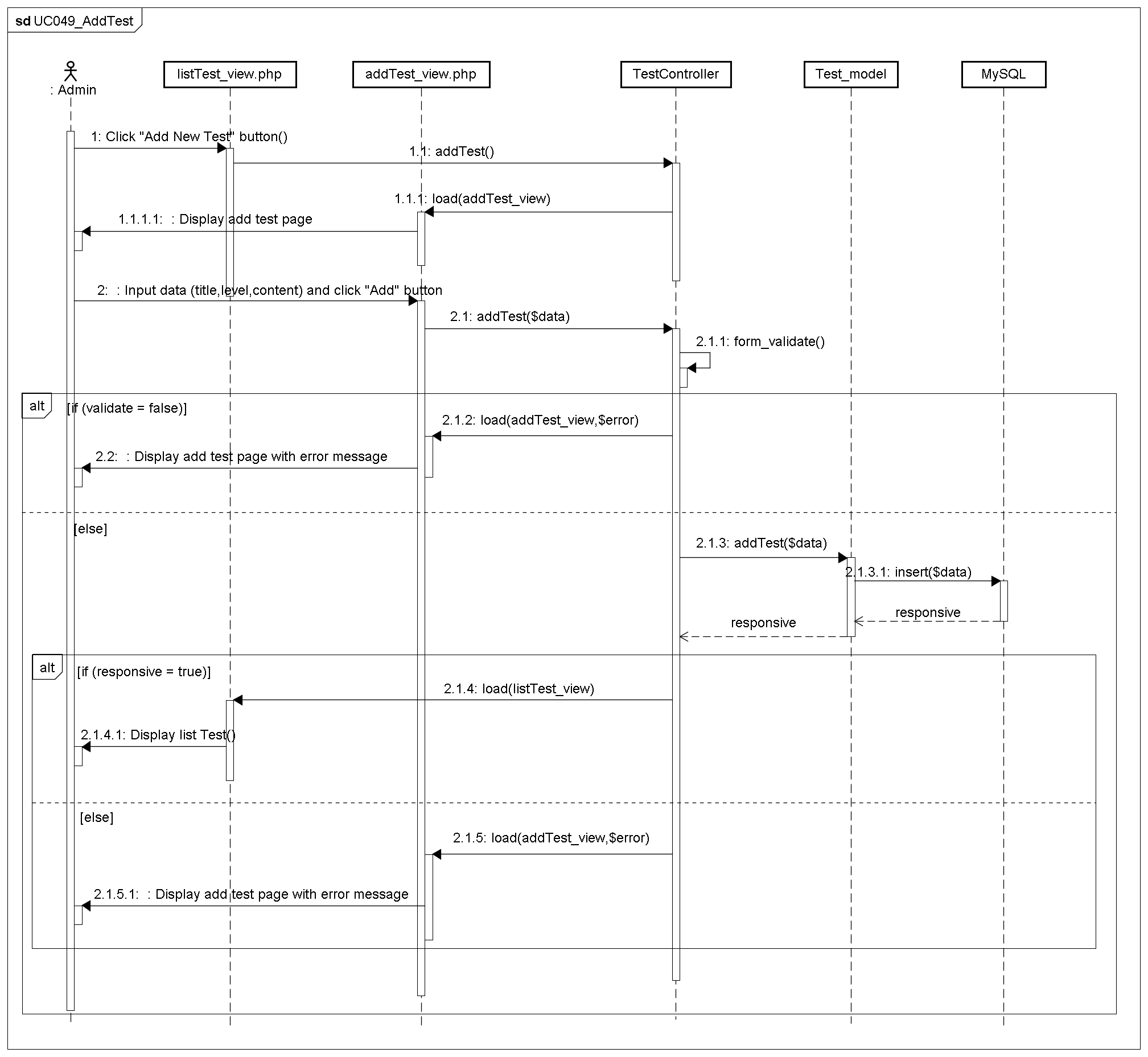
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | getTestByLevel () | Search Test |
| 2 | addTest () | Create Test |
| 3 | editTest () | Edit Test |
| 4 | deleteTest() | Delete Test |
| 5 | addQuestion() | Add Question of Test |
| 6 | editQuestion() | Edit Question of Test |
| 7 | deleteQuestion() | Delete Question of Test |
| 8 | addAnswer() | Add Answer of Question |

### Sequence Diagram

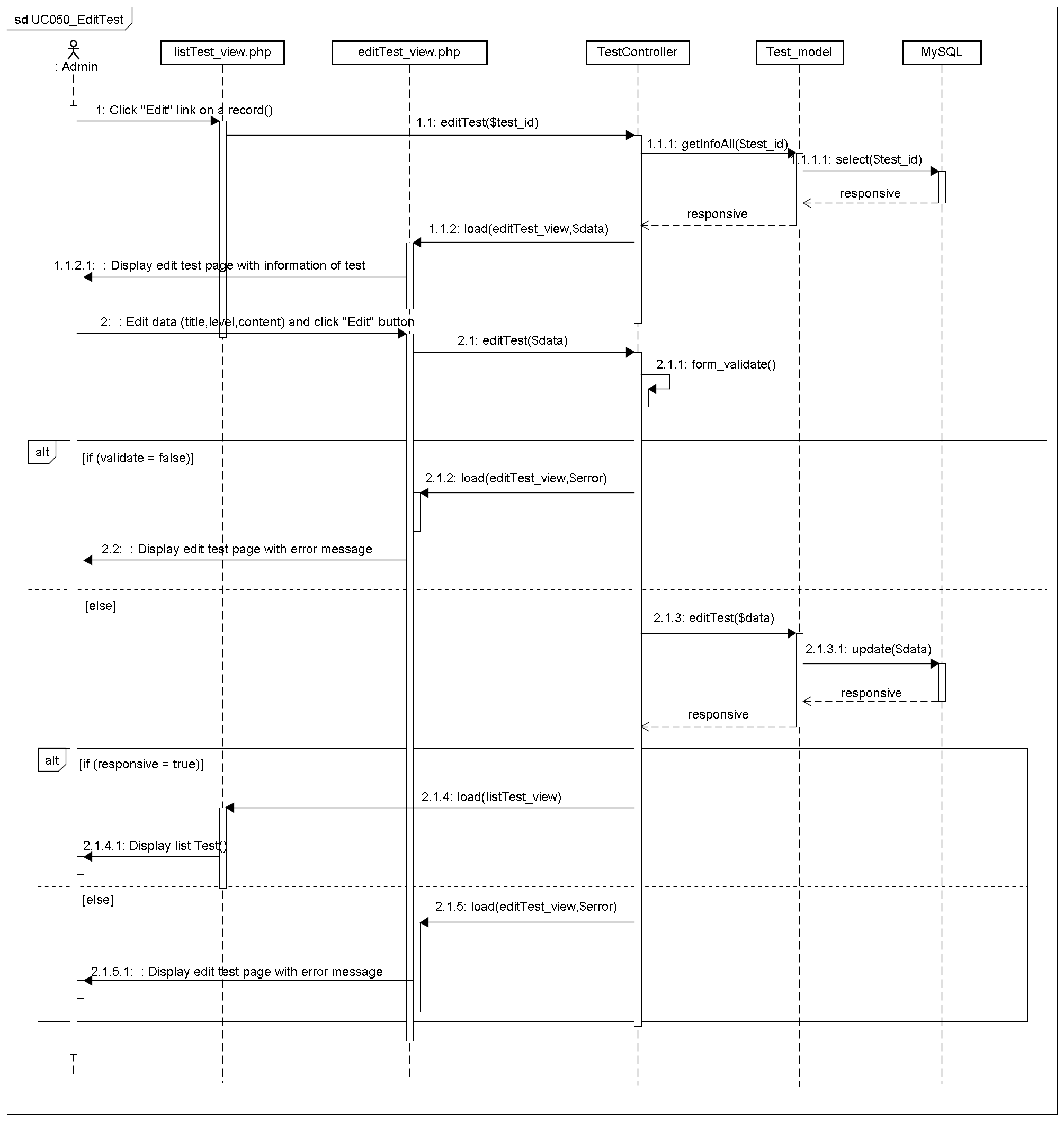
#### UC048\_SearchTest



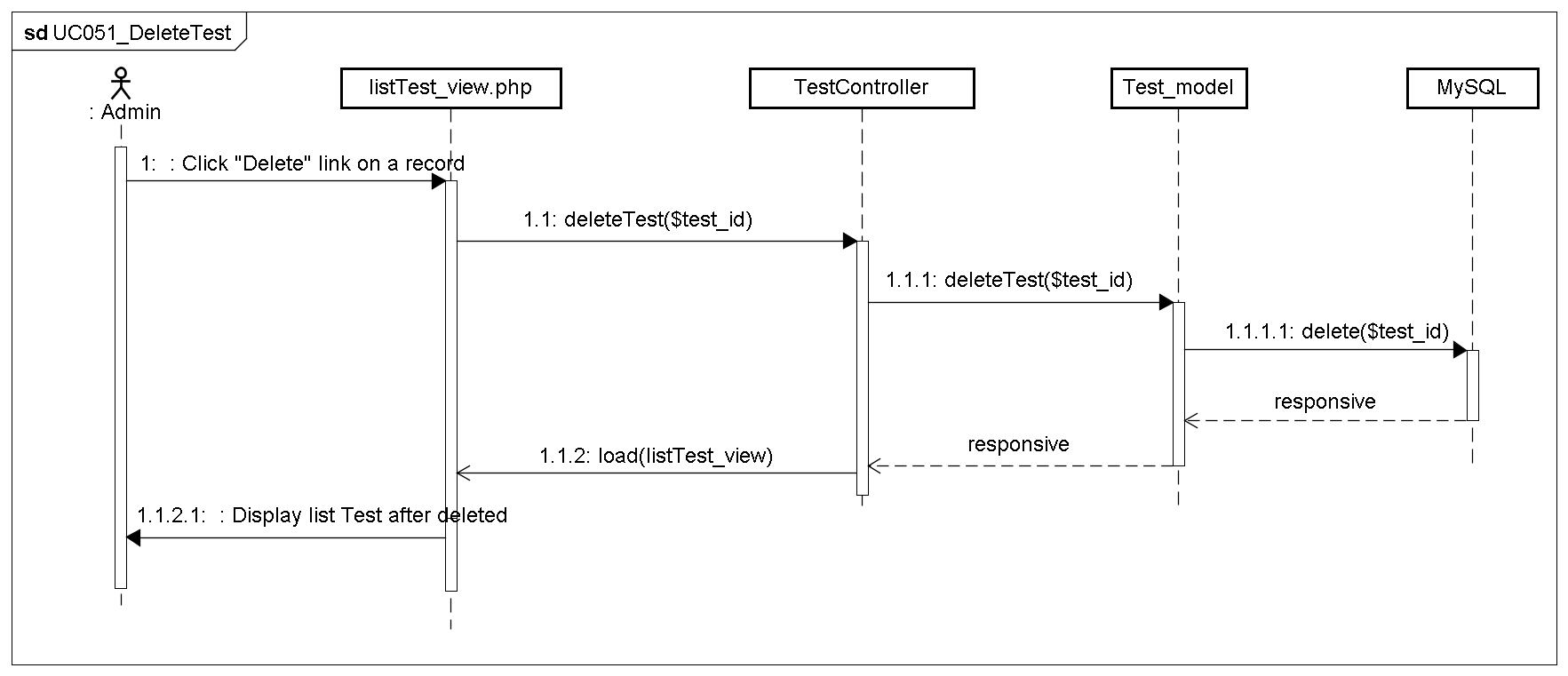
#### UC049\_AddTest



#### UC050\_EditTest

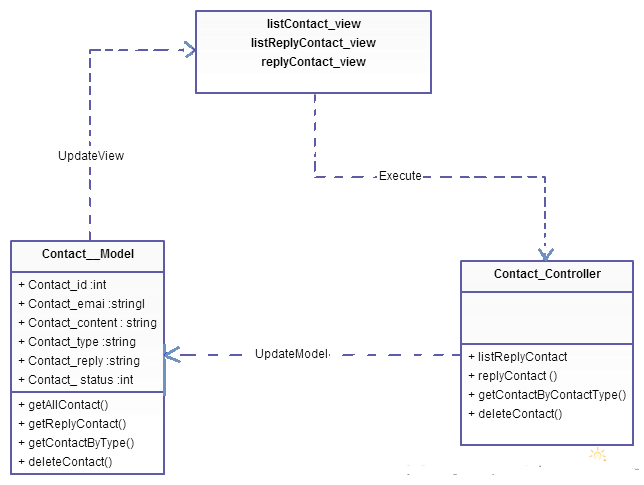


#### UC051\_DeleteTest



## Contact management Package

### Class diagram



**Figure 14: Class diagram Contact package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_Contact | Include method interact with database |
| 2 | ContactController | Include method interact with model |

### Model\_Contact class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | Contact\_id | Number |  | private |  |
| 1. 2 | Contact\_email | String |  | private |  |
| 1. 3 | Contact\_content | String |  | private |  |
|  | Contact\_type | String |  | private |  |
|  | Contact\_reply | String |  | Private |  |
|  | Contact\_ status | Number |  | Private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | getAllContact() | Interact with database: get all contact in database that unanswered. |
|  | getReplyContact() | Interact with database: get all contact in database that answered. |
|  | getContactByType() | Interact with database: get contact in database that has type as keyword input. |
|  | deleteContact() | Interact with database: delete contact in database. |

### ContactController

#### Attributes

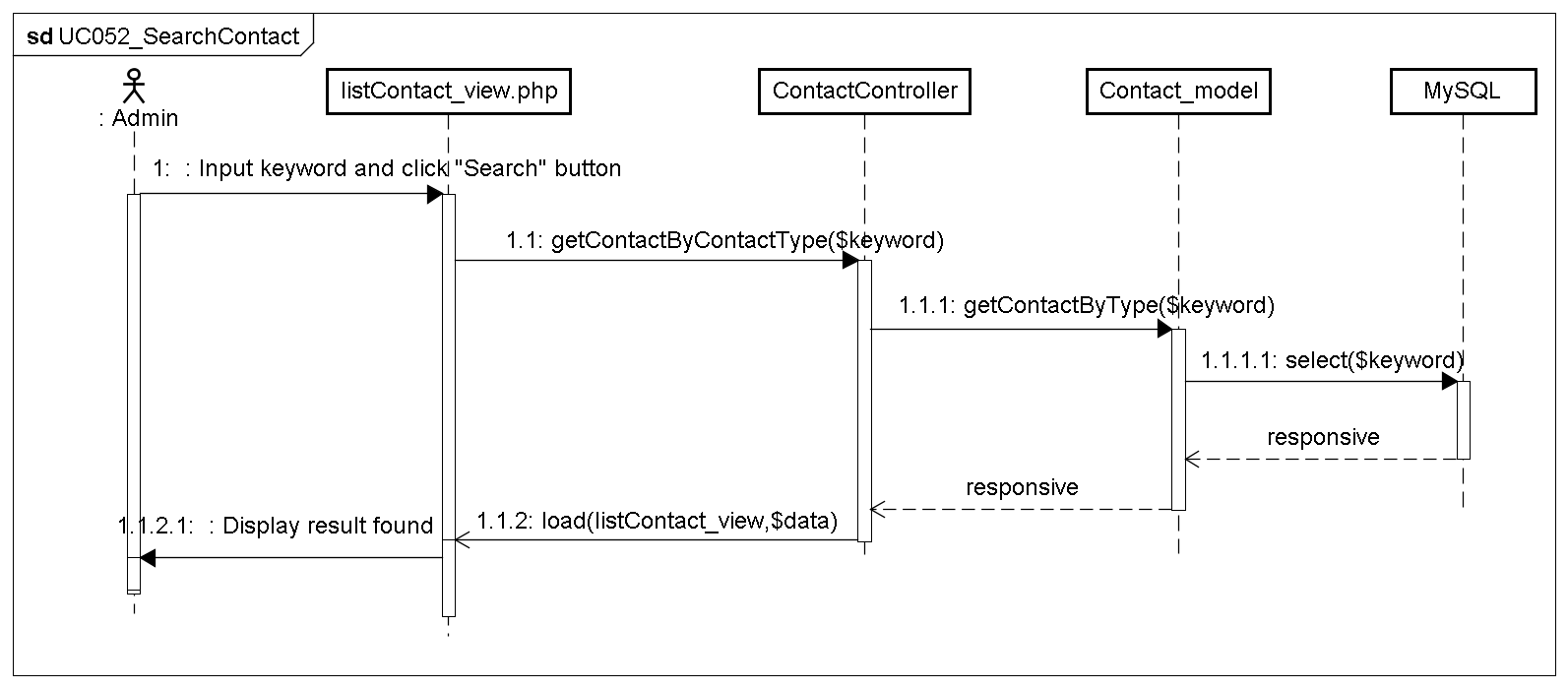
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
|  |  |  |  |  |  |

#### Methods

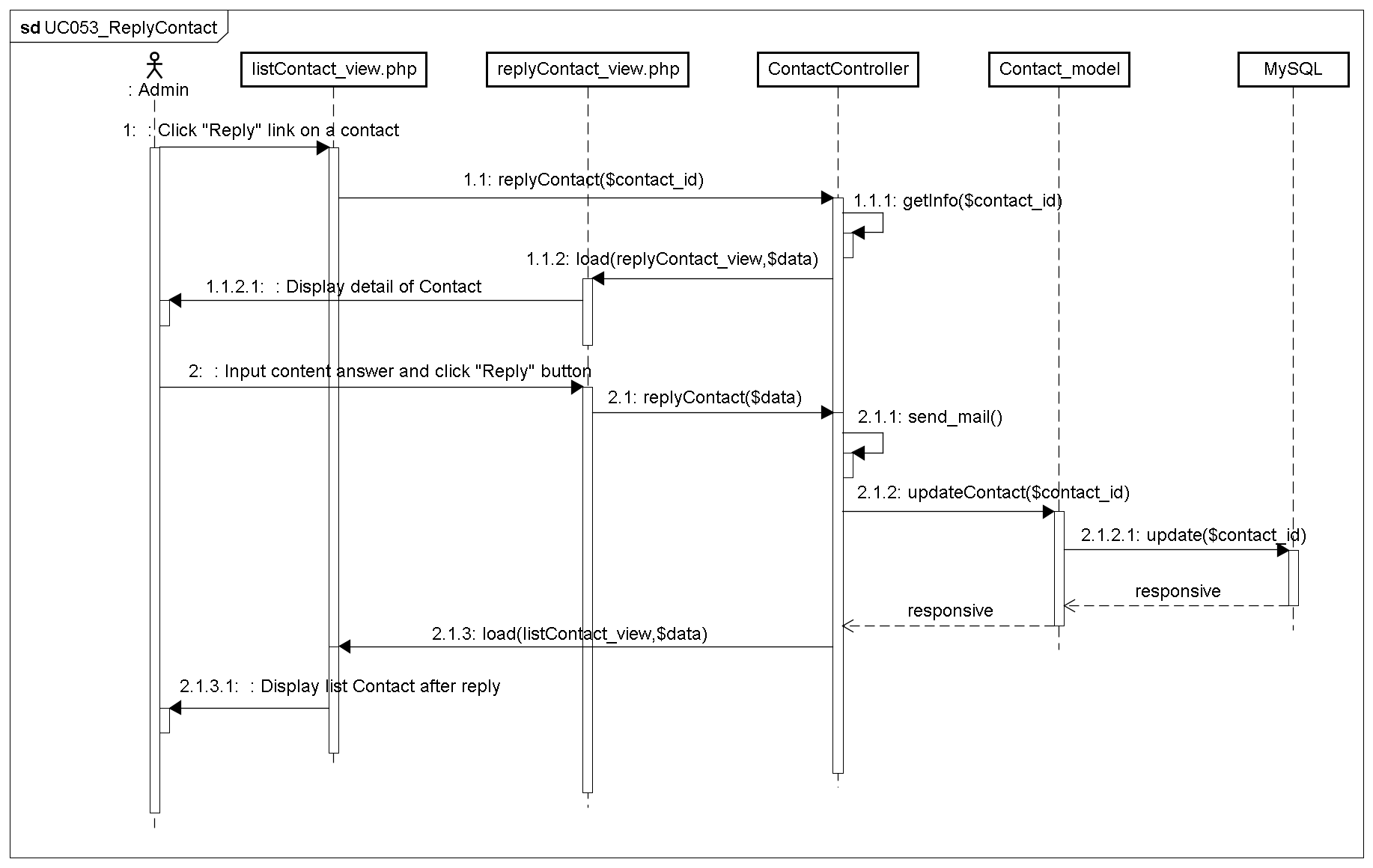
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | listReplyContact | List Contact |
|  | replyContact () | Reply Contact |
|  | getContactByContactType() | Search Contact |
|  | deleteContact() | Delete Contact |

### Sequence Diagram

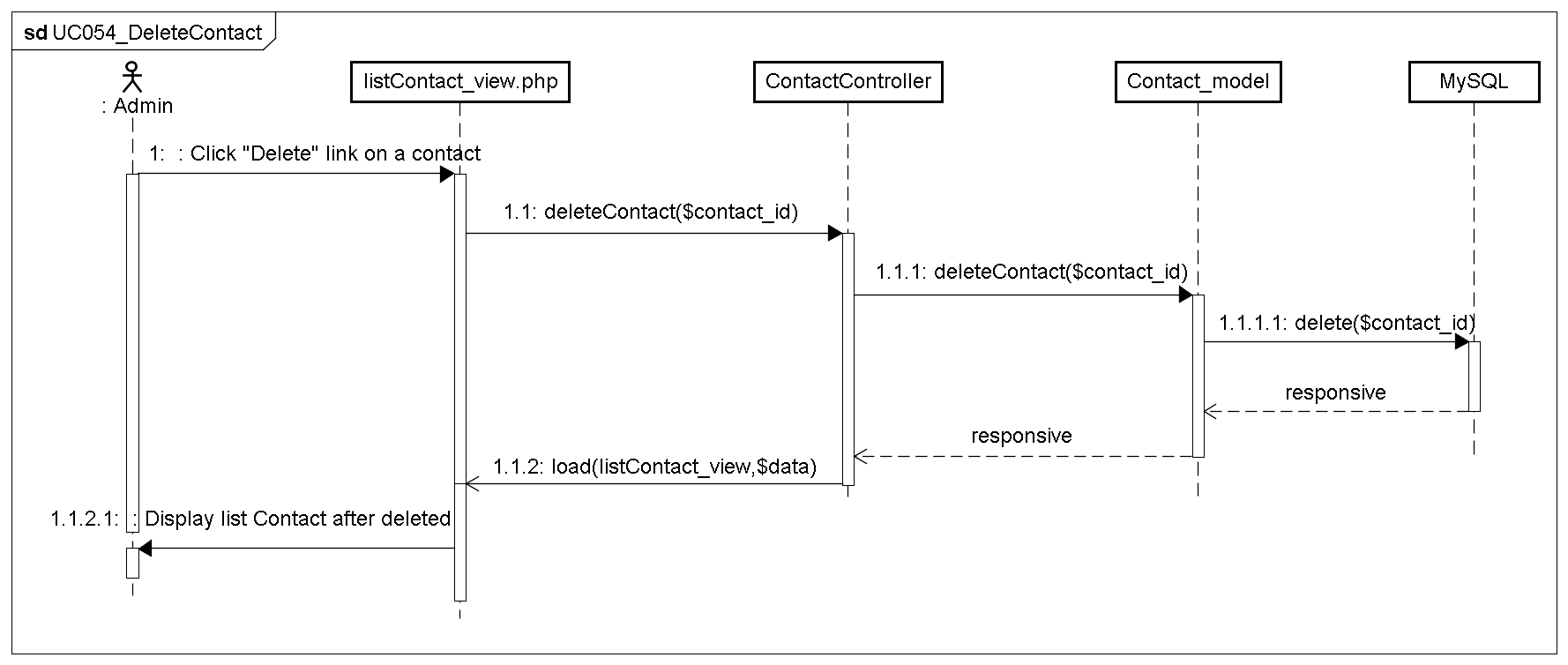
#### UC052\_SearchContact



#### UC053\_ReplyContact

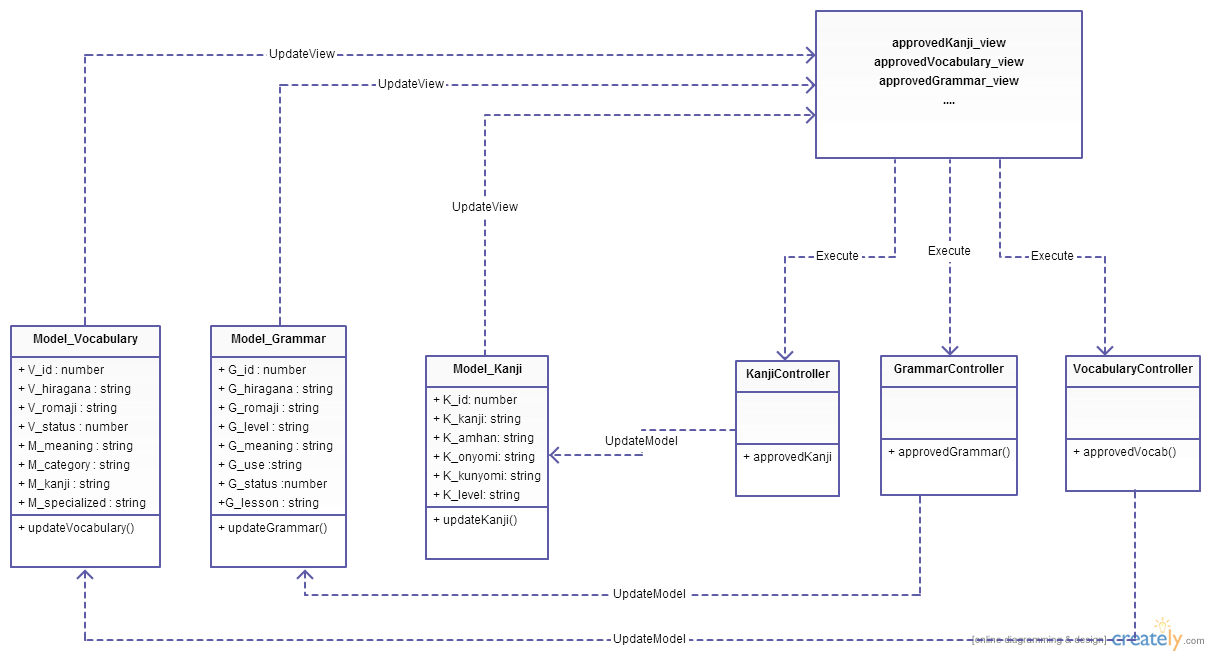


#### UC054\_DeleteContact



## Contributed Content management

### Class diagram



**Figure 15: Class diagram Contributed Content Management package**

|  |  |  |
| --- | --- | --- |
| No | Class Name | Description |
| 1 | Model\_Vocabulary | Include method interact with database |
| 2 | Model\_Grammar | Include method interact with database |
| 3 | Model\_Kanji | Include method interact with database |
| 4 | VocabularyController | Include method interact with model |
| 5 | GrammarController | Include method interact with model |
| 6 | KanjiController | Include method interact with model |

### Model\_Grammar class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | G\_id | Number |  | private |  |
| 1. 2 | G\_hiragana | String |  | private |  |
| 1. 3 | G\_romaji | String |  | Private |  |
| 1. 3 | G\_level | String |  | private |  |
|  | G\_meaning | String |  | private |  |
|  | G\_use | String |  | private |  |
|  | G\_status | Number |  | Private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | approvedGrammar() | Interact with database: approved grammar in database that user contributed. |

### Model\_Vocabulary class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | V\_id | Number |  | private |  |
| 1. 2 | V\_hiragana | String |  | private |  |
| 1. 3 | V\_romaji | String |  | private |  |
| 1. 3 | V\_status | Number |  | private |  |
|  | M\_id | Number |  | private |  |
|  | M\_meaningvn | String |  | private |  |
|  | M\_category | String |  | private |  |
|  | M\_kanji | String |  | private |  |
|  | M\_specialized | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | approvedVocabulary() | Interact with database: approved vocabulary in database that user contributed. |

### Model\_Kanji class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1. 1 | K\_id | Number |  | private |  |
| 1. 2 | K\_kanji | String |  | private |  |
| 1. 3 | K\_amhan | String |  | private |  |
| 1. 3 | K\_onyomi | String |  | private |  |
|  | K\_kunyomi | String |  | private |  |
|  | K\_level | String |  | private |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
| 1 | approvedKanji() | Interact with database: approved kanji in database that user contributed. |

### GrammarController class

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 |  |  |  |  |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | approvedGrammar() | Approved Grammar |

### VocabularyController

#### Attributes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 |  |  |  |  |  |

#### Methods

|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | approvedVocabulary() | Approved Vocabulary |

### KanjiController

#### Attributes

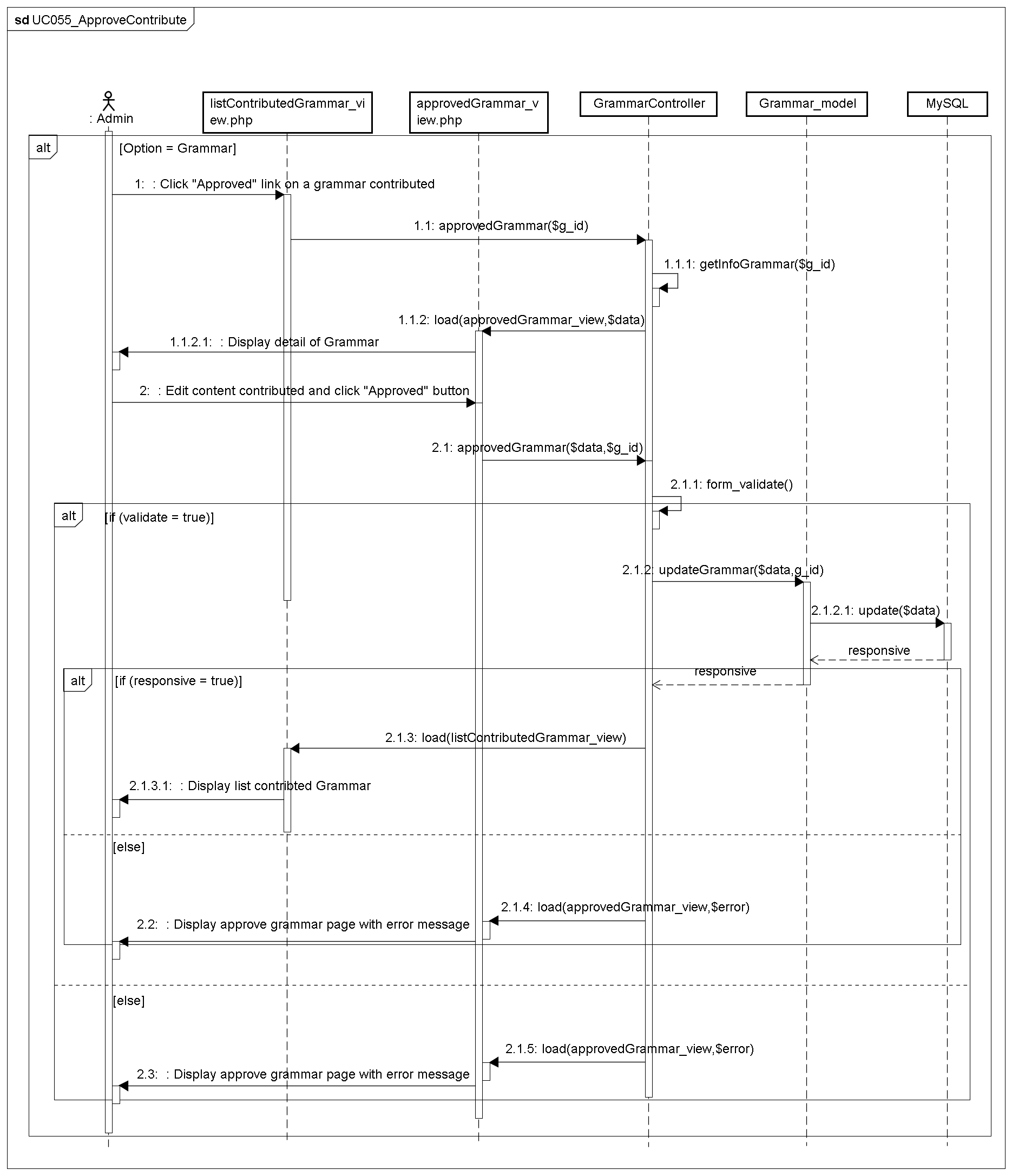
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Attribute | Type | Default | Note | Description |
| 1 |  |  |  |  |  |

#### Methods

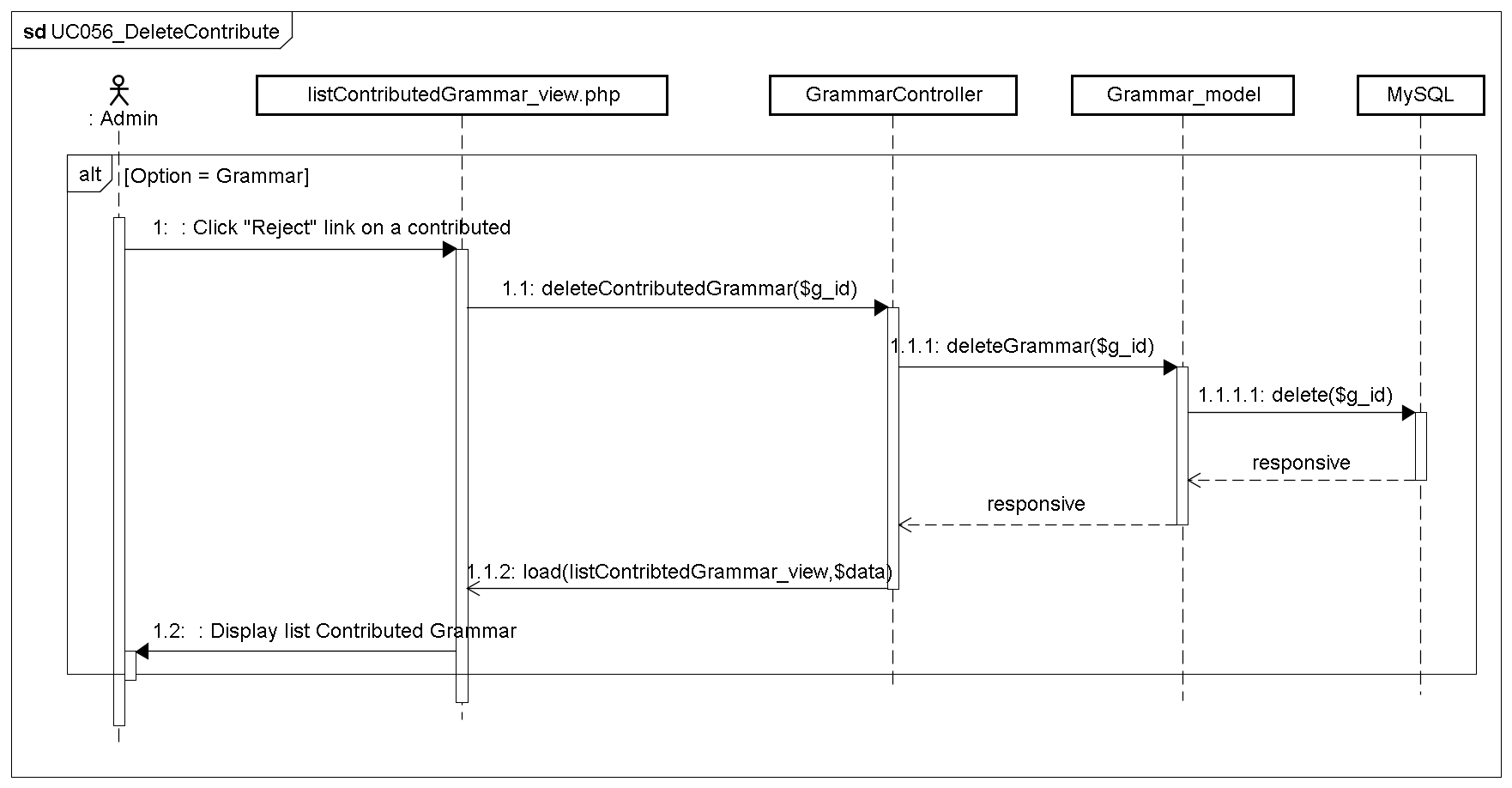
|  |  |  |
| --- | --- | --- |
| No | Method | Description |
|  | approvedKanji() | Approved Kanji |

### Sequence Diagram

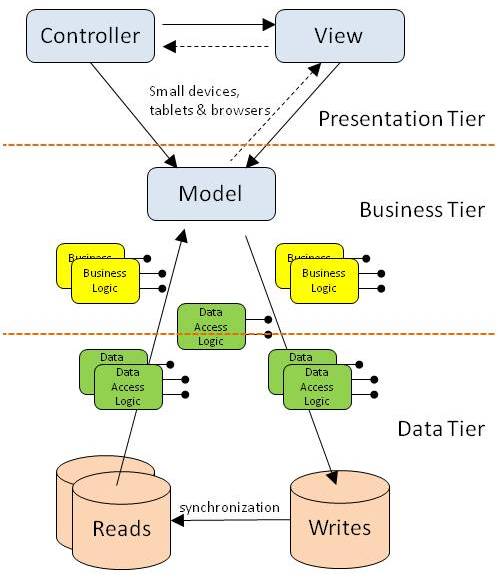
#### UC055\_ApproveContribute



#### UC056\_DeleteContribute



# MVC model



***Figure 6: MVC Model***