

**HO CHI MINH CITY NATIONAL UNIVERSITY**  
**UNIVERSITY OF NATURAL SCIENCES**  
**FACULTY OF INFORMATION TECHNOLOGY**



**PA2**  
**USE-CASE SPECIFICATION**

Subject: User Interface Design

**Instructor guides:**

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## A. INTRODUCTION

### 1. Group information

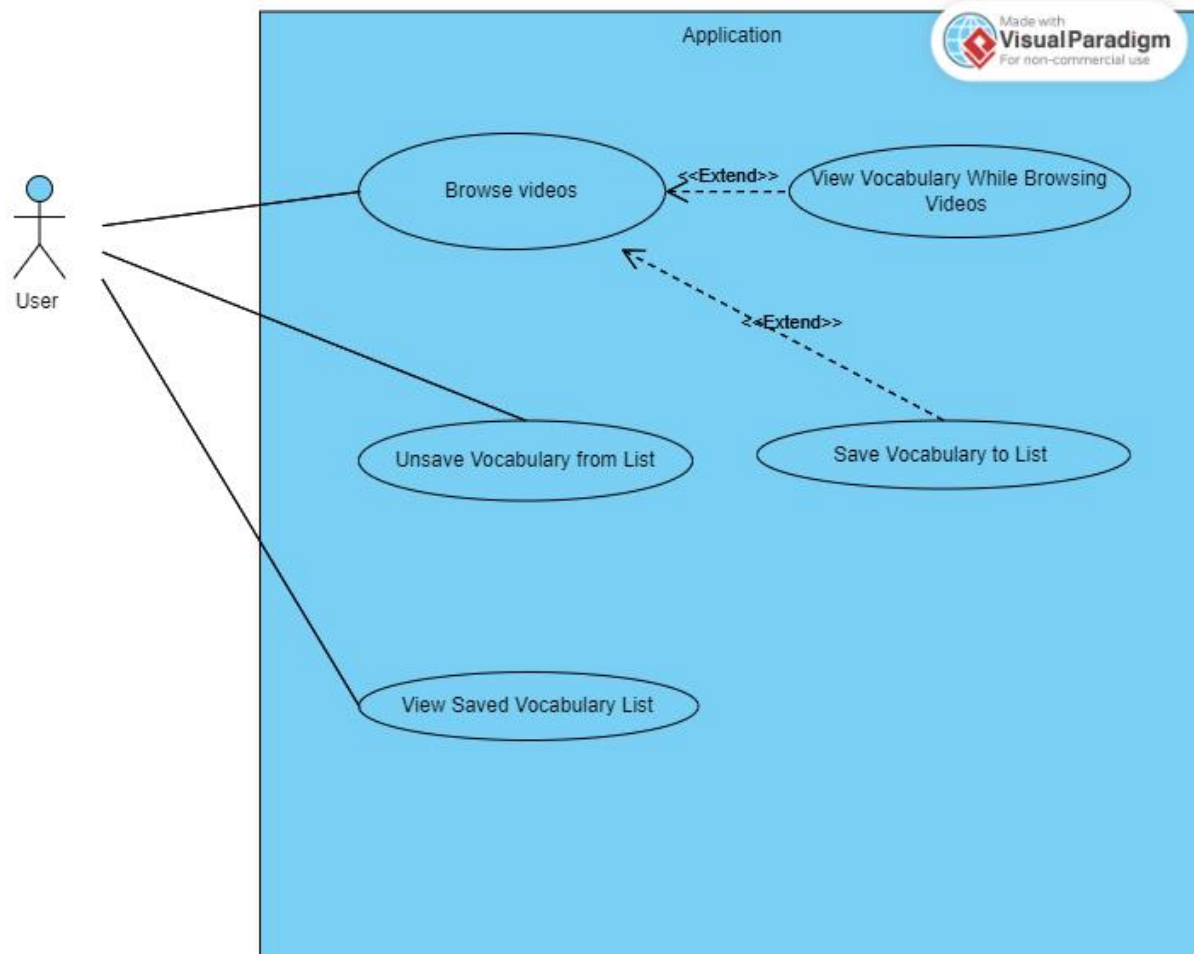
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### 2. Assign task

No.	Responsibility	Task	Level of completion
1	Nguyễn Lê Anh Chi	B.1, B.2.1, B.2.2	100%
2	Nguyễn Xuân Quỳnh Chi	C.1, C.2.1, C.2.2	100%
3	Lê Ngô Song Cát	B.2.3 - B.2.5	100%
4	Bùi Ngọc Kiều Nhi	C.2.3 - C.2.7	100%

## B. SOLUTION 1: Flashcard with Short Videos

### 1. Use-case Diagram



### 2. Use-case Specification

#### 2.1. Use-cases Name: Browse Videos

<b>Use Case ID</b>	UC-1
<b>Use Case Name</b>	Browse Videos
<b>Description</b>	The user browses through videos to find interesting vocabulary content.
<b>Actors</b>	User
<b>Basic flows</b>	<ol style="list-style-type: none"> <li>1. User opens the app and navigates directly to the video browsing section.</li> <li>2. App shows a list of videos for user.</li> <li>3. Random video including captions and a new word in highlighted is displays.</li> </ol>

	4. User watch the video. 5. User can navigate to next video by swiping up.
<b>Alternative flows</b>	- At step 5, user can navigate to previous video by swiping down.
<b>Exception flows</b>	4. 1 User can pause/continue video anytime while watching by touching the screen.
<b>Special requirements</b>	None.
<b>Preconditions</b>	User logged in.
<b>Postconditions</b>	- User can see multiple kinds of videos including new words. - User can add new words to their lists for future revision.
<b>Extension points</b>	None.

## 2.2. Use-cases Name: View Vocabulary While Browsing Videos

<b>Use Case ID</b>	UC-2
<b>Use Case Name</b>	View Vocabulary While Browsing Videos
<b>Description</b>	The user views vocabulary words associated with a video while watching.
<b>Actors</b>	User (Learner)
<b>Basic flows</b>	1. The app playing videos including new words. 2. Users come across a video they want to watch. 3. Users start watching the video. 4. The app plays the video including captions, and a new word in highlighted. 5. Users want to know more about the word and then swipe left. 6. The app shows the word with its spelling, meaning, usage, and other details.
<b>Alternative flows</b>	None
<b>Exception flows</b>	None
<b>Special requirements</b>	None
<b>Preconditions</b>	- Users are browsing or watching a video.
<b>Postconditions</b>	- Users can see vocabulary words highlighted in the video and know its context through the videos.
<b>Extension points</b>	None.

## 2.3. Use-cases Name: Save Vocabulary to List

<b>Use Case ID</b>	UC-3
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<b>Use Case Name</b>	Save Vocabulary to List
<b>Description</b>	The user saves a vocabulary word to their personal list.
<b>Actors</b>	User
<b>Basic flows</b>	<ol style="list-style-type: none"> <li>1. User sees a vocabulary word they want to save.</li> <li>2. User clicks on the "Save" icon on the right hand side.</li> <li>3. App prompts the user to add a note.</li> <li>4. User fills in the note.</li> <li>5. User clicks "Comfirm" button to save the word to their list.</li> <li>6. App saves the vocabulary word to the user's personal list with the optional note.</li> </ol>
<b>Alternative flows</b>	None.
<b>Exception flows</b>	None.
<b>Special requirements</b>	None.
<b>Preconditions</b>	- User is viewing vocabulary words while watching a video.
<b>Postconditions</b>	- Selected vocabulary word with their specific note is saved to the user's personal list for future revision.
<b>Extension points</b>	None.

#### 2.4. Use-cases Name: View Saved Vocabulary List

<b>Use Case ID</b>	UC-4
<b>Use Case Name</b>	View Saved Vocabulary List
<b>Description</b>	The user views vocabulary words they have saved to their personal list.
<b>Actors</b>	Learner
<b>Basic flows</b>	<ol style="list-style-type: none"> <li>1. The user selects the user icon in the top right corner.</li> <li>2. App navigates to user's personal wall.</li> <li>3. Multiple saved words are displayed in a grid format, with each cell representing a word on the cover.</li> <li>4. The user clicks one of the cells to view a word.</li> <li>5. A word with only its spelling and word type is displayed first.</li> <li>6. The user swipes left to review the context video.</li> <li>7. The users continue to swipe left.</li> <li>8. Its meaning, context sentence, and the added note are displayed.</li> </ol>
<b>Alternative flows</b>	None.
<b>Exception flows</b>	None.
<b>Special requirements</b>	None.
<b>Preconditions</b>	- User has saved vocabulary words in their list.

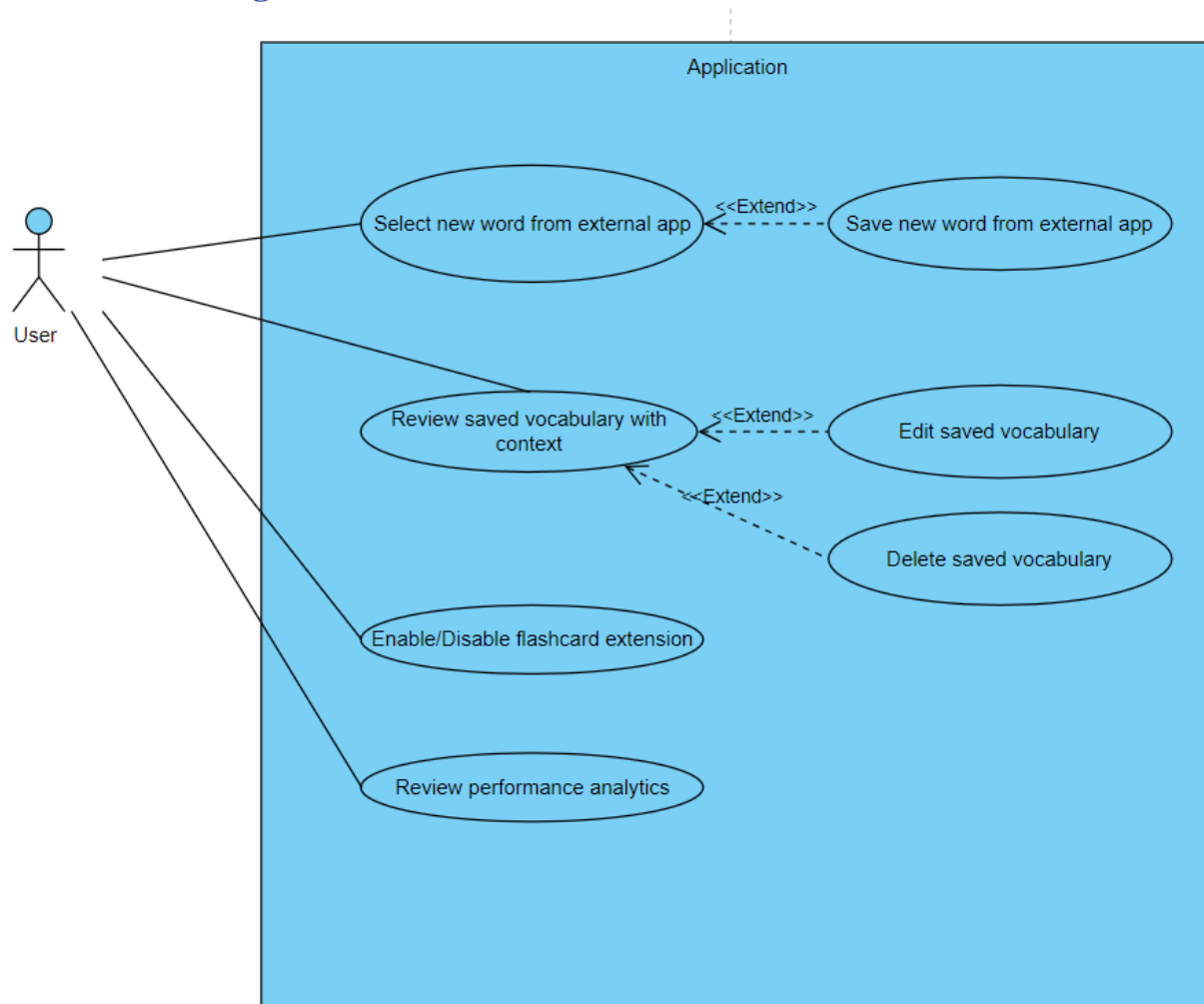
<b>Postconditions</b>	- The user can see all vocabulary words saved in their personal list along with their notes and context contextual videos.
<b>Extension points</b>	None.

### 2.5. Use-cases Name: Unsave Vocabulary from List

<b>Use Case ID</b>	UC-5
<b>Use Case Name</b>	Unsave Vocabulary from List
<b>Description</b>	The user deletes a vocabulary word from their personal list after learning it.
<b>Actors</b>	User
<b>Basic flows</b>	<ol style="list-style-type: none"> <li>1. The user selects the user icon in the top right corner.</li> <li>2. App navigates to user's personal wall.</li> <li>3. Multiple saved words are displayed in a grid format, with each cell representing a word on the cover.</li> <li>4. The user clicks one of the cells to view a word.</li> <li>5. A word with only its spelling and word type is displayed first.</li> <li>6. The user clicks on the saving icon unsave the word.</li> <li>7. The app prompts user to confirm the deletion.</li> <li>8. User clicks "Comfirm" button to save the word to their list.</li> <li>9. The app removes the vocabulary word from the user's personal list.</li> </ol>
<b>Alternative flows</b>	At step 8, the user can clicks "Cancel" button to undo. UC-5 ends.
<b>Exception flows</b>	None.
<b>Special requirements</b>	None.
<b>Preconditions</b>	<ul style="list-style-type: none"> <li>- User has vocabulary words saved in their personal list.</li> <li>- User learned about the word and do not want to review any more.</li> </ul>
<b>Postconditions</b>	Selected vocabulary words are removed from the user's personal list.
<b>Extension points</b>	None.

## C. SOLUTION 2: Integrated Flashcard Extension

### 1. Use-case Diagram



### 2. Use-case Specification

#### 2.1. Use-cases Name: Select new word from external app

<b>Use Case ID</b>	UC-1
<b>Use Case Name</b>	Select new word from external app
<b>Description</b>	The user selects a new word from any external app (e.g., Facebook, news readers)
<b>Actors</b>	User (Learner)
<b>Basic flows</b>	<ol style="list-style-type: none"> <li>1. User selects a word in an external app.</li> <li>2. The app displays a non-intrusive popup with word details (definition, part of speech, pronunciation).</li> <li>3. User reviews the information.</li> </ol>



<b>Alternative flows</b>	None
<b>Exception flows</b>	None
<b>Special requirements</b>	None
<b>Preconditions</b>	- The integrated flashcard extension is enabled and running in the background.
<b>Postconditions</b>	- The user can see basic information about the selected word.
<b>Extension points</b>	None

## 2.2. Use-cases Name: Save new word from external app

<b>Use Case ID</b>	UC-2
<b>Use Case Name</b>	Save new word from external app
<b>Description</b>	The user saves a new word from an external app to their flashcard list.
<b>Actors</b>	User (Learner)
<b>Basic flows</b>	<ol style="list-style-type: none"> <li>1. User selects a word in an external app.</li> <li>2. The app displays a non-intrusive popup with word details (definition, part of speech, pronunciation).</li> <li>3. The user taps the "Save" button on the popup.</li> <li>4. The app captures a screenshot of the current screen.</li> <li>5. OCR technology extracts text from the screenshot, highlighting the new word within its original context.</li> <li>6. The app creates a flashcard with the new word, its details, and the context in which it was found.</li> </ol>
<b>Alternative flows</b>	None
<b>Exception flows</b>	4.1 The screenshot capture fails, and the app prompts the user to try again.
<b>Special requirements</b>	The device must have OCR capabilities.
<b>Preconditions</b>	<ul style="list-style-type: none"> <li>- The integrated flashcard extension is enabled and running in the background.</li> <li>- The user has granted necessary permissions for screen capture.</li> </ul>
<b>Postconditions</b>	- The new word is saved to the user's flashcard list with its context.
<b>Extension points</b>	None

## 2.3. Use-cases Name: Review saved vocabulary with context

<b>Use Case ID</b>	UC-3
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<b>Use Case Name</b>	Review saved vocabulary with context
<b>Description</b>	The user reviews their saved vocabulary list, including words with their original context.
<b>Actors</b>	User
<b>Basic flows</b>	<ol style="list-style-type: none"> <li>1. User opens the flashcard app.</li> <li>2. User navigates to their saved vocabulary list.</li> <li>3. App displays the saved words along with their definitions, parts of speech, pronunciations, and the original context from which they were captured.</li> <li>4. User reviews each word and its context.</li> <li>5. User can choose to edit, delete, or further interact with the flashcards.</li> </ol>
<b>Alternative flows</b>	None
<b>Exception flows</b>	None
<b>Special requirements</b>	None
<b>Preconditions</b>	- User has saved words in their vocabulary list.
<b>Postconditions</b>	- User can review and manage their saved vocabulary words.
<b>Extension points</b>	None

#### 2.4. Use-cases Name: Edit saved vocabulary

<b>Use Case ID</b>	UC-4
<b>Use Case Name</b>	Edit saved vocabulary
<b>Description</b>	The user edits details of a saved word in their vocabulary list.
<b>Actors</b>	User (Learner)
<b>Basic flows</b>	<ol style="list-style-type: none"> <li>1. User opens the flashcard app.</li> <li>2. User navigates to their saved vocabulary list.</li> <li>3. User selects a word to edit.</li> <li>4. The app displays the word's details, including the original context.</li> <li>5. User makes the desired changes to the word's details.</li> <li>6. User select "Save" to save the changes.</li> </ol>
<b>Alternative flows</b>	None
<b>Exception flows</b>	None
<b>Special requirements</b>	None
<b>Preconditions</b>	- User has saved vocabulary words in their list.
<b>Postconditions</b>	- The word's details are updated in the vocabulary list.
<b>Extension points</b>	None

### 2.5. Use-cases Name: Delete saved vocabulary

<b>Use Case ID</b>	UC-5
<b>Use Case Name</b>	Delete saved vocabulary
<b>Description</b>	The user deletes a saved word from their vocabulary list.
<b>Actors</b>	User (Learner)
<b>Basic flows</b>	<ol style="list-style-type: none"> <li>1. User opens the flashcard app.</li> <li>2. User navigates to their saved vocabulary list.</li> <li>3. User selects a word to delete.</li> <li>4. The app asks for confirmation.</li> <li>5. User selecte “Yes” to confirms the deletion.</li> <li>6. The app removes the word from the vocabulary list.</li> </ol>
<b>Alternative flows</b>	None
<b>Exception flows</b>	None
<b>Special requirements</b>	None
<b>Preconditions</b>	- User has saved vocabulary words in their list.
<b>Postconditions</b>	- The word is deleted from the vocabulary list.
<b>Extension points</b>	None

### 2.6. Use-cases Name: Enable/Disable flashcard extension

<b>Use Case ID</b>	UC-6
<b>Use Case Name</b>	Enable/Disable flashcard extension
<b>Description</b>	The user enables or disables the integrated flashcard extension.
<b>Actors</b>	User (Learner)
<b>Basic flows</b>	<ol style="list-style-type: none"> <li>1. User opens the flashcard app.</li> <li>2. User navigates to the settings menu.</li> <li>3. User finds the option to enable or disable the flashcard extension.</li> <li>4. User toggles the switch to enable or disable the extension .</li> <li>5. The app confirms the change in status.</li> </ol>
<b>Alternative flows</b>	None
<b>Exception flows</b>	None
<b>Special requirements</b>	None
<b>Preconditions</b>	- The flashcard app is installed and the user is logged in.
<b>Postconditions</b>	- The flashcard extension is enabled or disabled based on the user’s preference.
<b>Extension points</b>	None

**2.7. Use-cases Name: Review performance analytics**

<b>Use Case ID</b>	UC-7
<b>Use Case Name</b>	Review performance analytics
<b>Description</b>	The user reviews their learning progress and performance analytics.
<b>Actors</b>	User (Learner)
<b>Basic flows</b>	<ol style="list-style-type: none"><li>1. User opens the flashcard app.</li><li>2. User navigates to the performance analytics section.</li><li>3. The app displays detailed analytics, including learning progress, word retention rates, and areas for improvement.</li><li>4. User reviews the analytics to understand their learning patterns.</li></ol>
<b>Alternative flows</b>	None
<b>Exception flows</b>	None
<b>Special requirements</b>	None
<b>Preconditions</b>	<ul style="list-style-type: none"><li>- The user has been using the flashcard app and saving words regularly.</li></ul>
<b>Postconditions</b>	<ul style="list-style-type: none"><li>- The user gains insights into their learning progress and can make informed decisions to improve their vocabulary acquisition.</li></ul>
<b>Extension points</b>	None