HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY

DESIGN DOCUMENT FOR Flashcard Software

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For course: Software Engineering

*** **Group 1:**

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1. Requirement Specification :

Flash card is a method that combining English word and a corresponding image to help people remembering words more easily and having fun with learning English.

Main feature:

+ Visualize flashcards, Flashcard collections on the computer screen so that people can use to learning without buying their paper collections.

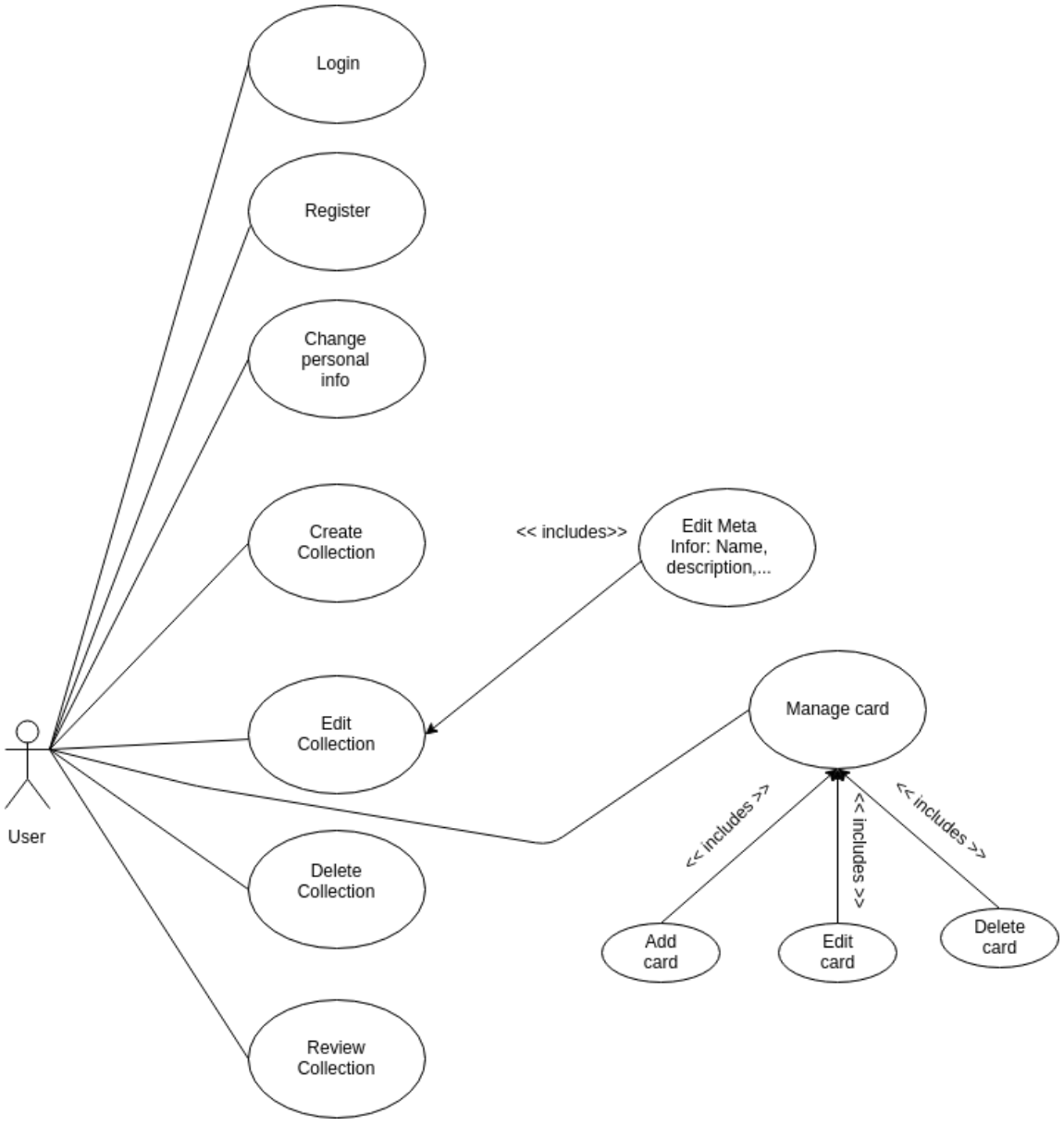
+ Can be used in multiple platform (firstly on web and PC application) to learn every where.

+ Help people in using available Flashcard collections, creating/editing their own collections.

2. Design diagram

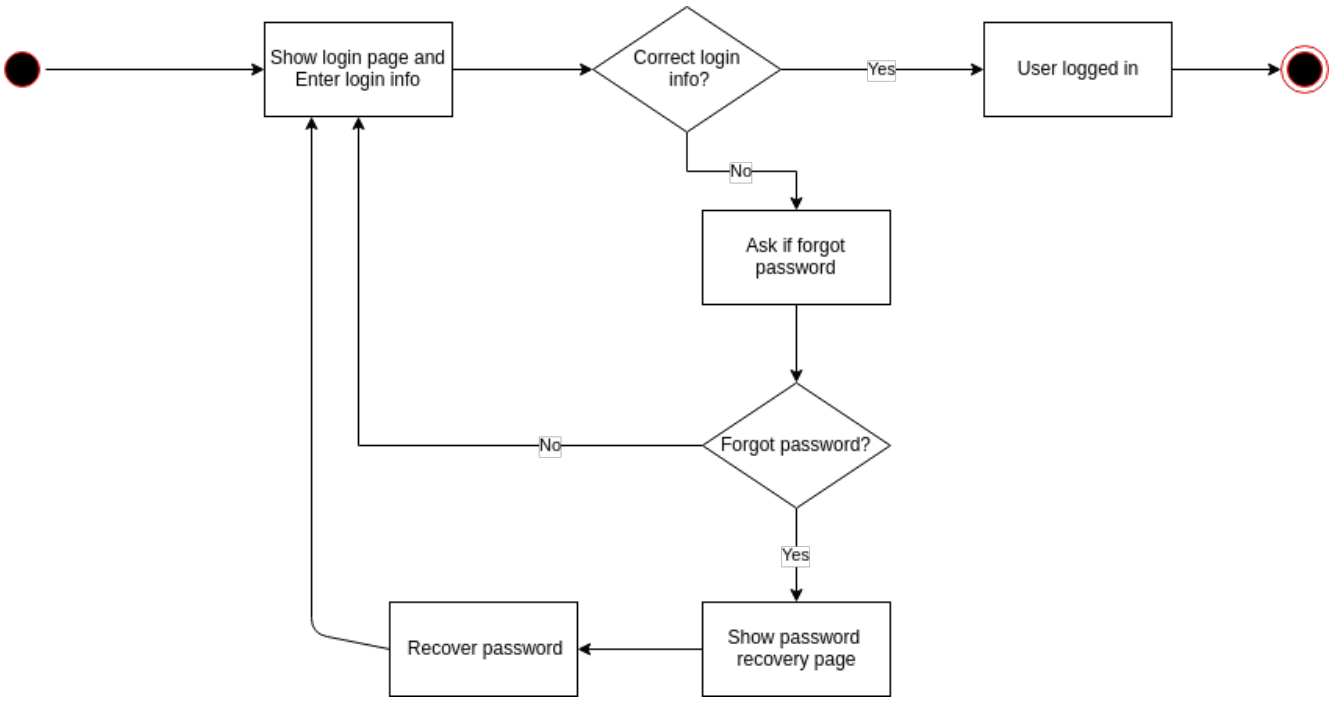
2.1. Use-case diagram

USECASE



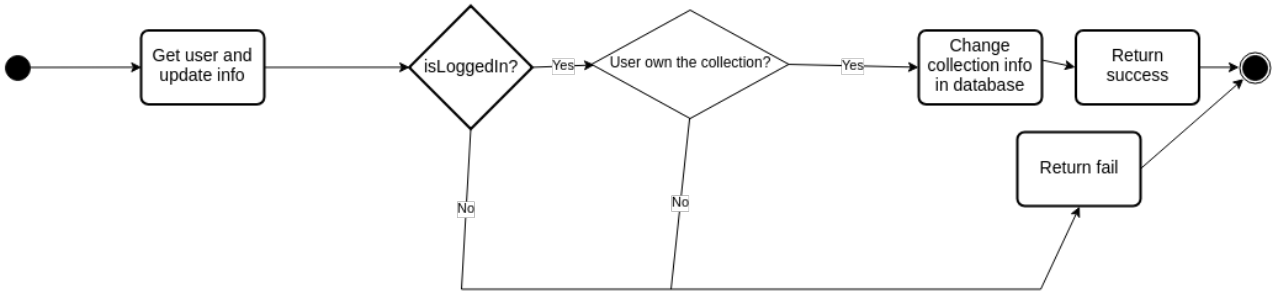
2.2. Activity diagrams

LOGIN

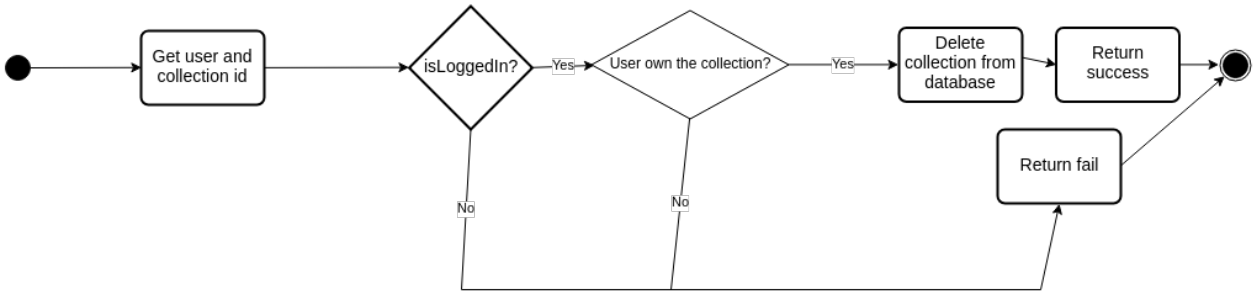


CREATE COLLECTION

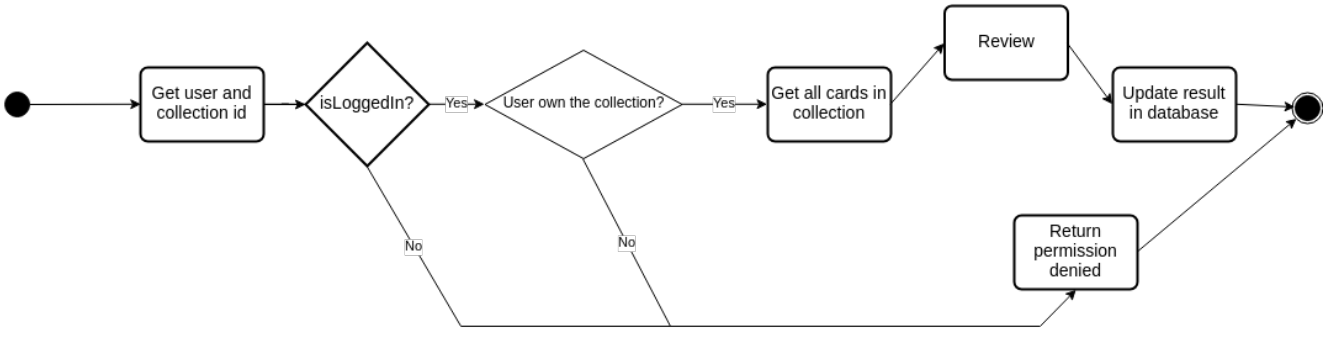
EDIT COLLECTION



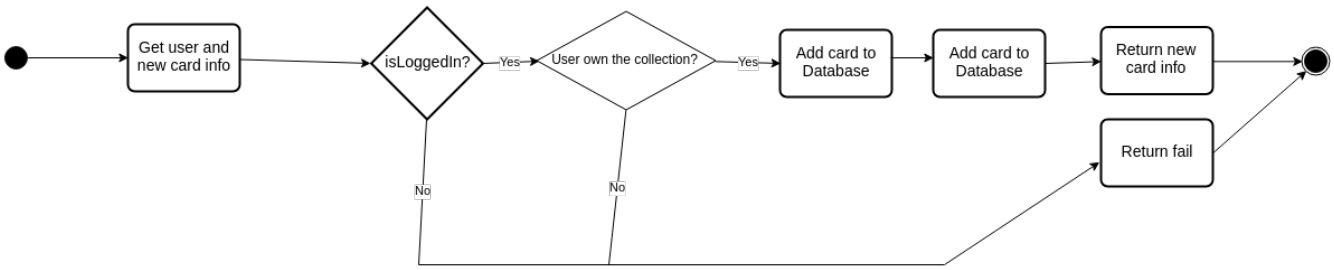
DELETE COLLECTION



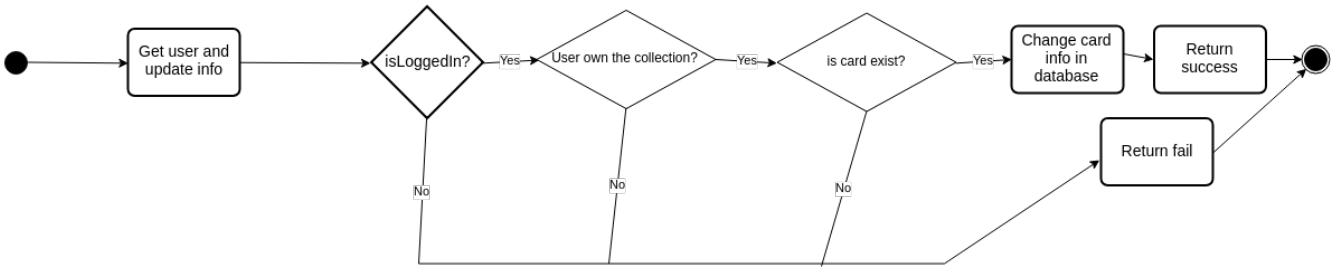
REVIEW COLLECTION



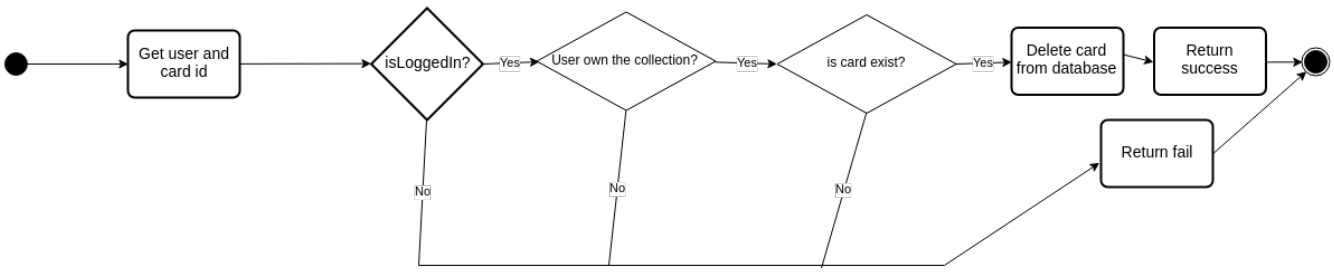
CREATE CARD



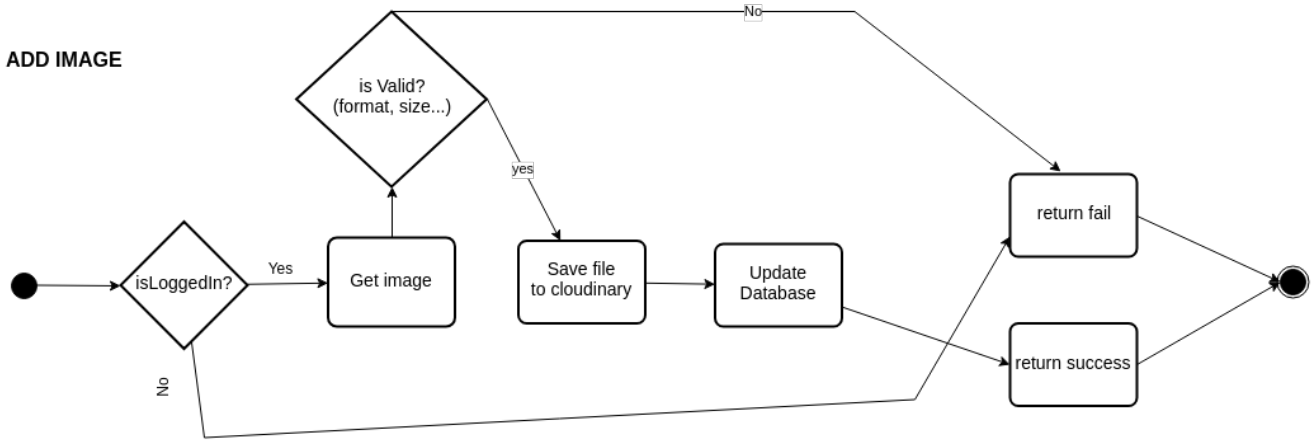
EDIT CARD



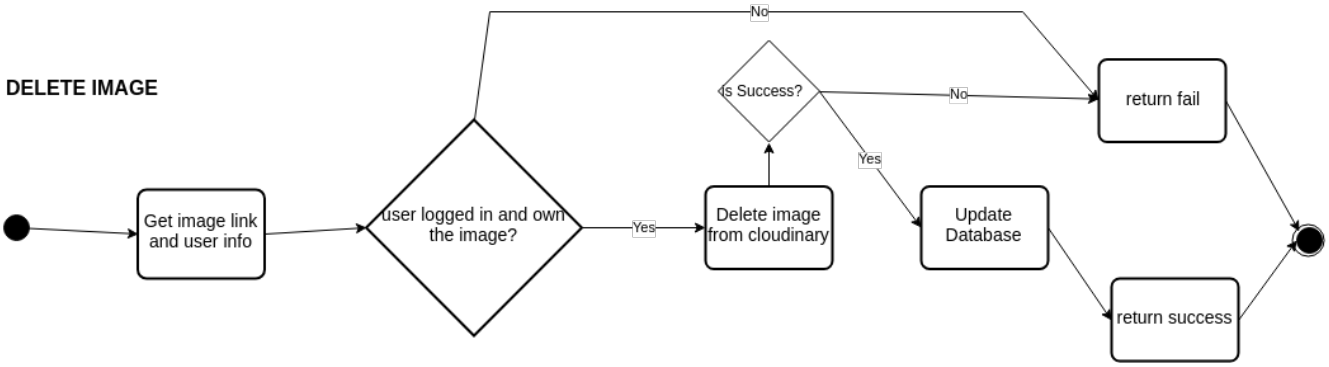
DELETE CARD



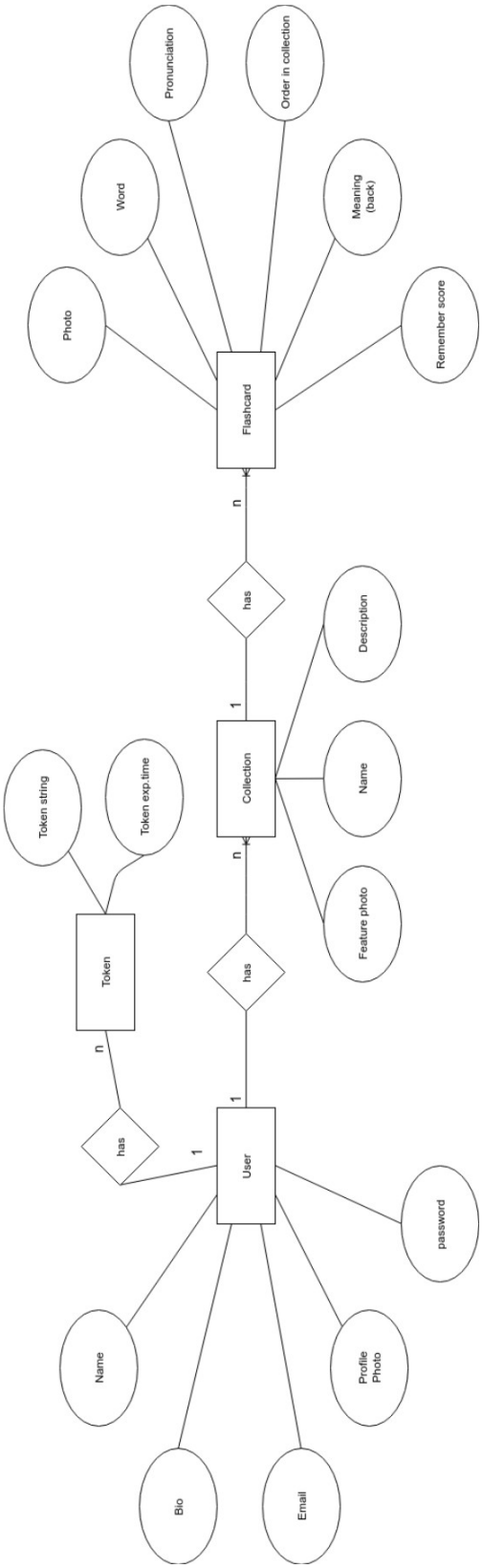
ADD IMAGE



DELETE IMAGE



2.3. Entity diagram



3. Web APIs

The APIs in this part are used in communication between server (Node.js) and clients (Web frontend and PC application).

3.1. Dictionary

- E-V Dictionary Lookup:

GET: /api/dictionary/ev?lookup=<word>

3.2. User management

- User Register

POST: /api/user/register

params:

{

'username': '<username>',

'password': '<password>',

'email': '<password>',

'fullname': '<password>'

}

success: return {'success': true}

fail: return {'success': false, 'message': '<why fail?>'}

- User Login

POST: /api/user/login

params:

{

'username': '<username>',

'password': '<password>'

}

success: return {'success': true, 'token': '<token>'}

fail: return {'success': false}

- User Logout

POST: /api/user/logout

params: {'username': '<username>', 'token', '<token>'}

success: return {'success': true}

fail: return {'success': false}

- Check login state

POST: /api/user/islogin

params: {'username': '<username>', 'token': '<token>'}

success: return {'success': true, 'isLoggedIn': true}

fail: return {'success': false}

or: return {'success': true, 'isLoggedIn': false}

- Update user info

POST: /api/user/updateinfo

params: {'username': '<username>', 'token': '<token>',

'oldPassword': '<oldPassword>'

'newUserInfo': {

'email' : '<email>',

'bio' : '<bio>',

'fullname' : '<fullname>',

'newPassword' : '<newPassword>',

}

}

=> 'oldPassword', 'newPassword' are used when user wants to change their password

=> all properties of 'newUserInfo' are optional

success: return {'success': true}

fail: return {'success': false}

- Get user info

POST: /api/user/getinfo

params: {

'user': '<username>',

'token', '<token>'

}

success: return

{

'success': true,

'data': {

'email': '<email>',

'fullname': '<fullname>',

'bio': '<bio>',

'username': '<username>',

'phofile_photo', '<phofile_photo>'

}

}

3.3. Image mamangement

- Upload image

POST: /api/image/upload

Params: {

'user': '<username>',

'token', '<token>',

'image': <image-base64>

}

success: return {'success': true, 'imageUrl': '<image-address>'}

fail: return {'success': false}

- Delete image <not implemented>

Params: {

'user': '<username>',

'token', '<token>',

'imageUrl': '<image-address>'

}

success: return {'success': true}

fail: return {'success': false}

3.4. Collection mamangement

- Create collection

POST: /api/collection/create

Params: {

'username': '<username>',

'token', '<token>',

'photo': '<photoUrl>',

'name': '<name>',

'description': '<description>',

}

success: return

{

'success': true,

'collection_id': '<collection_id>',

}

fail: return {'success': false}

- Update collection

POST: /api/collection/update

Params: {

'username': '<username>',

'token', '<token>',

'collection_id': '<collection_id>',

'photo': '<photoUrl>',

'name': '<name>',

'description': '<description>',

}

success: return

{ 'success': true }

fail: return

{ 'success': false }

- Delete collection

POST: /api/collection/delete

Params: {

'username': '<username>',

'token', '<token>',

'collection_id': '<collection_id>'

}

success: return

{ 'success': true }

fail: return

{ 'success': false }

- Get collection info

POST: /api/collection/get

Params: {

'username': '<username>',

'token', '<token>',

'collection_id': '<collection_id>',

}

success: return
{ 'success': true,

'data' : {

'id': '<collection_id>',

'photo': '<photoUrl>',

'name': '<name>',

'description': '<description>',

'flashcards': [<list of ids of flashcard in the collection>]

}

}

fail: return

{ 'success': false }

- Get all collection

POST: /api/collection/getall

Params: {

'username': '<username>',

'token', '<token>',

'collection_id': '<collection_id>',

}

success: return
{ 'success': true,

'data' : [{

'id': '<collection_id>',

'photo': '<photoUrl>',

'name': '<name>',

'description': '<description>',

'user_id': '<user_id>'

},...]

}

fail: return

{ 'success': false }

3.5. Flashcard mamangement

- Create flashcard

POST: /api/flashcard/create

Params: {

'username': '<username>',

'token', '<token>',

'collection_id': '<collection_id>',

'word': '<word>',

'pronunciation': '<pronunciation>',

'meaning': '<meaning>',

'image': '<image>',

'order': '<order in collection>',

}

success: return

{

'success': true,

'flashcard_id': '<flashcard_id>',

}

fail: return {'success': false}

- Update flashcard

POST: /api/flashcard/update

Params: {

'username': '<username>',

'token', '<token>',

'flashcard_id': '<flashcard_id>',

'word': '<word>',

'pronunciation': '<pronunciation>',

'meaning': '<meaning>',

'image': '<image>',

'order': '<order in collection>',

}

success: return

{

'success': true

}

fail: return {'success': false}

- Delete flashcard

POST: /api/flashcard/delete

Params: {

'username': '<username>',

'token', '<token>',

'flashcard_id': '<flashcard_id>',

}

success: return

{ 'success': true }

fail: return

{ 'success': false }

- Get flashcard info

POST: /api/flashcard/get

Params: {

'username': '<username>',

'token', '<token>',

'flashcard_id': '<flashcard_id>',

}

success: return

{

'success': true,

'data': {

'collection_id': '<collection_id>',

'id': '<flashcard_id>',

'word': '<word>',

'pronunciation': '<pronunciation>',

'meaning': '<meaning>',

'image': '<image>',

'order': '<order in collection>'

}

}

fail: return {'success': false}

- Get all flashcards

POST: /api/flashcard/getall

Params: {

'username': '<username>',

'token', '<token>',

'collection_id': '<flashcard_id>',

}

success: return
{

'success': true,

'data': [{

'collection_id': '<collection_id>',

'id': '<flashcard_id>',

'word': '<word>',

'pronunciation': '<pronunciation>',

'meaning': '<meaning>',

'image': '<image>',

'order': '<order in collection>'

}, ...]

}

fail: return {'success': false}

- Update all flashcards

POST: /api/flashcard/updateall

Params: {

'username': '<username>',

'token', '<token>',

'collection_id': '<flashcard_id>',

'data': [{

'collection_id': '<collection_id>',

'id': '<flashcard_id>',

'word': '<word>',

'pronunciation': '<pronunciation>',

'meaning': '<meaning>',

'image': '<image>',

'order': '<order in collection>'

}, ...]

}

success: return

{

'success': true,

'data': [

{

'collection_id': '<collection_id>',

'id': '<flashcard_id>',

'word': '<word>',

'pronunciation': '<pronunciation>',
'meaning': '<meaning>',
'image': '<image>',
'order': '<order in collection>'
}, ...]
}

fail: return {'success': false}