

# FLASHCARD LEARNING TOOL

The chosen business domain is e-learning. This tool should provide functionalities for engaging learning based on flashcards. The platform should allow creation, management and interaction with flashcards. Quizzes will be generated from flashcard collections, allowing users to test their knowledge on specific topics.

## BUSINESS REQUIREMENTS

### 1. Flashcard Management:

Users can create, update, delete, and visualize flashcards. Each flashcard contains a term, a definition and a difficulty level, and it is included in a collection.

### 2. Collection Management:

Users can create, update, delete, and visualize collections. Flashcards are grouped into collections, making it easier to organize and filter. Collections have a name and a category (math, science, ...).

### 3. Quiz Generation:

Quizzes are created from a selection of flashcards, based on user-selected collections and difficulty levels.

### 4. Quiz Attempts:

Users can attempt quizzes generated from flashcards. A quiz is a determined set of questions that produces a score.

### 5. Quiz Scoring:

Users can see their score after completing a quiz, with correct and incorrect answers highlighted.

### 6. Study Sessions:

Users can study flashcards in a collection in a randomized or sequential manner. A study session is a session started and ended by the user with no preset number of questions. The correct answers are shown after each given answer.

### 7. Question Type:

Quizzes generated from flashcards will support one question type: direct term matching. The user will be presented with a definition and multiple choices for the term that it defines.

### 8. Search and Filtering:

Flashcards and collections can be filtered by name, category and difficulty.

### 9. Bulk Flashcard Import:

Users can import flashcards in bulk via a CSV format to speed up the creation process.

## **10. Progress tracking:**

Track the number of quizzes taken and overall accuracy.

### **MVP Features**

The MVP will include the following features based on the business requirements:

#### **1. Flashcard Management**

- Users can create, view, update, and delete flashcards using the UI or dedicated API endpoints.
- Each flashcard includes the following information: term, definition, difficulty, and collection.

#### **2. Collection Management**

- Users can create, view, update, and delete collections.
- Each collection includes the following information: name and category.
- Flashcards are linked to collections, allowing better organization.

#### **3. Quiz Generation and Attempts**

- Users can generate quizzes from flashcards in selected collections and difficulty levels.
- Quizzes will present definitions as prompts with multiple-choice term options.
- Users can submit answers and receive scoring feedback, highlighting correct and incorrect responses.

#### **4. Study Mode**

- Users can study flashcards in a sequential or randomized order, filtered by collection or difficulty.
- This mode provides focused learning without scoring.

#### **5. Bulk Flashcard Import**

- Users can import multiple flashcards at once using CSV files.
- This feature simplifies the creation process, especially for large datasets.