INST 326: Final Group Project Document

**Overview**

The purpose of our app is to help students study vocabulary words, by enabling them to create a flashcard study program that can be used to be create, organize, and used for studying by using a user input feature. Users can store flashcards in local CSV files, import additional flashcards via an API, and track their progress as they study.

**Instructions on how to run the program**

1. Ensure your system has python installed
2. Save the program code into a file titled “**flashcards.py**”
3. Open your terminal / command prompt and navigate to the directory containing the **flashcards.py** file
4. Run program

**How to Use the Program**

1. Ensure the requests library is installed
2. Prepare a csv file titled “flashcards.csv”
   1. File should already be provided in the zipped folder
3. Upon running it you will be greeted with a menu of options, these options are:
   1. **1. Add Flashcards**:

Which allows you to add a new flashcard. User must select either be in math or vocabulary category. The prompt will then ask for the question and the answer pertaining to the flashcard the user wants to create.

* 1. **2. Review Flashcards**:

Allows user to review the flash cards they have created.

* 1. **3. Import Flashcards from API**:

Allows user to load flashcards from API, in our code we use the Open Trivia Database.

* 1. **4. Load flashcards from specific file**

Allows user to load flashcards from their own csv file.

* 1. **5. View Progress**

Displays the progress of user, with percentage of how correct they have been.

* 1. **6. Exit**: Allows user to exit the application

1. To add Flashcards, Choose the “Add Flashcard” option, specify the type (Vocabulary or Math), and input the question and answer. Flashcards will be saved to `flashcards.csv` by default.
2. To review Flashcards, Select “Review Flashcards” to test yourself. The program will present questions, and you provide answers via the command line. Correct answers will be tracked for progress reporting.
3. To import Flashcards from API, select The “Import Flashcards from API” option fetches 5 flashcards from an external source. These cards are automatically saved to your CSV file and included in the review.

Note the code provided uses the **Open Trivia Database API to retrieve information for the flashcards**

1. To uploading your own CSV file:
   1. You must first create a csv file, this can be done by using google sheets or Microsoft excel
   2. We will need to use 3 columns.
   3. The first line of the 3 columns are
      1. Math OR Vocabulary (this categorizes the flashcard)
      2. Question / word
      3. Answer / definition
   4. Save file, and ensure the code for the flashcards app imports your specific file by editing the code to import your file and NOT `flashcards\_example.csv` in the load flashcard code.

Note: the zip file containing the program file has an example of a csv file that has already been coded in. you can use the csv file as an example to write your own

* 1. To use `flashcards\_example.csv`, simple type `flashcards\_example.csv` in the command line after selecting **Load flashcards from specific file** option

1. To view progress, choose “View Progress” to see your accuracy and total flashcards reviewed.

**Works Cited**

1. Open Trivia Database

Link: <https://opentdb.com/api.php?amount=5&type=multiple>

Used to import questions and answers for the option to import flashcards from API

1. Google Collab

Used as a location for all group members to collaborate and write code

1. Libraries / modules used:
   1. Csv
      1. Used to read csv files
   2. Request: HTTP for humans
      1. Used to fetch flashcards from external API
   3. Html
      1. Used to unescaped HTML-encoded characters in API responses
   4. ABC from abc
      1. Used to define abstract base class
   5. Abstractmethod from abc
      1. Used to ensure subclasses implement certain methods