

Testing Plan

Team Deepcourse

1. High Level Overview

- a. Our testing plan consists of two parts: frontend and backend testing. For the backend, we are going to use Postman to create automated tests, and for the frontend, we are going to conduct manual testing based on the use cases and all the features.

2. Prerequisites for testing

- a. Install Postman <https://www.postman.com/>
- b. Create Postman account
- c. Contact maxwell.panec@sjsu.edu asking for access to the Postman collection. Include your email you used to create your Postman account.
- d. Know how to build the frontend and backend of our project
https://github.com/maxpanec/Deeppcourse/blob/main/docs/expert_users/expert_user_guide.md

3. Backend

- a. Test cases for features
 - i. API for creating an account
 - ii. API for signing into an account
 - iii. API for resetting username
 - iv. API for resetting password
 - v. API for creating flashcard set
 - vi. API for getting all different flashcard sets for a user
 - vii. API for getting individual flashcards in a set
 - viii. API for generating a quiz
 - ix. API for storing quiz score
 - x. API for for getting all quiz scores for a flashcard set
 - xi. If unforeseen APIs are created (in the future) they will also be included in the test cases
- b. What test cases will cover
 - i. API is successful (200 return code)
 - ii. API is given invalid or wrong parameters/body (400 return code)
- c. How to run test cases
 - i. Build the backend of the project
 - ii. Open postman
 - iii. Go to the Deeppcourse API Tests collection
 - iv. Select run
 - v. Click "Run Deeppcourse API Tests"
 - vi. Verify that all tests passed

d. Example of how to run below

The screenshot shows the Postman interface with the 'Variables' tab selected for the 'Deepcourse API Tests' collection. The 'baseurl' variable is highlighted with a checkmark. A tooltip 'Run collection' is visible over the 'Run' button. A notification banner at the bottom explains the use of variables.

Deepcourse API Tests

Authorization Pre-request Script Tests **Variables** Runs

These variables are specific to this collection and its requests. Learn more about [collection variables](#)

Filter variables

	Variable	Initial value ⓘ	Current value ⓘ	...
<input checked="" type="checkbox"/>	baseurl	http://localhost:3001	http://localhost:3001	
	Add new variable			

ⓘ Use variables to reuse values and protect sensitive data
Store sensitive data in variable type secret to keep its values masked on the screen. Learn more about [variable type](#)
Work with the current value of a variable to prevent sharing sensitive values with your team. Learn more about [variable values](#)

The screenshot shows the Postman interface with the 'Runner' tab selected for the 'Deepcourse API Tests' collection. The 'RUN ORDER' section shows a single item 'POST Successful Signin' selected. The 'Choose how to run your collection' section has 'Run manually' selected. The 'Run configuration' section shows 'Iterations' set to 1 and 'Delay' set to 0 ms. A 'Run Deepcourse API Tests' button is visible at the bottom.

My Workspace

Deepcourse API Tests

Accounts

RUN ORDER

Deselect All Select All Reset

☒ > POST Successful Signin

Choose how to run your collection

☒ Run manually
Run this collection in the Collection Runner.

☐ Schedule runs
Periodically run collection at a specified time on the Postman Cloud.

☐ Automate runs via CLI
Configure CLI command to run on your build pipeline.

Run configuration

Iterations

1

Delay

0 ms

Data

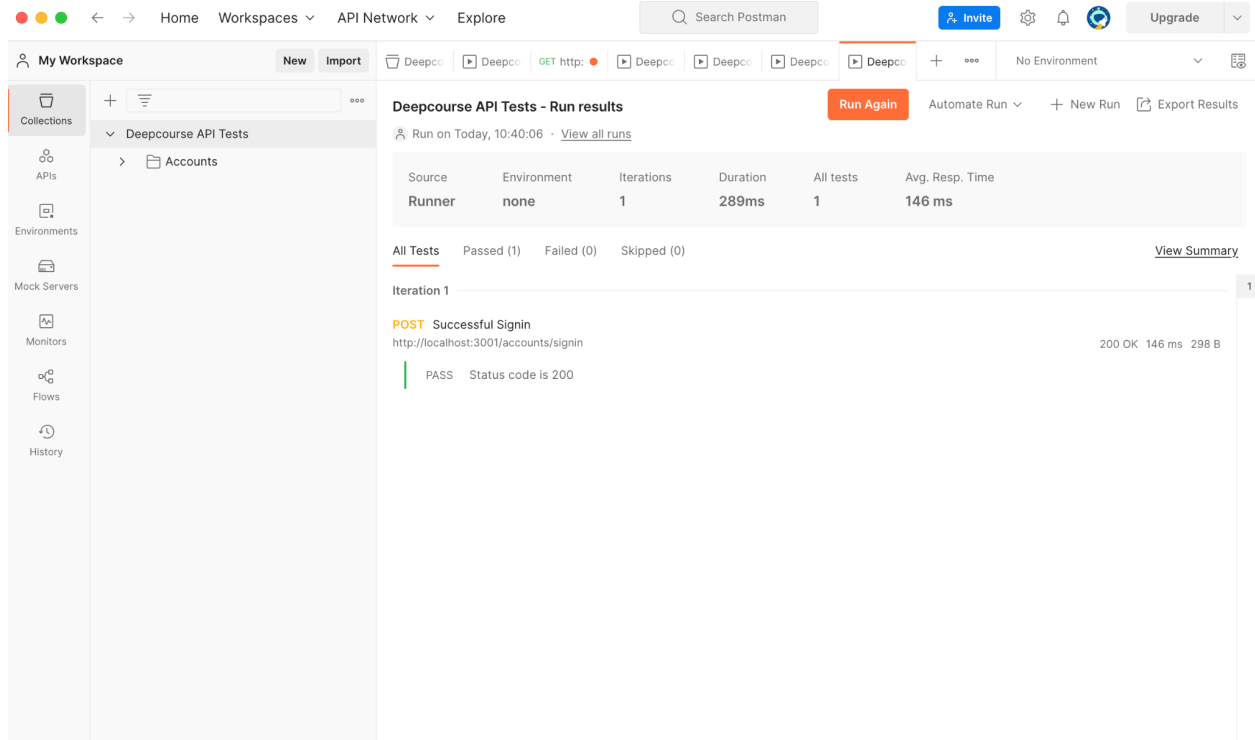
Select File

☐ Persist responses for a session ⓘ

> Advanced settings

Run Deepcourse API Tests

Run Deepcourse API Tests



e. Expected Time to run test cases

i. 5-10 minutes total

1. Most time will be setting up environment to run test cases
2. Actual run time of test cases will be less than 3 minutes

4. Frontend

a. Features

i. Signup/signin for accounts

1. Go to create an account. Input incorrect email address, short username, and weak password. Verify error on form saying invalid information. Follow information given on the form to create an account with valid information. Signout of your account. Go to sign in to account. Input invalid login credentials. Input correct credentials and verify you are now logged in (home page should display sign out option in top right)

ii. Reset username/password

1. Sign out of your account if you're logged in. Go to sign in. Reset your username. Sign in with your new username. Sign Out. Go to sign in. Reset your password. Sign in with your new password.

iii. Create Flashcard set

1. Go to create a flashcard set. Try to submit a flashcard set without any flashcards in it, and verify that you get an error message saying you cannot submit an empty set. Fill in a few flashcards. Try to submit with a flashcard missing a question or answer. Verify you get an error message saying both question and answer must be filled in. Fill in questions and answers for a few flashcards and submit.
- iv. View your flashcard sets
 1. Created two flashcard sets for your account prior to this test case. Click view flashcards. Verify that the flashcard sets you made previously are listed with the correct set names.
- v. View flashcards in a set
 1. Create a flashcard set prior to this testcase. When viewing your flashcards, select a flashcard set. Verify that all the flashcards that you had when creating the set are displayed and in the correct order. Verify that clicking on the flashcards hides/reveals the answers
- vi. Take a generate quiz
 1. Create a flashcard set prior to this testcase and know which question corresponds to which answer before taking the quizzes. Go to view your flashcards and select a flashcard set. Take a quiz on the flashcard set for each of the three quiz options (multiple choice, fill in the blank, and true or false). For each quiz, verify that the questions being asked correspond to the selected quiz option. Verify that the number of questions is equal to the number of flashcards. Score a 50%, 75%, and 100% on the quizzes (prerequisite for this test case was knowing the question answer pairs on flashcards so you will be able to purposefully get these scores) and verify that the displayed score after submitting a quiz is correct.
- vii. View score progression for a flashcard set
 1. Take at least 3 quizzes for the same flashcard set prior to this quiz and remember the order of the quiz score you got. For the flashcard set, click on view score timeline and verify that the scores for your quizzes are present and in the correct order.
- b. How to run tests
 - i. Frontend testing will be done manually, so run the frontend and backend of the project then follow test cases above

- c. Expected time to run through test cases
 - i. 30-60 minutes