

Unlock the Vault Test Plan

Summary of Test Plan Discussion with Colleagues:

→ Areebah

- ◆ For testing password hashing, I would recommend just double-checking that the password is encrypted in the database.
- ◆ To further enhance the account settings page, I would recommend allowing the user to change some of the information, such as username.

→ Fariha

- ◆ For the game, maybe you could implement some kind of scoring mechanism so that a user can track how well they do over multiple games.

Testing Instructions for Expert Users:

→ *Setup:*

◆ Frontend:

- cd dev/frontend
- npm i
- npm run start
- Interact with the frontend via localhost:3000

◆ Backend:

- cd dev
- docker compose build
- docker compose up -d
- Go to <http://localhost:4000> to interact with the back-end

→ *Requirements for hardware/software/password key:*

- ◆ Hardware: computer/laptop, keyboard, mouse/trackpad
- ◆ Software: command line interface (in order to use git, npm, and docker commands)

Automation (Complexity) of Testing Instructions:

→ *Time and effort to set up the test plan for execution:*

- ◆ Download/setup time for all requirements/testing tools: ~ 25 min
- ◆ Testing time for test cases: ~ 1 hr
- ◆ Testing time for backend: TBD

- Can only get an estimate once features are complete

→ *Testing tools:*

- ◆ Frontend: PyTest + Selenium
- ◆ Backend: Postman

Amount of Time to Finish the Tests:

Can see estimates in the “Time and effort...” subsection

Test Cases:

<i>Feature</i>	<i>Description</i>	<i>Test Case(s)</i>	<i>Expected Time (max)</i>	<i>Expected Result</i>	<i>Actual Test Result</i>
Landing page	A scrolling view where users can login, sign up for an account, or play a game without an account. They can also get a good idea of what the product is/why it would benefit them to try it out.	User scrolls from top of the page to the bottom.	< 1 min	User should be able to scroll from the top to bottom of the landing page, able to access active buttons for logging in, signing up, or playing a game.	Pass/Fail
		User clicks on the login button.	< 1 min	User is redirected to the Login page.	Pass/Fail
		User clicks on the ‘Play’ button.	< 1 min	User redirected to a play screen.	Pass/Fail
		User clicks on the sign up button.	< 1 min	User redirected to sign up page.	Pass/Fail
Account creation	Users are asked to enter email address, password, and first and last name in order to create an account.	User leaves at least one of the form fields blank.	< 1 min	The form doesn’t submit. Users are prompted to fill out the field(s) they left incomplete.	Pass/Fail
		User tries to create an	1 min	The form doesn’t submit. User is	Pass/Fail

		account with a pre-existing username.		alerted that the entered username has already been used.	
		User tries to create an account with a pre-existing email.	1 min	The form doesn't submit. User is alerted that the entered email has already been used.	Pass/Fail
		User tries to create an account with a password that doesn't meet password requirements	1 min	The form doesn't submit. User is prompted to enter a different password.	Pass/Fail
		User tries to create an account when both password fields don't match.	1 min	The form doesn't submit. User is notified that the password fields don't match.	Pass/Fail
		User tries to create an account with a valid username, email, and password.	1 min	The form is submitted successfully. User is redirected to the login page, to sign in using their new account.	Pass/Fail
Password hashing	When an account is being created, users' passwords will be hashed before it's stored in the database for security purposes.	n/a	< 1 min	n/a	Pass/Fail
Login	Users can log in to a	User enters an	1 min	User is alerted that	Pass/Fail

	preexisting account after providing the correct username and password.	incorrect username.		they entered an incorrect username.	
		User enters an incorrect password.	1 min	User is alerted that they entered an incorrect password.	Pass/Fail
		User enters the correct username and password.	1 min	User is redirected to the User Dashboard.	Pass/Fail
User Authentication	The user's identity will be verified after they attempt to log in on the Login page.	User enters the incorrect credentials on the Login page.	1 min	The user will be asked to enter the correct credentials.	Pass/Fail
		User enters the correct credentials on the Login page.	1 min	User is redirected to the User Dashboard.	Pass/Fail
Logout	Users can log out of their account using the 'Log Out' button in the navbar.	User clicks the 'Log Out' button in the navbar.	< 1 min	User is redirected to the landing page. Their session ends, and they cannot access the User Dashboard without logging in again.	Pass/Fail
Game	A random, 6 digit key is generated that users have to attempt to guess.	User guesses digits between 0 and 10 inclusive for each of the spots, then submitting their answer.	~ 15 min	Incorrect digits will be highlighted in red, while correct are highlighted in green.	Pass/Fail
Get hints	While playing a puzzle, users can click the 'Get Hint' option if they are stuck. They have a maximum of 3 hints	User clicks on the 'Get Hint' option and has used < 3 hints already.	< 1 min	User gets hints for all incorrect digits as described in the second column.	Pass/Fail

	per game. Hints are the relation between the digit at a spot and that of the digit to its left and right. (e.g. Spot 2 is less than Spot 3, and Spot 2 is the same as Spot 1)	User clicks on the 'Get Hint' option and has already used 3 hints.	< 1 min.	Users get a notification saying they've run out of hints, and can either keep submitting guesses, or request a Solve.	Pass/Fail
Game Solve	After they've exhausted 3 hints, the button to request a Solve will become active.	User clicks on the 'Solve' button.	< 1 min	Solution is evaluated given the user's correct guesses and hints provided.	Pass/Fail
Game end screen	Users will see the solution, and be prompted to sign up/sign in and save their game history (if haven't done so already).l	User clicks on the 'Sign in' option.	< 1 min	User is redirected to the Sign In Page	Pass/Fail
		User clicks on the 'Sign Up' option.	< 1 min	User is redirected to the Sign Up Page.	Pass/Fail
		Users have already signed in.	< 1 min	User sees an option to navigate to Dashboard.	Pass/fail
User dashboard	Users can view game history and leaderboard.	User clicks User Dashboard on navbar	1 min	User can see game history and leaderboard.	Pass/Fail
Game history	Users can view their game history as well as statistics about their games played.	User plays a new puzzle, goes to the User Dashboard, and goes to the Game History section.	Time to play a game + another min	User sees all of their previously played games, as well as the new game.	Pass/Fail
Account settings	Users can access the Account Settings through the navbar, where they can view	User clicks the Settings button in the navbar.	1 min	Users can view their account information (first and last name, and email).	Pass/Fail

	account information.				
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