PuffAway

Testing Document

SE 3350B: Software Engineering Design I

Self-Care mobile application that helps users quit vaping habits using Jeffrey M. Schwartz M.D. and Rebecca Gladding M.D.'s 4-Step Solution.

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When using this document, please "control + f" the name of test

Unit Testing

Name of Test	File located	Description of Test	Result of Test
Empty email returns error string	vape_app\test\ unit_test.dart	Leaving the email field empty returns "Enter a Valid Email" -- boundary test	Pass
(1) bad email format returns error string	vape_app\test\ unit_test.dart	Entering only the username part of the email in the email field will return "Enter a Valid Email" - bad test	Pass
(2) bad email format returns error string	vape_app\test\ unit_test.dart	Entering only the domain part of the email in the email field will return "Enter a Valid Email" - bad test	Pass
correct email format	vape_app\test\ unit_test.dart	Entering the email with the format "username@domain" for example "test@test.com" returns null - good test	Pass
correct email format - subdomain	vape_app\test\ unit_test.dart	Entering the email with the format "username@subdomain.domain" for example "test@gmail.co.uk" returns null - good test	Pass
password less than 6 characters returns error string	vape_app\test\ unit_test.dart	Leaving the password field empty or only entering a password with a length less than 6 characters will return "Enter a password longer than 6 characters" - boundary/bad test	Pass
password with more than or equal to 6 characters returns null	vape_app\test\ unit_test.dart	Password entered with more than or equal to 6 characters will return null - good test	Pass
goal value equal to 0 returns error (empty string)	vape_app\test\ unit_test.dart	Entering a goal of "0" on both the setup page and the settings will return an empty string, this will prompt the user to enter a proper goal. - boundary/bad test	Pass
goal value less than 1 returns error	vape_app\test\ unit_test.dart	Entering a goal of "-1" on both the setup page and the settings will return an	Pass

		empty string, this will prompt the user to enter a proper goal. - boundary/bad test	
goal value equal to 1 returns null	vape_app\test\ unit_test.dart	Entering a goal of "1" on both the setup page and the settings will return null, indicating that the goal entered is correct. - good test	Pass
goal value greater than 1 returns null	vape_app\test\ unit_test.dart	Entering a goal of "2" on both the setup page and the settings will return null, indicating that the goal entered is correct. - good test	Pass
sign in with email and password	vape_app\test\ unit_test.dart	Sign in with correct credentials will successfully sign in the user and return an authenticated user to us. This will also turn the bool "signedIn" to true	Pass
sign in fails with incorrect email and password	vape_app\test\ unit_test.dart	Sign in with incorrect credentials will not sign in the user and return unauthenticated. This will also turn the bool "signedIn" to false	Pass
sign out	vape_app\test\ unit_test.dart	Calling the sign out method return unauthenticated when sign out is successful	Pass

Widget Testing

Compone nt	Name of Test	File located	Description of Test	Result of Test
sign in page	validates empty email and password	vape_app\te st\widget_te st.dart	The signin button is tapped, leaving the email and password field empty. This will display a text for "Enter an email" and "Enter a password longer than 6 characters"	Pass
sign in page	validates wrong email format and password that is less than 6 characters	vape_app\te st\widget_te st.dart	Email field is filled in with the text "email" and the password field with the text "pass" The signin button is tapped. This will display a text for "Enter a Valid Email" and "Enter a password longer than 6 characters"	Pass

register page	validates empty email and password	vape_app\test\widget_test.dart	The register button is tapped, leaving the email and password field empty. This will display a text for "Enter an email" and "Enter a password longer than 6 characters"	Pass
register page	validates wrong email format and password that is less than 6 characters	vape_app\test\widget_test.dart	Email field is filled in with the text "email" and the password field with the text "pass" The signin button is tapped. This will display a text for "Enter a Valid Email" and "Enter a password longer than 6 characters"	Pass
reflections page	validates that reflections is saved	vape_app\test\widget_test.dart	Text is entered in the stressor and progress fields. After that the save button is clicked. If the fields become empty without errors, that means the test has passed	Pass

Integration Testing

Name of Test	File located	Description of Test	Result of Test
login fails with incorrect email and password, provides text feedback	vape_app\test_driver\app_test.dart	login fails with incorrect email and password inputs, this should provide text feedback "Vaping makes you forget, please try again and change your habit" and the page shouldnt change	Pass
logs in with correct email and password	vape_app\test_driver\app_test.dart	login passes with correct email and password inputs, this should redirect to the dashboard when sign in button is clicked	Pass
Register fails with duplicate email	vape_app\test_driver\app_test.dart	Register fails when an email that already exists in our database is entered and the text "Email already in use, please use a different email " is displayed	Pass
Register succeeds with unique email	vape_app\test_driver\app_te	Registration is succeeded when a random new email is entered in the email field and	Pass

	st.dart	a password of 6+ characters is entered. This redirects the user the setup page	
Setup page saves values to settings and new trigger is saved to dropdown	vape_app\test _driver\app_te st.dart	Once the fields are filled for name, date of birth, and goal settings, we add a custom trigger and the next button is tapped successfully, making sure everything worked without errors. The user is redirected to the dashboard. From there we go to the settings page to make sure the name and dob entered are there in their respective fields. After that we go to the logging trigger page and check if the new custom trigger exists in the drop down value. If all of this is successful, this test will pass	Pass
Adding Log	vape_app\test _driver\app_te st.dart	A trigger is logged with a trigger and thought, once the save button is pressed the recommendation page pops up. Then we go to the diary to check if the new logged trigger is in the list. If all of this is successful, this test will pass	Pass
Adding Reflection	vape_app\test _driver\app_te st.dart	A reflection is logged with the stressor and progress fields filled out, we go to the diary to check if the new reflection is in the list. If all of this is successful, this test will pass	Pass
Adding Trigger	vape_app\test _driver\app_te st.dart	This is for adding a custom trigger in the settings page. First we go to the settings page, then add a custom trigger in the field and click in the plus sign to add it. Then we go to the log triggers page and check if it exists in the dropdown. If all of this is successful, this test will pass	Pass

Validation Testing

Name of Requirement/ Use Case	Description of Requirement/Use Case (what it needs to do)	Testing Steps	Expected Result	Result of Test
Sign in as existing user	Allows the user to sign in with an existing username and password successfully	1. User goes to sign in page 2. User enters in email and password 3. User clicks submit	User should be logged in and continue to the dashboard	Pass
Encrypts password	Encrypts passwords in the database using the Scrypt algorithm and by generating random salts	1. Create a new user using the register page 2. Check on database to see if password is encrypted	User password should be encrypted in the backend	Pass
Checks for existing user/correct password	Compares the username and password to that stored in the database	1. Attempt logging in with incorrect username and/or password 2. Should not be allowed in 3. Attempt to log in with correct username and password 4. Should be allowed in	User should be logged in when the proper username and password are entered	Pass
Reject User	Logging in with incorrect credentials fails and does not	1. Attempt logging in with incorrect username	User should be rejected if the incorrect username or password are entered	Pass

		and/or password 2. Should not be allowed in		
Logs User In	Attaches a session token to the user and allows them to access main functionalities of the application	1. User goes to sign in page 2. User enters in email and password 3. User clicks submit	The user should be passed a local session	Pass
Create new user	Registering with a valid, unique username and strong password creates an account for the user	1. User goes to register page 2. User enters in email and password 3. User clicks submit	User should be created and sent to the set up page	Pass
Setup	A setup page includes the personal details the user should include after registering such as name, dob and the goal set in mind	1. User goes to the setup page 2. Types in personal detail, adds any new triggers, and a goal	User should updated information, triggers, and goal if they were set in the setup page	Pass
View Dashboard/St atistics	The dashboard shows the user progress. Time since the last hit is shown so the user has a time frame of when they took a last hit. The page also shows a calendar, which displays the number of times the user has vaped in a day.	1. User logs in and gets redirected to the statistics page	User should be able to see their statistics	Pass

	This helps visualize how much the user is vaping in a day. The last component of the dashboard in the graph, which shows how long the pod is lasting over time. If this trend is increasing overtime, that means the user is vaping less and succeeding in reducing their habit of vaping.			
Add a vaping session	Adding a vape session allows the user to log his thoughts and what was the trigger that led to vaping. This is part of the 4 step solution - Relabel	1. Use goes to the add vaping session page 2. User selects their trigger and types their thoughts into the text box 3. User presses next button	The vaping session should be sent to the backend and be added to the users profile	Pass
View Recommenda tion	After logging a vape session, the user is shown a recommendatio n that they can use to help mitigate that trigger for the future. This is part of the 4 step solution -	1. User submits a vaping session	The user should receive a recommendation	Pass

	Refocus			
Add a reflection	Adding a reflection lets the user enter their stressors and progress over time. This is saved in the diary for the future. This will help the user reflect on their behaviour and decisions over time. This is part of the 4 step solution - Revalue	1. User goes to add a reflection page 2. User types in reflection 3. User hits submit	This reflection should be added to the users profile and be seen by going to the diary	Pass
View Diary	The diary shows all the past actions in the app (the trigger logs and reflections entered). This helps the user go back in time and check what they were feeling, thinking, and how their habits have changed.	1. User goes to the diary page 2. User should see all the vaping session information or the reflections	The diary page should list all the vaping sessions or the reflections of the user	Pass
Toggle Between Vaping Sessions/Refl ections	The diary first shows the triggers logged, so by toggling to the other page, reflections are shown. The user can toggle between these two pages to see their past	1. User goes to the diary page 2. User should see all the vaping session information or the reflections 3. The user	The diary should toggle between reflections and the vaping session	Pass

	logs and reflections.	presses on the filter button		
Delete Log/Reflection	Give the user an option to delete a trigger or reflection that was accidently logged, or was logged wrong. This will give them more control of their diary	1. User goes to the diary page 2. User should see all the vaping session information or the reflections 3. User swipes on a log or reflection and presses on the delete button	The log or reflection should be deleted in the database and be removed from the view	Pass
Logout	Allow the user to logout of the application	1. User goes to the settings page 2. User presses the log out button	User should be redirected to the sign-in page	Pass
View Instructions	Give users an option to read the instructions of the app and the 4-step solution and how this app can help them succeed in their goal.	1. User goes to the settings page 2. User presses the view instructions button	User should see the instructions of the app	Pass
Update Goal	Let the user update their current goal, so they always have something to look forward to and achieve	1. User goes to the settings page 2. User edits the goal 3. User presses submit button	User's goal should be updated	Pass

Add Custom Trigger	Give the user an option to add a custom trigger based on their habits to personalize the app more. This will give them more control of their logs and help them when they come back in the future	1. User goes to the settings page 2. User types in a new custom trigger in custom trigger text box 3. User presses on the add button beside the trigger	The new custom trigger should show up on the triggers drop down	Pass
View Achievements	Let the user visualize their achievements through badges. This gives the user more incentive on using this app and gamifies the app. This in turn personalizes the experience even more.	1. User goes to the settings page 2. User presses the view achievements button	The user should see the view achievements	Pass
Congratulate you for passing goal	Once a goal is achieved, the app congratulates the user. This gratifies the achievement, making them more likely to increase their goal and try again.	1. User completes a goal	User should be notified about passing their goal	Pass
Award badge depending on time since last	Awards in this app are badges in the	1. User passes an achievement	User should be awarded a badge for passing an achievement	Pass

hit	achievements section of the app. This helps the user visualize their achievements more. These are based on the time they vaped last. This helps the user decrease the number of times they vape in real time.			
Loading screen	Change the users perspective about the pattern and see it as it really is. Part of the 4 step solution - Reframe	1. The user loads the application	User should be shown the loading screen	Pass