Test Plan and Report - Grow My Garden
Team: Chris Fang, Justin Valdez, Gavin Leach, Nuha Fakrudeen
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A. User Story 1: As a user, I want to create a list of my existing plants so that I can organize them in one place.

    a. Create Plant (**PASS**)
- i. Start App
- ii. Sign in
  1. Username: \<example@emial.com\>
  2. Password: \<GrowMyGarden115A!\>
- iii. Create a New Plant with the new Plant Dialog
  1. Name: \<Plant3\>
  2. Species: \<Tree\>
  3. Notes: \<Big\>
- iv. Close the app
- v. Terminate the app process using the multitask view
- vi. Reopen the app
- vii. Confirm that newly created plant persisted

    b. Deleting Plant (**PASS)**
- i. Start App
- ii. Sign in
  1. Username: \<example@emial.com\>
  2. Password: \<GrowMyGarden115A!\>
- iii. Create a New Plant with the new Plant Dialog
  1. Name: \<Plant2\>
  2. Species: \<Fern\>
  3. Notes: \<Likes Sunlight\>
- iv. Delete the Plant from the list using the Delete Plant button
- v. Confirm the Plant disappears from the dashboard
- vi. Close the App
- vii. Terminate the app process using the multitask view
- viii. Reopen the app
- ix. Confirm Deleted plant is still deleted

    c. Editing the Info of an existing plant (**PASS)**
- i. Start App
- ii. Sign in
  1. Username: \<example@emial.com\>
  2. Password: \<GrowMyGarden115A!\>
- iii. Click the edit button on any plant in the home page
- iv. Change information about the plant
  1. The name of the plant
  2. The species of the plant
  3. The notification frequency

4. Notes about the plant
    v. Hit save on the top left corner
    vi. Open the drop down menu of the plant and observe whether or not changed information is retained

B. User Story 2: As a user, I want a reminder of when to water, change the soil of my plants, etc., so that they don't die
    a. Scenario 1: Turn on notifications on plant creation (**FAIL**)
        i. Open app and log in
        ii. Create a plant with + on top left
        iii. When creating a new plant
            1. Provide image (optional)
            2. Adjust either water, fertilizer, or trimming notification frequency
            3. Turn on said notifications
            4. Add notes (optional)
        iv. Press confirm
        v. Observe if the notification gets sent on the date + frequency
    b. Scenario 2: Keep notifications off on plant creation (**PASS**)
        i. Open app and log in
        ii. Create a plant with + on top left
        iii. When creating a new plant
            1. Provide image (optional)
            2. Adjust either water, fertilizer, or trimming notification frequency
            3. Keep said notifications turned off
            4. Add notes (optional)
        iv. Press confirm
        v. Observe if no notifications get sent
    c. Scenario 3: Enable a Notification (**PASS**)
        i. Open app and log in
        ii. Click on plant with existing disabled notification
        iii. Click the button to enable the water/fertalizer notification
        iv. Observe whether notification gets sent
    d. Scenario 4: Disable a Notification (**PASS**)
        i. Open app and log in
        ii. Click on plant with existing enabled notification
        iii. Click the button to disable the water/fertalizer notification
        iv. Observe whether notification stop getting sent

C. User Story 3: As a user, I want to be able to login to view my own personal information.

 a. Scenario 1: Successful Creation of Account (**PASS**)
   i. Start the app
   ii. Select "create an account"
   iii. Enter:
     1. Username <Nuha>
     2. Email <nfakrude@ucsc.edu>
     3. Password <gmg115a>
   iv. Press login
   v. Navigate to profile page
   vi. Press log out and go back to the login page
   vii. Select "Sign in"
   viii. Enter:
     1. Email: <nfakrude@ucsc.edu>
     2. Password: <gmg115a>
   ix. Press login

 b. Scenario 2: Failed Creation of Account due to same email (**PASS**)
   i. Start the app
   ii. Select "create an account"
   iii. Enter:
     1. Username <Nuha>
     2. Email: <nfakrude@ucsc.edu>
     3. Password: <anything>
   iv. Press login
   v. Recieve error: "The email address is already in use by another account."

 c. Scenario 3: Failed Login due to Incorrect Password (**PASS**)
   i. Start the app
   ii. Select "Sign in"
   iii. Enter:
     1. Email: <nfakrude@ucsc.edu>
     2. Password: <enter wrong password>
   iv. Press login
   v. Recieve error: "Your email or password is incorrect. Please try again."

 d. Scenario 4: Failed Login due to Nonexistent Account (**PASS**)
   i. Start the app.
   ii. Select "Sign In".
   iii. Enter:
     1. Email: <nonexistent_user>
     2. Password: <any_password>
   iv. Press Login.
   v. Recieve error: "Your email or password is incorrect. Please try again."

 e. Scenario 5: Persisted Login Session (**PASS**)
   i. Start the app.
   ii. Sign in with a valid account.
   iii. Close the app.

- iv. Terminate the app in the multitask view.
- v. Reopen the app.
  1. Add should open without needed to login again
- f. Scenario 6: Sign in with Google (**PASS**)
  - i. Start the app
  - ii. Select "Sign in with Google"
  - iii. Approve the permissions prompt.
  - iv. Choose a Google account from the Google system popup OR sign in manually.
  - v. Click login
- g. Scenario 7: Sign in with Apple (**PASS**)
  - i. Start the app
  - ii. Select "Sign in with Apple"
  - iii. Authenticate using Face ID, Touch ID, or password.
  - iv. Approve permissions (if first time).
- h. Scenario 8: Forgot Password -> Send Reset Link (**PASS**)
  - i. Start the app
  - ii. Select "Sign in"
  - iii. Choose "Forgot Password"
  - iv. Enter email: <nfakrude@ucsc.edu>
  - v. Press Send Reset Link.
  - vi. See message: "If an account exists for that email, a reset link has been sent."
  - vii. Go through reset process:
    1. Go to your email
    2. Press the link
    3. Change your password
  - viii. Come back to app
  - ix. Enter information
  - x. Login
- i. Scenario 9: Forgot Password -> Invalid Email (**PASS**)
  - i. Start the app
  - ii. Select "Sign in"
  - iii. Choose "Forgot Password"
  - iv. Enter email: <doesnotexist@gmail>
  - v. Press Send Reset Link.
  - vi. Get error: "please enter a valid email"
- j. Scenario 10: Forgot Password -> Invalid Email (**PASS**)
  - i. Start the app
  - ii. Select "Sign in"
  - iii. Choose "Forgot Password"
  - iv. Enter email: <doesnotexist@gmail.com>
  - v. Press Send Reset Link.
  - vi. See message: "If an account exists for that email, a reset link has been sent."
- k. Scenario 10: Login Fails With Incorrect Password (**PASS**)

   i. Start the app
   ii. Select "Sign in"
   iii. Enter:
     1. Email: <valid_email>
     2. Password: <wrong_password>
   iv. Press Login
   v. Get error message: "Your email or password is incorrect. Please try again."
 l. Scenario 11: Login Fails With Unregistered Account (**PASS**)
   i. Start the app
   ii. Select "Sign in"
   iii. Enter:
     1. Email: <invalid_email>
     2. Password: <any_password>
   iv. Press Login
   v. Get error message: "Your email or password is incorrect. Please try again."

D. User Story 4: As a user, I want to be able to look up a plant and get the growing information on it.

 a. Scenario 1: Entering nothing into search bar (**PASS**)
   i. Open app
   ii. Navigate to search page
   iii. Enter nothing into the search bar and hit enter
   iv. Confirm nothing happens
 b. Scenario 2: Entering one word (**PASS**)
   i. Open app
   ii. Navigate to search bar
   iii. Enter in a single word and press enter
   iv. Observe results are related to the word
   v. Click on one of the results
   vi. Observe you are taken to a screen showing the details of result
 c. Scenario 3: Entering multiple word (**PASS**)
   i. Open app
   ii. Navigate to search bar
   iii. Enter in a phrase (more than one word) and press enter
   iv. Observe results are related to the phrase
   v. Click on one of the results
   vi. Observe you are taken to a screen showing the details of result
 d. Scenario 4: Entering word/phrase that mean nothing, i.e., gibberish (**PASS**)
   i. Open app
   ii. Navigate to search bar
   iii. Enter in gibberish and hit enter
   iv. Observe no related results appear

E. User Story 5: As a user I want care information to be automatically generated based on my plant type so I don't care for it wrong and to create reminders faster
  a. Scenario: Care Information from Plant Species (**FAIL**)
     i. Open the app
     ii. Continue without logging in
     iii. Open the create plant dialogue and set the species to <Aloe>, but do not close the dialogue
     iv. Confirm that watering frequency is automatically filled in with: <>
     v. Confirm that fertilizing frequency is automatically filled in with: <>
     vi. Confirm that trimming frequency is automatically filled in with: <>

F. User Story 6: As a user, I want to view my collection of unique plants ("PlantBook").
  a. Scenario 1: View PlantBook with Existing Unique Species (**PASS**)
     i. Start the app
     ii. Sign in with a user who already has plants saved
     iii. Navigate to PlantBook
  b. Scenario 2: PlantBook With No Plants (**PASS**)
     i. Start the app
     ii. Sign in with a new user who has no plants saved
     iii. Navigate to PlantBook
  c. Scenario 3: Adding a New Species Updates PlantBook (**PASS**)
     i. Start the app and sign in
     ii. Go to the plant dashboard
     iii. Create a plant with:
        1. Name: <any>
        2. Species: <new species name>
     iv. Save the new plant
     v. Navigate to plantbook and check if it is there
  d. Scenario 4: Adding a Duplicate Species Does NOT Create a New Entry (**PASS**)
     i. Sign in and ensure the user already has a plant with species <SpeciesA>.
     ii. Go to the plant dashboard.
     iii. Add another plant with species <SpeciesA>.
     iv. Navigate to PlantBook and make sure a duplicate doesnt occur.
  e. Scenario 5: Database Image Retrieval for Species (**PASS**)
     i. Sign in and add a plant with species <SpeciesX> (that is known to exist in the species database).
     ii. Navigate to PlantBook and make sure image appears.
  f. Scenario 6: Test if Plantbook persists (**PASS**)
     i. Sign in and navigate to PlantBook.
     ii. Observe unique species and images.
     iii. Close the app.
     iv. Terminate the app from the multitasking screen.

v.   Reopen the app and navigate to PlantBook.

Database Unit Tests

Runs on an Ios Simulator on a Github Actions Server

(shared/src/commonTest/kotlin/com/gmg/growmygarden/PlantDatabaseTest.kt)

- testDatabaseInsert (Pass)
- testDatabaseMultiIInsert (Pass)
- testDatabaseDelete (Pass)
- testDatabaseUpdate (Pass)