

Project 2 : Test Cases for Login Flow

1. Google Sign-In Flow

- **Test Case 1.1:** Verify that the "Sign in with Google" button is visible and functional.
 - **Expected Result:** Button is clickable, and the Google sign-in interface opens.
- **Test Case 1.2:** Validate login with a valid Google account.
 - **Expected Result:** User is authenticated and proceeds to the onboarding flow.
- **Test Case 1.3:** Attempt login with an invalid Google account or incorrect credentials.
 - **Expected Result:** Error message is displayed, and user cannot proceed.
- **Test Case 1.4:** Validate login flow when the Google account has 2-factor authentication enabled.
 - **Expected Result:** Prompt for 2FA appears, and user is authenticated after successful verification.
- **Test Case 1.5 (Edge Case):** Attempt login with a Google account that does not have a connected email address.
 - **Expected Result:** Error message is displayed, and user cannot proceed.

2. Apple Sign-In Flow

- **Test Case 2.1:** Verify that the "Sign in with Apple" button is visible and functional.
 - **Expected Result:** Button is clickable, and the Apple sign-in interface opens.
- **Test Case 2.2:** Validate login with a valid Apple ID.
 - **Expected Result:** User is authenticated and proceeds to the onboarding flow.
- **Test Case 2.3:** Attempt login with an invalid Apple ID or incorrect credentials.
 - **Expected Result:** Error message is displayed, and user cannot proceed.
- **Test Case 2.4:** Validate login with an Apple ID with limited permissions (e.g., private email).
 - **Expected Result:** User is authenticated, and app handles the private email correctly.
- **Test Case 2.5 (Edge Case):** Attempt login with an Apple ID not connected to any device.
 - **Expected Result:** Error message is displayed, and user cannot proceed.

3. Onboarding Flow

- **Test Case 3.1:** Verify that the onboarding flow starts after successful login.
 - **Expected Result:** User is presented with a prompt to pair the wearable via Bluetooth.
- **Test Case 3.2:** Validate successful pairing of the wearable device.

- **Expected Result:** Wearable is paired, and the user is navigated to the home screen.
- **Test Case 3.3:** Attempt pairing with a wearable device that is already paired with another account.
 - **Expected Result:** Error message is displayed, and user cannot proceed.
- **Test Case 3.4:** Verify that the app retries pairing if the initial attempt fails.
 - **Expected Result:** App retries pairing up to the maximum allowed attempts (e.g., 3 times).
- **Test Case 3.5 (Edge Case):** Attempt pairing when Bluetooth is turned off on the phone.
 - **Expected Result:** App prompts the user to enable Bluetooth.
- **Test Case 3.6 (Edge Case):** Attempt pairing with multiple wearable devices in range.
 - **Expected Result:** User is prompted to select a device from the list.

4. Home Screen Navigation

- **Test Case 4.1:** Verify that the user is navigated to the home screen after successful pairing.
 - **Expected Result:** Home screen loads with default settings and linked wearable data.
- **Test Case 4.2:** Validate the app's behavior if the pairing process is skipped.
 - **Expected Result:** User is prompted to complete the pairing before accessing the home screen.

Error Scenarios and Edge Cases

- **Login Errors:**
 - Unstable internet connection during login.
 - Attempting to log in while the authentication provider (Google/Apple) is down.
 - Revoked permissions for the app on the Google or Apple account.
- **Onboarding Errors:**
 - Wearable device firmware is outdated.
 - Wearable battery is low or device is powered off.
 - Device pairing timeout due to inactivity.
- **Other Edge Cases:**
 - Simultaneous login attempts on multiple devices with the same account.
 - App crashes during the onboarding flow.
 - Interrupted pairing process due to an incoming call or app switching.

