**Test cases for smart wearable with a companion app**

**Test Case 1: Login with Google ID (Valid Case)**

**Test Case ID**: TC\_001  
**Objective**: Verify that a user can log in successfully using a Google ID.  
**Preconditions**: The app is installed, and the user has a valid Google ID.  
**Test Steps**:

1. Open the app.
2. Select the "Login with Google" button.
3. Enter valid Google credentials (email and password).
4. Tap the "Sign in" button.  
   **Expected Result**:

* User should be successfully logged in using the Google ID.
* The onboarding flow should start (e.g., pairing the wearable).  
  **Postconditions**: The user should be taken through the onboarding process.

**Test Case 2: Login with Apple ID (Valid Case)**

**Test Case ID**: TC\_002  
**Objective**: Verify that a user can log in successfully using an Apple ID.  
**Preconditions**: The app is installed, and the user has a valid Apple ID.  
**Test Steps**:

1. Open the app.
2. Select the "Login with Apple" button.
3. Enter valid Apple credentials (Apple ID and password).
4. Tap the "Sign in" button.  
   **Expected Result**:

* User should be successfully logged in using the Apple ID.
* The onboarding flow should start (e.g., pairing the wearable).  
  **Postconditions**: The user should be taken through the onboarding process.

**Test Case 3: Login Attempt with Invalid Google ID**

**Test Case ID**: TC\_003  
**Objective**: Verify that the app displays an error message when the user enters invalid Google credentials.  
**Preconditions**: The app is installed, and the user is attempting to log in.  
**Test Steps**:

1. Open the app.
2. Select the "Login with Google" button.
3. Enter invalid Google credentials (incorrect email or password).
4. Tap the "Sign in" button.  
   **Expected Result**:

* The user should see an error message such as "Invalid credentials. Please try again."  
  **Postconditions**: The user should remain on the login screen.

**Test Case 4: Login Attempt with Invalid Apple ID**

**Test Case ID**: TC\_004  
**Objective**: Verify that the app displays an error message when the user enters invalid Apple credentials.  
**Preconditions**: The app is installed, and the user is attempting to log in.  
**Test Steps**:

1. Open the app.
2. Select the "Login with Apple" button.
3. Enter invalid Apple credentials (incorrect Apple ID or password).
4. Tap the "Sign in" button.  
   **Expected Result**:

* The user should see an error message such as "Invalid credentials. Please try again."  
  **Postconditions**: The user should remain on the login screen.

**Test Case 5: Login with Missing Credentials (Google or Apple)**

**Test Case ID**: TC\_005  
**Objective**: Verify that the app prompts the user when credentials are missing.  
**Preconditions**: The app is installed, and the user is attempting to log in.  
**Test Steps**:

1. Open the app.
2. Select the "Login with Google" or "Login with Apple" button.
3. Leave the fields for credentials (email, password) blank.
4. Tap the "Sign in" button.  
   **Expected Result**:

* The app should display a message like "Please enter your credentials."  
  **Postconditions**: The user remains on the login screen until valid credentials are entered.

**Test Case 6: Successful Onboarding and Pairing Flow**

**Test Case ID**: TC\_006  
**Objective**: Verify that the user is guided through the onboarding process after successful login and is able to pair the wearable with the phone.  
**Preconditions**: The app is installed, and the user has logged in successfully via either Google or Apple.  
**Test Steps**:

1. After successful login, the user is directed to the onboarding screen.
2. The user selects the option to pair the wearable device with the phone via Bluetooth.
3. The user follows the on-screen instructions to complete the pairing process.
4. Tap "Finish" or "Complete" once pairing is successful.  
   **Expected Result**:

* The wearable device should be successfully paired with the phone.
* The user is then taken to the home screen.  
  **Postconditions**: The user is on the home screen of the app.

**Test Case 7: Bluetooth Pairing Timeout or Failure**

**Test Case ID**: TC\_007  
**Objective**: Verify that the app handles Bluetooth pairing failure or timeout properly.  
**Preconditions**: The app is installed, and the user has logged in successfully.  
**Test Steps**:

1. After successful login, the user is directed to the onboarding screen.
2. The user selects the option to pair the wearable device with the phone via Bluetooth.
3. Simulate a failure or timeout in the Bluetooth connection.  
   **Expected Result**:

* The app should display an error message like "Bluetooth pairing failed. Please try again."
* The user should be allowed to retry the pairing process or exit.  
  **Postconditions**: The user is still on the onboarding screen.

**Test Case 8: User Tries to Login with Unsupported Social Platform**

**Test Case ID**: TC\_008  
**Objective**: Verify that the app shows an error if the user tries to log in using an unsupported social platform.  
**Preconditions**: The app is installed, and the user attempts to log in with a social platform that is not supported (e.g., Facebook).  
**Test Steps**:

1. Open the app.
2. Select a login button for an unsupported social platform (e.g., Facebook).  
   **Expected Result**:

* The app should display a message like "This social login is not supported. Please use Google or Apple ID to log in."  
  **Postconditions**: The user remains on the login screen.

**Test Case 9: App Behavior During Network Disconnection (Error Scenario)**

**Test Case ID**: TC\_009  
**Objective**: Verify that the app handles network disconnection during the login process.  
**Preconditions**: The app is installed, and the user is attempting to log in.  
**Test Steps**:

1. Open the app.
2. Select the "Login with Google" or "Login with Apple" button.
3. Disconnect the network (Wi-Fi or mobile data) while entering credentials.
4. Tap the "Sign in" button.  
   **Expected Result**:

* The app should display an error message like "Network connection lost. Please try again."  
  **Postconditions**: The user remains on the login screen.

**Test Case 10: Successful Login and Redirection to Home Screen**

**Test Case ID**: TC\_010  
**Objective**: Verify that a user is redirected to the home screen after a successful login and pairing process.  
**Preconditions**: The app is installed, and the user has logged in and completed the onboarding (pairing) process successfully.  
**Test Steps**:

1. Open the app and log in successfully via Google or Apple.
2. Complete the Bluetooth pairing process.
3. After pairing, verify that the user is directed to the home screen.  
   **Expected Result**:

* The user should be taken to the home screen after successful login and pairing.  
  **Postconditions**: The user is on the home screen and can begin using the app.

**Edge Cases and Error Scenarios**

* **Network Issues**: Test the login process when the network is slow, intermittent, or disconnected during the login and pairing process.
* **Account Recovery**: Verify that the user can recover their credentials (Google/Apple ID) if they forget them.
* **Incorrect Bluetooth Device**: Test the scenario where the wrong Bluetooth device is paired (e.g., a different wearable).
* **App Crashes**: Verify that the app does not crash during login, pairing, or redirection to the home screen.