Exercise 1.3

Suggestions to Improve the Sign-In Page:

1. Clearer Labeling and Instructions:

- Instead of "My e-mail address is," use a simpler label like "Email address".
- Replace "Do you have password?" with a clearer phrase like "Select your login type:" or separate new user registration from the sign-in form.

2. Form Layout and Grouping:

- Group related form fields visually with appropriate spacing.
- Use a more modern design with clear input fields and aligned labels.

3. Color and Contrast:

- Improve color contrast for better readability, especially for visually impaired users.
- The current red and yellow may be hard to read for many users.
- Avoid using too many colors that can distract or confuse users.

4. Field Focus and Validation:

- Automatically focus on the email field when the page loads.
- Add real-time validation with helpful error messages (Ex - "Please enter a valid email address").

5. Simplify Sign-In Process:

- Consider merging both new user and existing user flows on a single page using smart detection.
- Add a "Show password" option for ease of entry.

6. Accessibility Enhancements:

- Ensure screen reader compatibility.

7. Button Improvements:

- The button "Sign in using our secure server" is too wordy. Replace it with "Sign In" and include a security icon or note nearby if needed.

8. Link Visibility:

- "Forgotten your password?" link should be more visible and placed right below the password field.

9. Mobile Responsiveness:

- Ensure the layout adapts well on mobile devices with appropriately sized inputs and buttons.

Exercise 1.4

Sprint 1: Core Currency Conversion Features

USER STORY-1: Convert rates from one currency to another

UACs:

- Input an amount for conversion
- Select from and to currencies
- Provision to flip the from and to currencies

Test Scenarios:

1. **Valid Input Handling:**
   - Enter a valid numeric amount and verify successful conversion.
   - Enter zero and verify the system handles it appropriately.
   - Enter a negative number and verify the system handles it appropriately.
   - Enter a large number and verify the system handles it.
2. **Currency Selection:**
   - Select various valid 'from' and 'to' currencies and verify correct conversion.
   - Attempt to select the same currency for both 'from' and 'to' and verify the system prevents it.
3. **Currency Flip Function:**
   - Use the flip feature and verify that the 'from' and 'to' currencies are swapped correctly.
4. **UI Elements:**
   - Verify the presence and functionality of input fields, dropdowns, and buttons.
   - Ensure the layout is responsive and user-friendly.
5. **Error Handling:**
   - Enter invalid characters (e.g., alphabets) and verify the system displays an appropriate error message.
   - Leave the amount field empty and verify the system prompts for input.
6. **Performance:**
   - Measure the time taken for conversion and ensure it meets performance standards.

USER STORY-2: View LIVE currency exchange rates

UACs:

- I can view the from and to currency codes.
- I can view the from and to currency names.
- I can view the currency conversion computation for both the currencies.
- I can view current date/time of conversion.
- I have a provision to look at a chart that shows the rate history for the given day.

Test Scenarios:

1. **Currency Information Display:**
   - Verify that both 'from' and 'to' currency codes and names are displayed correctly.
   - Ensure that the conversion computation is accurate for both currencies.
2. **Date/Time Display:**
   - Verify that the current date and time of conversion are displayed correctly.
3. **Rate History Chart:**
   - Check the availability and functionality of the rate history chart.
   - Verify that the chart displays accurate historical data for the selected day.
4. **UI Elements:**
   - Ensure that all UI elements are properly aligned and accessible.
   - Test the responsiveness of the app on various devices.
5. **Error Handling:**
   - Simulate network failures and verify that the app handles them gracefully.
   - Test the app's behavior when historical data is unavailable.
6. **Performance:**
   - Measure the time taken to load live rates and historical data, ensuring it meets performance standards.

Sprint 2: Enhanced Conversion Features

USER STORY-3: Convert LIVE exchange rates again

UACs:

- I can see the from and to currency codes.
- I can use a default amount and perform a conversion.
- I can change the default amount before conversion

Test Scenarios:

1. **Default Amount Handling:**
   - Verify that a default amount is pre-filled in the input field.
   - Ensure that the default amount can be changed by the user.
2. **Currency Selection:**
   - Verify that the 'from' and 'to' currency codes are displayed correctly.
   - Ensure that the user can select different currencies for conversion.
3. **Conversion Functionality:**
   - Perform a conversion using the default amount and verify the result.
   - Change the default amount and perform the conversion again to verify accuracy.
4. **UI Elements:**
   - Ensure that all UI elements are properly aligned and accessible.
   - Test the responsiveness of the app on various devices.
5. **Error Handling:**
   - Enter invalid characters in the amount field and verify that the system displays an appropriate error message.
   - Leave the amount field empty and verify that the system prompts for input.
6. **Performance:**
   - Measure the time taken for conversion and ensure it meets performance standards.