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Test Project

Module F

Web Technologies

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Introduction

A client-side only prototype for an AI-chat-based learning product named Study Buddy. The prototype must follow accessibility guidelines (WCAG 2.2 Level AA and WAI-ARIA) and must be fully operable by keyboard and screen-reader users.

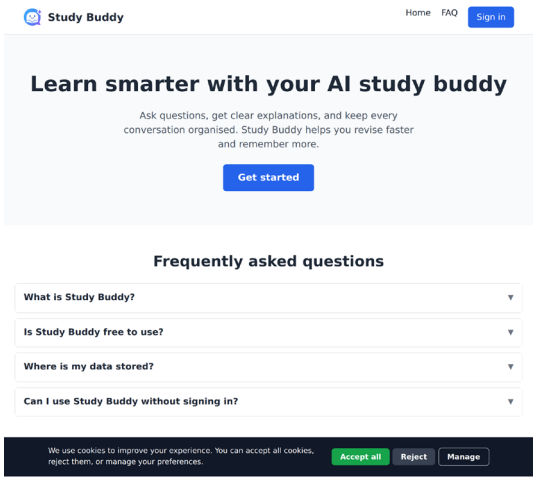
- The prototype is built using client-side technology only; no server-side programming is required.
- Any client-side framework or vanilla JavaScript may be used.
- The three pages may be implemented as separate HTML pages or as routes of a single-page application.
- All data persists in browser storage (localStorage or IndexedDB) and restores after refresh.

Description of project and tasks

The deliverable consists of three pages: Landing page, Sign-in Page, and Chat UI prototype.

Landing Page

- The landing page includes at minimum: a header/navigation displaying the provided logo, a hero section with a call-to-action linking to the sign-in page, the FAQ accordion, and a footer. All other content is Competitor-defined.
- A starter HTML file (landing-page-starter.html) is provided in the media assets. It implements the complete landing page layout and content but intentionally contains no accessibility features (no semantic HTML, ARIA, alt text, or keyboard support). Competitors must build upon this file and add all required accessibility features.



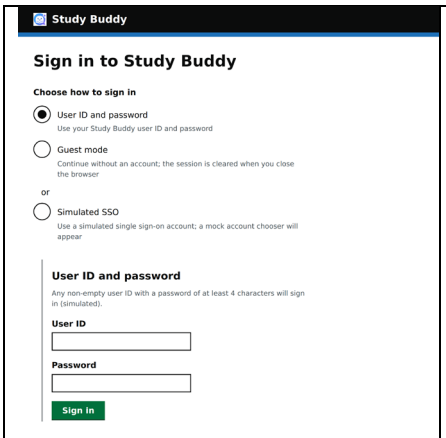
- Correct semantic HTML5 elements and appropriate ARIA landmark roles.
- Exactly one <h1> per page; heading hierarchy must not skip levels.
- The skip-to-main-content link is the first focusable element and is visible on keyboard focus.
- All interactive elements have clearly focus visible indicators with at least 3:1 contrast.
- Accordion FAQ uses correct WAI-ARIA for expand status, label, controls, and proper region.
- Accordion keyboard interaction: Enter/Space toggles, Tab navigates, and only one panel is open at a time.
- Cookie consent banner displays on first visit with Accept, Reject, and Manage options.
- Cookie banner buttons use aria-pressed to indicate toggle state.

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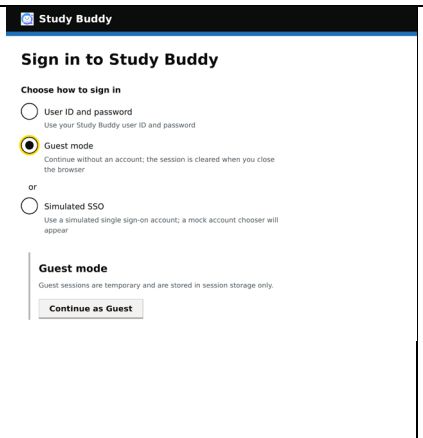
- The Manage option opens a preferences panel with at least two optional cookie categories (e.g. analytics, marketing) that can be toggled individually; necessary cookies are always on and cannot be toggled. The Save button persists the choices.
- After any choice (Accept, Reject, or Save) the choice is persisted and the banner is not shown again on subsequent visits.

Sign-in Page

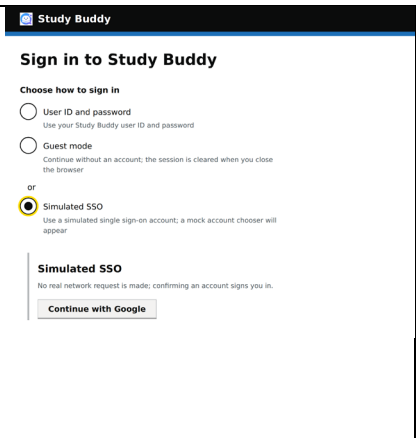
The sign-in page provides three distinct sign-in methods. All authentication is simulated client-side; no real network request is made.



Sketch Reference for Method 1



Sketch Reference for Method 2

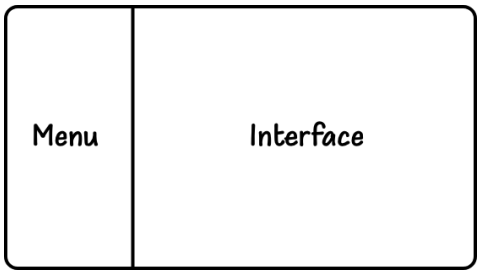


Sketch Reference for Method 3

- Method 1 - User ID and password: a form with a user ID input, a password input, and a sign-in button. Validation is simulated: any non-empty user ID with a password of at least 8 characters succeeds.
- Method 2 - Guest mode: a "Continue as Guest" is a mock-up button that creates a temporary guest session. No actualy login logic is required.
- Method 3 - Simulated SSO: a "Continue with Google" is a mock-up button too. No external identity provider is contacted.
- Each method is presented as a visually distinct group with its own heading.
- Each input has a correctly associated <label>.
- Each sign-in method uses proper ARIA describe attribute to link to its helper text.
- This sign-in page is a mock-up page. No actual login process is required. But login button may link to chat UI, or providing a dedicated chat UI route is acceptable.
- The embedded sign-in sketches are layout references only.

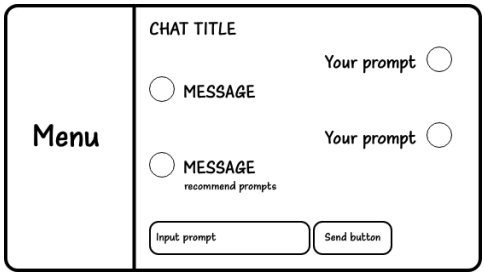
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Chat UI



Two-column Layout for Chat UI

- Two-column layout: chat history sidebar on the left, main chat area on the right.
- Clicking a conversation in the sidebar displays it in the main area.
- Clicking the New Chat button creates and displays a new conversation.
- A new conversation opens in the welcome state, which displays at least three welcome prompt examples (e.g. "What is the difference between HTML, CSS, and JavaScript?", "How do I make my website keyboard accessible?", "Quiz me on semantic HTML5 elements."). Clicking a welcome prompt sends it as the first message.
- After the first message is sent in a new conversation, the conversation appears in the sidebar history.
- The conversation title shown in the sidebar is the first message, truncated to 30 characters.
- Each conversation in the sidebar has a three-dot menu with Pin and Delete options.
- Multiple conversations may be pinned. Pinned conversations appear above all non-pinned conversations; within each group (pinned and non-pinned), the most recently active conversation appears first.
- A pinned conversation can be unpinned from the same menu.
- Deleting a conversation removes it from the sidebar after confirmation.
- Deleting the currently open conversation switches the main area to the new-chat welcome view.
- Each message displays a timestamp in HH:mm format.
- Assistant messages are rendered according to the rules in the "Chat Messages Format Rendering" section.
-



Chat UI with your messages on the right and responsed messages on the left.

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Simulated Chat Experience

- When the user sends a message, the simulated assistant first responds with "Assistant is typing…".
- After one second, the typing indicator is replaced with the final message.
- Final message: "Thank you for your message. I've recorded it."
- You will also find extra returning messages in media assets folder.
- If the assistant is already responding, the user must be able to stop the response.
- When the user stops the response, the typing indicator is replaced by the message "User cancelled."

Chat Messages Format Rendering

The returned message contains a specific structure that you need to parse into a specific style or structure, as described in detail below:

- Heading: Starts with "#". The text following "#" on the same line is parsed as heading text. There are 6 heading levels, distinguished by the number of # characters: one # for level 1 heading, two # for level 2 heading, up to six # for level 6 heading. Headings are bold, and different levels have different font sizes — level 1 is the largest, level 6 is the smallest.
- Bold text: Text wrapped in double asterisks "**". The wrapped text is displayed in bold.
- Italic text: Text wrapped in a single asterisk "*". The wrapped text is displayed in italic.
- Quote: Starts with ">". The text on the same line immediately after ">" is parsed as quote text. The left side of the same quote text element shall be displayed with a continuous vertical line. Consecutive lines of quote text (without blank lines between rows) are parsed within the same quote text element.
- Unordered list: Starts with "-" or "+". The text following "-" or "+" on the same line is parsed as a list item. Consecutive lines with no blank lines between them are parsed into the same unordered list.
- Line break: The string \n shall be parsed as a line break.
- The marker characters "#", "-", "+", and ">" only trigger parsing when they appear at the start of a line.

Bold text, italic text, and link elements are displayed inline. Single heading text, quote text, code blocks, and unordered lists are displayed as block-level elements.

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Automated Testing Specifications

The following data-testid attributes are mandatory. Automated tests will fail if any are missing or incorrect.

- **Skip t**o main content link must use data-testid="skip-to-main".
- Navigation home link must use data-testid="nav-home-link".
- Navigation sign-in link must use data-testid="nav-sign-in-link".
- Cookie banner must use data-testid="cookie-banner".
- Cookie accept all button must use data-testid="cookie-accept-all".
- Cookie reject button must use data-testid="cookie-reject".
- Cookie manage button must use data-testid="cookie-manage".
- Cookie save button must use data-testid="cookie-save".
- FAQ accordion must use data-testid="faq-accordion".
- Login user ID input must use data-testid="login-user-id".
- Login password input must use data-testid="login-password".
- Login button must use data-testid="login-btn".
- Guest sign-in button must use data-testid="login-guest-btn".
- Simulated SSO sign-in button must use data-testid="login-sso-btn".
- Error summary must use data-testid="error-summary".
- Chat list must use data-testid="chat-list".
- New chat button must use data-testid="new-chat-btn".
- Welcome prompt list must use data-testid="welcome-prompts".
- Conversation three-dot menu button must use data-testid="chat-menu-btn".
- Pin button must use data-testid="pin-btn".
- Delete button must use data-testid="delete-btn".
- Messages area must use data-testid="messages-area".
- Message input must use data-testid="message-input".
- Send button must use data-testid="send-btn".
- Stop button must use data-testid="stop-btn".
- Accessibility statement link must use data-testid="accessibility-link".

Media Assets Provided

- logo.png — Study Buddy logo, for use in the header/navigation.
- landing-page-starter.html — starter landing page with complete layout and content but no accessibility features.

Instructions to the Competitor

- You need to commit your project to the git repository that you created on the submission platform.
- Please access to the submission platform dashboard by using the credentials you received.
- Please include an expert_readme.txt on how to get your project up and running, and where to access your project.

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