Test Project

Module B – Mobile Conference

Web Technologies

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Introduction

A client-side only single-page application (SPA) that serves as a mobile conference companion. The application must run from a single HTML entry point and must not perform full page reloads when switching views.

Description of project and tasks

- Single HTML entry point (index.html).
- No server-side code; all data must be loaded from the provided static JSON files (no backend API server is required or permitted).
- Mobile-first design assessed at around 375 px width (below 768px); tablet layout assessed at 768 px width or greater.
- A persistent bottom navigation bar must be visible across all views.
- Use a light visual theme (light backgrounds and dark text) suitable for a conference companion app.
- User-facing error messages (failed data load, invalid stamp code, etc.) must appear in the element with data-testid="error-message" and must be written for end users (not raw HTTP/stack traces).

Views

- Schedule/Speakers — session list, session detail, speaker list, and speaker profile
- Venue Map — interactive CSS Grid map with room and hall session details
- Attendance Stamps — collect unique per-session attendance codes
- Photo Booth — image compositing with frame overlay, download, and share
- Bottom navigation must include four tabs that switch among these views: Schedule, Map, Stamps, Photo.

Navigation and Single-Page Application

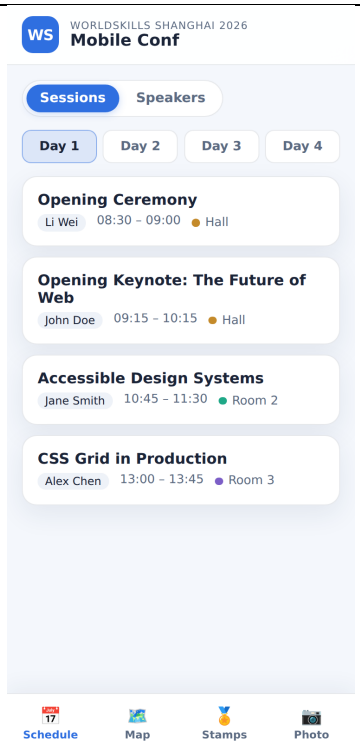
- The application must behave as a true SPA: no full HTML document reload occurs when navigating between Schedule/Speakers, Venue Map, Attendance Stamps, and Photo Booth views.
- The URL hash must update when navigating between views.
- Use hash-based routing with these four routes: #/schedule, #/map, #/stamps, and #/photo.
- Deep linking must work: navigating directly to a view's hash URL renders the correct view.
- The bottom navigation bar must visually highlight the currently active tab based on the current route state.
- The layout must follow the provided UI sketch and the reference screenshots embedded in this document. Except where explicitly stated otherwise, the embedded screenshots and sketches are for reference only and do not need to be reproduced exactly.

Schedule and Speaker View

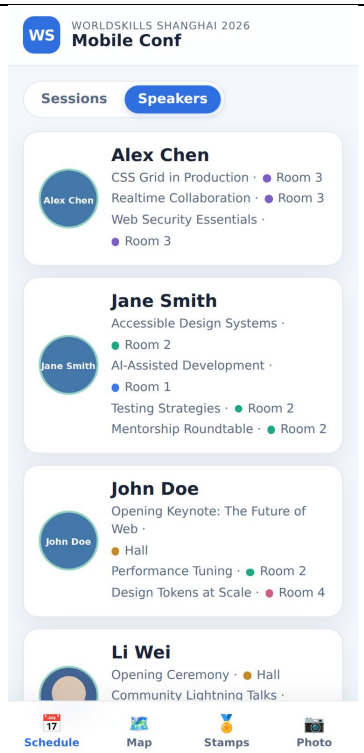
- A switch or navigation must allow switching between Sessions view and Speakers view.
- The default view shows the Sessions list.
- The schedule list must display: Session Title, Speaker Name, Time, and Room.
- Whenever a room/location name is shown (schedule list, session detail, speaker list, speaker profile, map modal), display a small color dot that matches the venue map color for that location.
- Venue display names must be consistent everywhere: Room 1, Room 2, Room 3, Room 4, and Hall.
- The speaker list must display: Speaker Name, Profile Picture, and Session List (with location color dots where rooms are shown).
- There are four days in the schedule view; the default day is Day 1.

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- The provided data contains 16 sessions (four per day). Session ids "1"…"16" map one-to-one to stamps 1…16 for attendance.
- Users must be able to navigate between Day 1, Day 2, Day 3, and Day 4.
- The session list must be scrollable without breaking the bottom navigation bar.
- Users can open a session detail view that shows session information and the attendance code for that session.
- A clear Back control (button or link) returns from session detail (or speaker profile) to the previous list.
- The speaker list and profiles must be comprehensive, modern, and elegant, with clear information hierarchy.
- If schedule JSON fails to load, show a user-friendly message in the element with data-testid="error-message".

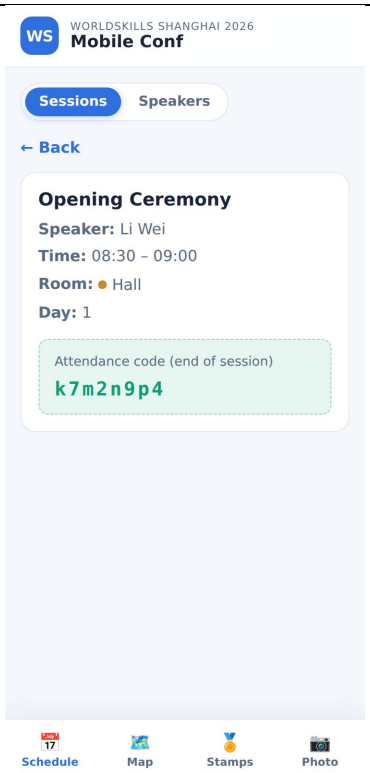


Screenshot of Sessions list view

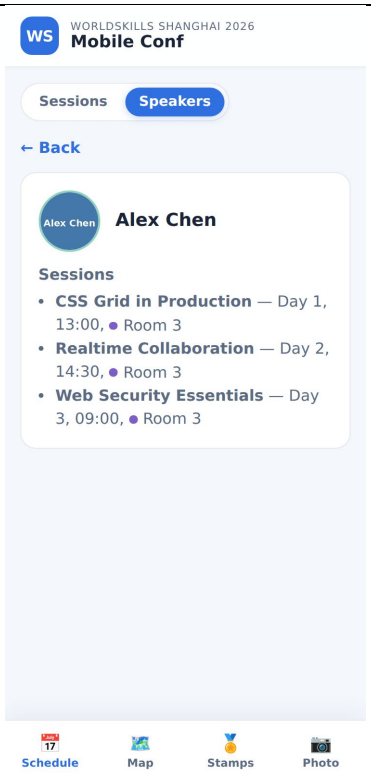


Screenshot of Speakers list view

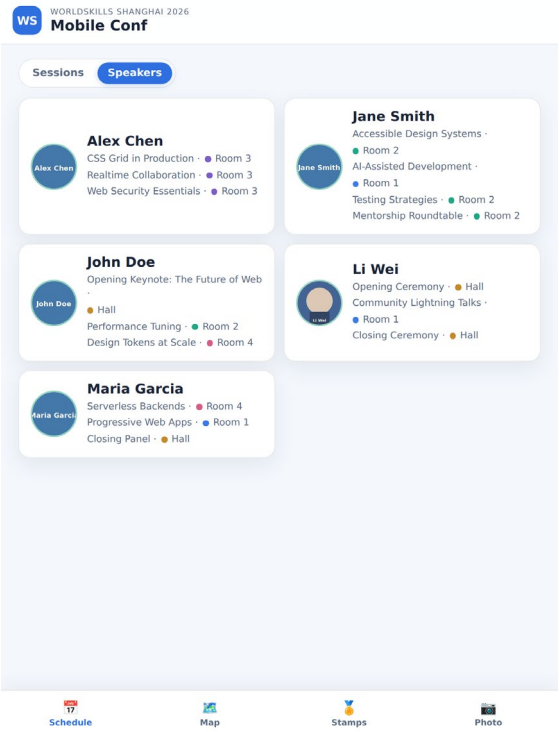
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Screenshot of Session detail view



Screenshot of Speaker detail view

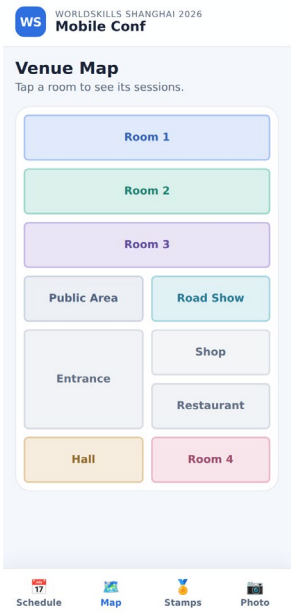


Screenshot of Speakers list (grid) view in tablet.

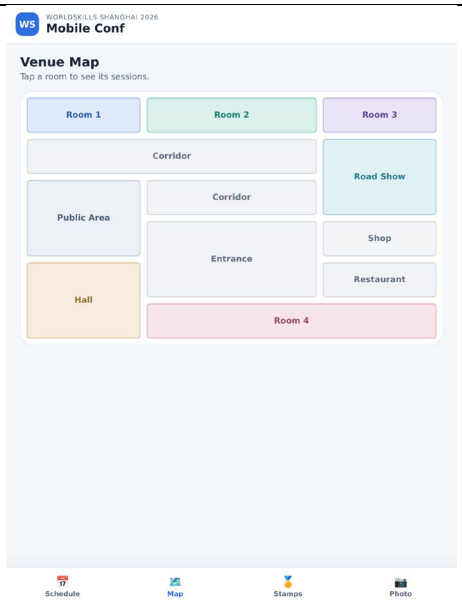
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Venue Map

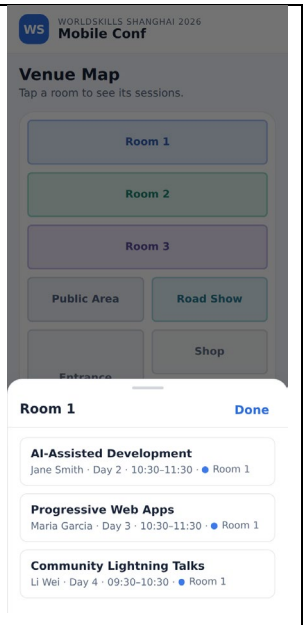
- Map zones follows the screenshot and includes the following: Room 1, Room 2, Room 3, Room 4, Hall, Public Area, Road Show, Entrance, Shop, Restaurant, and Corridor (horizontal and vertical).
- Mobile layout (default, below 768 px) uses a 2-column grid arrangement consistent with the provided sketch. Corridors are hidden on mobile.
- Tablet layout (min-width: 768 px) uses a 3-column grid arrangement consistent with the provided sketch. Corridors are visible on tablet.
- Zone colors are fixed as follows (base colors / font colors and border colors): Room 1 = #3D7AE8 (blue), Room 2 = #1FA887 (teal green), Room 3 = #7C5EC7 (purple), Room 4 = #D45F84 (rose), and Hall = #C48A2A (amber).
- Road Show = #2A9BB8 (cyan). Public Area = #6D84A8 (slate). Entrance, both Corridors, Restaurant, and Shop share the same light neutral base color #8A99B0.
- Zone fills must be subtle: render each zone's background as its base color tinted with white (approximately 10–16% base color on white), with a slightly stronger matching border and dark readable text on top. Location color dots (schedule list, session detail, speaker list, speaker profile, map modal) use the solid base color so the dots visually match their map zones.
- Interactive zones: Room 1–4 and Hall. Clicking one shows the loaded the matching JSON sessions data and shows a slide-up panel with that location’s sessions.
- A slide-up panel must appear and be populated with the location’s sessions (title, speaker, time, day as available).
- Tapping the empty/backdrop area or the Done button closes the modal.
- A slide-up transition animates the modal showing and hiding motion.
- The motion must respect system’s motion reduction preference.
- If a room sessions JSON load fails, show a user-friendly message in the element with data-testid="error-message".



Grid for Venue Map in mobile



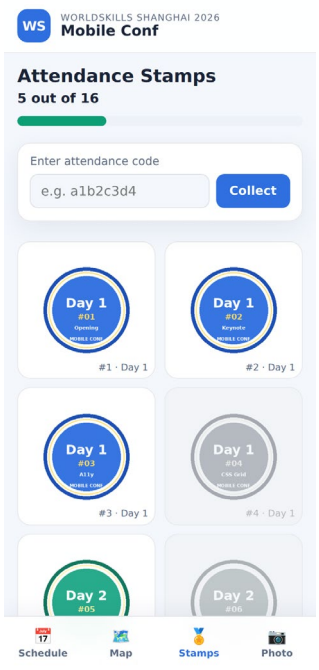
Grid for Venue Map in tablet



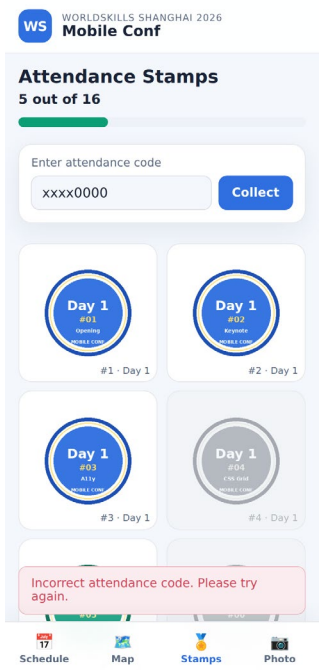
Slide-up panel after clicking a room

Attendance Stamps Collection

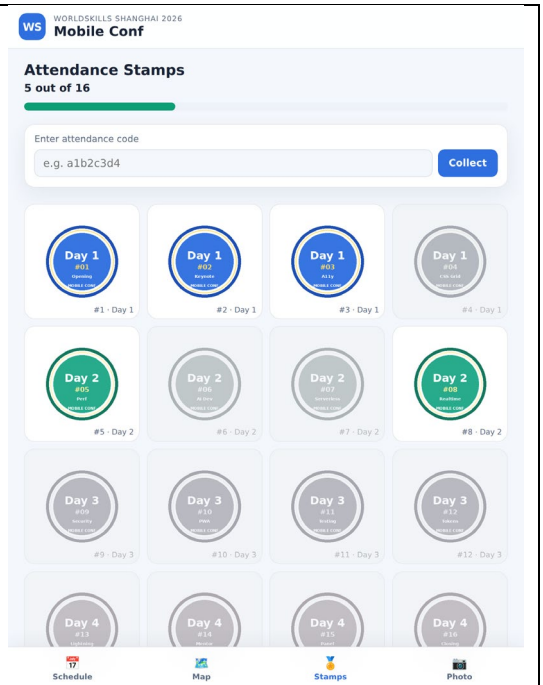
- Users can obtain an attendance code associated with sessions and enter it to collect stamps.
- There are exactly 16 stamps and 16 sessions. Stamp number N corresponds to session id "N", and the Day printed on stamp graphic N matches that session's day (stamps 1–4 → Day 1, 5–8 → Day 2, 9–12 → Day 3, 13–16 → Day 4).
- The attendance code is unique and is an 8-character string combining lowercase letters and digits (0-9, a-z).
- Session detail (or equivalent end-of-session UI) shows the code so the audience can type it in to collect the stamp.
- A progress indicator at the top of the view shows "X out of 16" stamps collected and a <progress> element progress bar.
- The "Enter attendance code" form (input + collect action) is placed after progress bar and must stick to the top of the viewport (under the app header) while the stamp grid scrolls, so the collect animation remains visible after submission. The progress indicator is not required to be sticky.
- The stamp grid uses a 2-column layout on mobile and a 4-column layout on tablet.
- Uncollected stamp tiles are dimmed; collected stamps display the stamp graphic.
- When a stamp is collected, a subtle and elegant animation plays (stamp graphic scales from large to fit with a bounce effect and ribbon particles).
- An incorrect code entry must display a clear error message.
- Entering an already-collected code must give clear feedback (error or info) without double-counting.
- Collected stamps must persist across page reloads (for example using localStorage).



Screenshot of Attendance Stamps view in mobile



Error message when attendance code mismatches

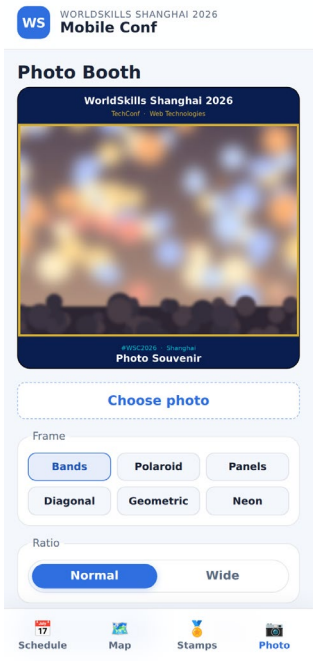


Screenshot of Attendance Stamps view in tablet

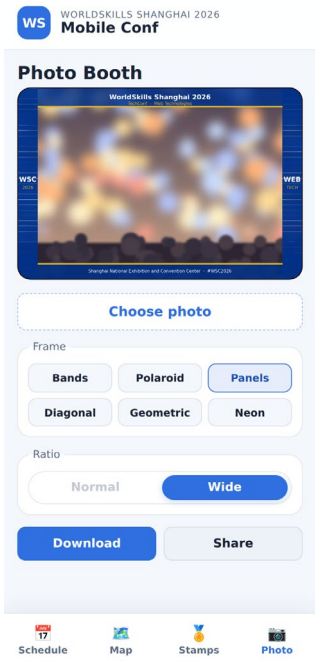
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Photo Booth

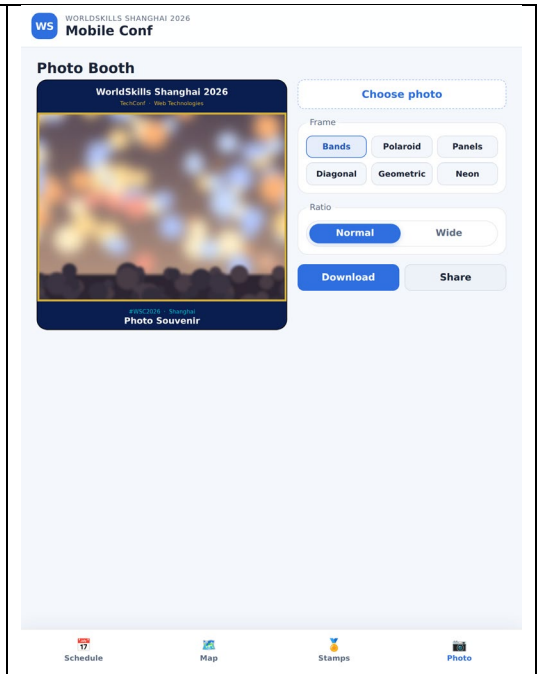
- Users can select an image file or capture a photo to composite with a frame overlay.
- The file input element must restrict file selection to image files only (image/*).
- The uploaded image is scaled and centred without aspect ratio distortion or stretching.
- The uploaded image must cover the entire canvas area without letterboxing or empty gaps.
- The canvas must be styled responsively so it fits the viewport without causing horizontal page scrolling.
- The provided frame overlay is drawn exactly on top of the user image; canvas internal dimensions must match the native dimensions of the currently active frame PNG file.
- Users can select a frame design from the provided frame assets. After selecting a frame, users can choose between Normal ratio (1080 × 1080 px) and Wide ratio (1600 × 1080 px).
- Frame designs may provide a Normal PNG, a Wide PNG, or both. When the user changes the ratio, the canvas and frame overlay must automatically switch to the matching PNG for the currently selected frame design (for example, bands → frame_bands.png or frame_wide_bands.png).
- Not every frame design has both ratios. If the selected design has no Normal variant, the Normal option must be disabled and must not be selectable. If it has no Wide variant, the Wide option must be disabled and must not be selectable.
- When the user selects a different frame design that does not support the currently active ratio, the application must automatically switch to an available ratio for that design and load the corresponding PNG.
- Users can share the composed image via the Web Share API.
- Users can download the composed image. Clicking "Download" button triggers file download.
- The exported filename must follow the format worldskills-shanghai-2026-[timestamp].png, where timestamp is a 14-digit local date-time string (YYYYMMDDHHMMSS).
- Feature detection must be implemented before invoking the Web Share API.
- If Web Share is unsupported, an automatic file download is triggered without throwing any JavaScript errors.
- The Web Share payload must include a title, a text message, and the composited image as a File object.



Screenshot of Photo Booth view in mobile



Screenshot of Photo Booth view with wide ratio frame



Screenshot of Photo Booth view in tablet

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Automated Testing Specifications

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

- Bottom navigation tab — Schedule must use data-testid="nav-schedule".
- Bottom navigation tab — Venue Map must use data-testid="nav-map".
- Bottom navigation tab — Attendance Stamps must use data-testid="nav-stamps".
- Bottom navigation tab — Photo Booth must use data-testid="nav-photo".
- Schedule list container must use data-testid="schedule-list".
- Error message container must use data-testid="error-message".
- Venue map room zone 1 must use data-testid="zone-room1".
- Venue map room zone 2 must use data-testid="zone-room2".
- Venue map room zone 3 must use data-testid="zone-room3".
- Venue map room zone 4 must use data-testid="zone-room4".
- Venue map Hall zone must use data-testid="zone-hall".
- Room detail modal must use data-testid="room-modal".
- Modal close button must use data-testid="modal-close-btn".
- Photo upload input must use data-testid="photo-upload".
- Download button must use data-testid="download-btn".
- Share button must use data-testid="share-btn".
- Ratio control — Normal must use data-testid="ratio-normal".
- Ratio control — Wide must use data-testid="ratio-wide".

Optional assisted checks may be provided as pasteable console scripts.

Provided JSON Data

- api/schedule.json — full schedule array of sessions. Each session includes: id, title, speaker, time, endTime, room, roomName, and day.
- api/rooms.json — list of venue locations (id, name, capacity), including room1–room4 and hall.
- api/rooms/{roomId}/sessions.json — sessions for a specific location (room1–room4, hall).
- room id values in JSON: "room1", "room2", "room3", "room4", "hall" (use these in file paths and interactive zone handlers).
- Venue names in data: Room 1, Room 2, Room 3, Room 4, Hall. Hall hosts opening and closing sessions (and related hall sessions as provided).
- Competitors must load these JSON files directly (for example via fetch of relative paths or by bundling/importing the files). Do not implement or depend on a separate REST API server.

Media Assets Provided

- Frame overlay images under frames/ (Normal 1080×1080 and/or Wide 1600×1080 variants; not every design has both ratios).
- Static JSON data files under api/ (schedule, rooms, and per-location sessions)
- Speaker images under speakers/
- Stamp graphics under stamps/ (16 stamps)
- UI sketch/mockup PDF (if provided); the reference screenshots embedded in this document show the expected layouts and states.

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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.

Implementation Checklist

- SPA routing with four views; no full reload; deep link works.
- Schedule day filter + Sessions/Speakers modes + session detail with attendance code.
- Speakers list/profile with photos and location color dots.
- Venue map grid-template-areas mobile + tablet; Hall + Room 1–4 interactive; modal open/close + reduced motion.
- 16 stamps, sticky code form, progress X/16 + <progress>, persist collection, collect animation.
- Photo booth cover composite, six frame designs, Normal/Wide with disable rules, download filename, Web Share + fallback.
- All mandatory data-testid attributes present.

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