Test Project

Module E – Resume Platform

Web Technologies

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Introduction

A full-stack online resume platform. The project upgrades an existing database and application while preserving the structure of existing tables.

- The existing database structure must not be changed.
- A database dump with sample data and schema is provided by the competition.
- Competitors must configure their framework/ORM to map to the provided tables, primary keys, timestamps, and foreign keys; auto-discovery will not work.
- Two page types: Public view and Management view.
- Required routes: /login, /register, /onboarding, /dashboard (management view), and /resume/{slug_value} (public view).
- The management view (/dashboard) provides access to profile editing, resume experience management, and theme configuration.
- Users can only access and modify their own data. Accessing another account's management pages or content returns HTTP 401/403.
- The competition environment has no internet access; all frameworks and dependencies are pre-installed locally.

Provided Database Schema

The following MySQL schema is provided. Table names, column names, primary keys, and foreign keys must be used exactly as defined.

- account - stores user credentials. Primary key: account_uuid (CHAR(36), UUID). Columns: email_addr, display_name, secret_hash, slug_value, dt_joined (datetime).
- profile - stores the account's public profile information. Primary key: profile_id (INT AUTO_INCREMENT). Foreign key: owner_uuid references account(account_uuid). Columns: name, phone, website, summary.
- preference - stores the account's theme preferences. Exactly one row per account; saving updates the existing row in place. Primary key: preference_id (INT AUTO_INCREMENT). Foreign key: linked_account references account(account_uuid). Columns: template_code ('CLASSIC', 'SIDEBAR', 'TIMELINE'), primary_color (6 hex chars), font_size_code ('small', 'medium', 'large'), tagline_txt, dt_modified (datetime).
- resume_content - stores the user's experience list as free-form text. Primary key: content_id (INT AUTO_INCREMENT). Foreign key: linked_account references account(account_uuid). Columns: payload_txt (LONGTEXT), dt_updated (datetime). The serialisation format is up to the competitor (JSON is recommended; see media/resume.json).

Description of project and tasks

Authentication and Registration

- Users can register with email address and password.
- Users can log in with email address and password. Password storage and encryption method is up to the competitor. The column keeps the provided name secret_hash regardless of the chosen method; the seed accounts are stored as plain text for testing purpose only and may be replaced to match the competitor's implementation.
- Invalid login attempts display a generic error message to prevent user enumeration.
- Unauthorized access to /dashboard returns HTTP 401 or redirects to login.

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- After a successful login, the user is redirected to /dashboard.
- After a successful registration, the user is redirected to the onboarding wizard at /onboarding.

Onboarding Wizard

- The onboarding wizard is shown once, immediately after registration, and guides the user through the initial setup in three steps.
- Step 1 - Public name and slug: the user enters their public name and chooses a slug. The public name is written to both account.display_name and profile.name. The slug input is pre-filled from the public name (lowercased, non-alphanumeric characters replaced by hyphens) but remains editable. If the chosen slug already exists, the system automatically resolves the collision by appending a numeric suffix: first -2, then -3. If -3 is still not unique, the system appends a random 4-character lowercase alphanumeric string instead (e.g., alex-12a4). No uniqueness error is shown; onboarding continues with the assigned slug.
- Step 2 - Tagline and details: a mini preview shows the public name entered in step 1, with a tagline input directly below it. The same step also collects phone, website, and summary.
- Step 3 - Starting template: the user picks one of three template cards arranged left to right (CLASSIC, SIDEBAR, TIMELINE). Each card shows a square sketch thumbnail of the layout (provided in media/templates/). CLASSIC is pre-selected. Primary color and font size are not selectable here; they default to light blue (#3B82F6) and medium font-size.
- On finish, the profile and preference rows are created with the entered and default values, the experience list starts empty, and the user is redirected to /dashboard.
- Until onboarding is completed, logging in always redirects to /onboarding (the wizard resumes where the user left off).

Public View

- Each user has a public share page at /resume/{slug_value}.
- The public page renders the user's resume using the selected template and preferences.
- Unknown slugs return HTTP 404 with a custom 404 page, with Resume Platform branding or wording.

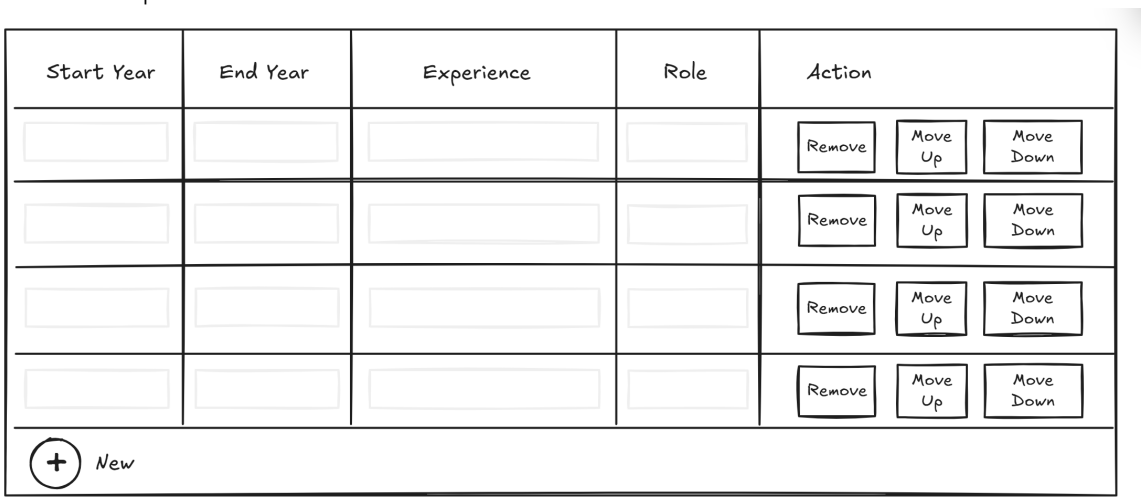
Theme Configuration

- The theme configuration panel appears on the left; a scaled-down live preview appears on the right.
- Users can select a template from a dropdown menu: CLASSIC, SIDEBAR, or TIMELINE.
- After selecting a template, the theme preview is updated.
- Shared personal branding settings: Primary Color, Font Size Level, Tagline Copywriting.
- Primary color is validated server-side as exactly 6 hexadecimal characters (0–9, a–f, A–F). The hash symbol is optional in the input but normalized before storage in primary_color. Invalid values are rejected with HTTP 400/422 and an error message.
- Font size level is one of: small (13px), medium (15px), large (17px).
- Changing any input updates the live preview immediately, even before saving.
- Preview changes are not persisted; only clicking Save writes them to the database.

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Profile and Resume Content Management

- The management view includes a profile form where users can view and edit their public profile fields: name, phone, website, and summary. Saving writes to the profile table. The form also includes the user's slug (stored in account.slug_value); changing it applies the same collision-resolution rule as onboarding - if the new slug is already taken, the system appends -2, then -3, then a random 4-character lowercase alphanumeric suffix (e.g., alex-12a4).
- The management view includes an experience editor for each account to manage their own experience list (see the reference UI sketch below, also provided as media/experiences.png).
- Each experience row contains four input fields: Start Year, End Year, Experience (company or organisation), and Role (job title). A blank End Year is rendered as Present on the public page.
- Each row has Remove, Move Up, and Move Down buttons; a + New button below the list adds a new row. Editing field values and all four buttons are client-side only - nothing is written to the database while editing. Only clicking Save experiences persists the list, overwriting resume_content.payload_txt with the complete current list in the displayed order.
- No additional validation is required on the experience fields.
- Experience rows are rendered on the public page in the order they are stored.
- The public page does not render the stored data directly. The server converts the current experience list into the fixed HTML block defined in next section and substitutes it for the {{EXPERIENCES}} placeholder in the active template.



Reference UI sketch - experience editor

Template Engine

- Templates are plain HTML files stored in a templates/ directory: classic.html, sidebar.html, and timeline.html. The three template files are provided ready-made in media/templates/; competitors copy them into their project and may modify them. Page layout and visual design are not assessed — only the server-side placeholder substitution . All three templates share the same frame: a top navigation bar with the platform brand (Resume Platform) and Login/Register links carrying the nav-login-link and nav-register-link data-testids, and a dark footer with platform links and copyright information. The provided templates apply only to the public view (/resume/{slug_value}); the management view (/login, /register, /onboarding, /dashboard) is a separate view built by the competitor with their own markup and styling. Competitors may reuse the navigation bar markup on their own pages, but this is not required.
- Each template file must use placeholders in the exact format {{VARIABLE}} — double curly braces, all uppercase letters.

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- The server reads the active template file and replaces each placeholder with the corresponding database value before returning the public page.
- Theme branding variables: {{PRIMARYCOLOR}} — preference.primary_color, rendered as stored (6 hex characters, no leading #); {{FONTSIZE}} — preference.font_size_code, rendered as its pixel value (small = 13px, medium = 15px, large = 17px).
- Brief information variables: {{EMAIL}} — account.email_addr; {{PHONE}} — profile.phone; {{WEBSITE}} — profile.website.
- Main information variables: {{NAME}} — profile.name; {{TAGLINE}} — preference.tagline_txt; {{SUMMARY}} — profile.summary; {{EXPERIENCES}} — see below.
- {{EXPERIENCES}} is replaced by a complete HTML block generated by server-side logic from the user's experience list. The block has a fixed structure — one table row per experience:

```
<table class="experiences">
  <tr class="experience">
    <td class="exp-years">STARTYEAR – ENDYEAR
    <td class="exp-experience">EXPERIENCE
    <td class="exp-role">ROLE
  <tr class="experience">
    <td class="exp-years">STARTYEAR – ENDYEAR
    <td class="exp-experience">EXPERIENCE
    <td class="exp-role">ROLE
…
</table>
```

- The template file does not need to contain any loop syntax for experiences; the entire block is substituted as one piece, and each template styles the same block structure with its own CSS.
- The exact layout and styling of each template is defined by the provided files in media/templates/ (classic.html, sidebar.html, timeline.html); those files are the definitive reference for the required structure.

Automated Testing Specifications

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

- **Navigation login link** must use data-testid="nav-login-link".
- **Navigation register link** must use data-testid="nav-register-link".
- **Login email input** must use data-testid="login-email".
- **Login password input** must use data-testid="login-password".
- **Login button** must use data-testid="login-btn".
- **Register email input** must use data-testid="register-email".
- **Register password input** must use data-testid="register-password".
- **Register button** must use data-testid="register-btn".
- **Onboarding public name input** must use data-testid="onboard-name".
- **Onboarding slug input** must use data-testid="onboard-slug".
- **Onboarding tagline input** must use data-testid="onboard-tagline".
- **Onboarding phone input** must use data-testid="onboard-phone".
- **Onboarding website input** must use data-testid="onboard-website".
- **Onboarding summary input** must use data-testid="onboard-summary".
- **Onboarding CLASSIC template card** must use data-testid="onboard-template-classic".
- **Onboarding SIDEBAR template card** must use data-testid="onboard-template-sidebar".
- **Onboarding TIMELINE template card** must use data-testid="onboard-template-timeline".
- **Onboarding next step button** must use data-testid="onboard-next-btn".

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- **Onboarding finish button** must use data-testid="onboard-finish-btn".
- **Profile name input** must use data-testid="profile-name".
- **Profile slug input** must use data-testid="profile-slug".
- **Profile phone input** must use data-testid="profile-phone".
- **Profile website input** must use data-testid="profile-website".
- **Profile summary input** must use data-testid="profile-summary".
- **Save profile button** must use data-testid="save-profile-btn".
- **Template preference select** must use data-testid="pref-template".
- **Primary color input** must use data-testid="pref-color".
- **Font size preference select** must use data-testid="pref-fontsize".
- **Save preferences button** must use data-testid="save-preferences-btn".
- **Experience list container** must use data-testid="experience-list".
- **Add experience row button** must use data-testid="add-experience-btn".
- **Delete experience row button** must use data-testid="delete-experience-btn".
- **Move experience row up button** must use data-testid="move-up-btn".
- **Move experience row down button** must use data-testid="move-down-btn".
- **Save experiences button** must use data-testid="save-experiences-btn".
- **Error message container** must use data-testid="error-message".
- Each experience row carries its own delete-experience-btn, move-up-btn, and move-down-btn, so the same data-testid legitimately appears multiple times on the page; tests must scope selectors to the row.
- nav-login-link and nav-register-link must appear in the navigation of every page shown to unauthenticated visitors.
- All form validation errors and failed login attempts must be displayed inside the error-message container.

Media Assets Provided

- media/resume.json - a suggested JSON structure for the experience list (competitors may choose another serialisation format).
- media/templates/ - square sketch thumbnails for the three templates (classic.svg, sidebar.svg, timeline.svg), used in the onboarding wizard, plus the ready-made template files (classic.html, sidebar.html, timeline.html) for the public view.
- media/experiences.png - reference UI sketch for the experience editor.
- db-dump.sql - the provided schema with five seed accounts.

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.