

Kids Business Education WebApp -

Project Structure

Folder Structure

```
kids-business-webapp/
├── index.html                      # Landing/Marketing page
├── login.html                       # Authentication page
├── signup.html                      # Registration page
├── dashboard.html                   # Main hub after login
├── learning-path.html               # Specific learning track view
├── lesson.html                      # Individual lesson page
├── quiz.html                        # Quiz/assessment page
├── simulation.html                  # Business simulation page
├── progress.html                    # Progress tracking page
├── rewards.html                     # Badges & achievements page
├── profile.html                     # User profile & settings
└── parent-dashboard.html            # Parent/teacher portal

|
├── css/
│   ├── variables.css                # Color palette, spacing, breakpoints
│   ├── reset.css                    # Browser reset/normalize
│   ├── typography.css              # Font styles & scales
│   ├── components.css              # Reusable components
│   ├── animations.css              # Keyframes & transitions
│   ├── landing.css                 # Landing page specific
│   ├── dashboard.css               # Dashboard specific
│   ├── lesson.css                  # Lesson page specific
│   └── responsive.css              # Media queries

|
├── js/
│   ├── auth.js                     # Login/signup logic
│   ├── dashboard.js                # Dashboard interactions
│   ├── lesson.js                   # Lesson player logic
│   ├── quiz.js                     # Quiz functionality
│   ├── simulation.js               # Business simulation logic
│   ├── progress.js                 # Progress tracking
│   ├── rewards.js                  # Badge/reward animations
│   ├── utils.js                    # Helper functions
│   └── api.js                      # Backend API calls

|
└── assets/
    ├── icons/                      # SVG icons
    └── illustrations/              # Topic illustrations
```

```
|   └── badges/           # Achievement badges
|   └── audio/            # Sound effects (optional)
|
└── data/
    ├── lessons.json      # Lesson content & metadata
    ├── quizzes.json       # Quiz questions
    ├── simulations.json    # Simulation scenarios
    └── achievements.json   # Badge definitions
```

Page Breakdown & Implementation

1. index.html - Landing Page

Purpose: Marketing page to attract users and explain the platform

Key Sections:

- Hero section with main value proposition
- Features grid (4-6 cards explaining benefits)
- How it works (3-step process)
- Age group selector preview
- Testimonials
- CTA button to signup

Visual Elements:

- Animated hero illustration (CSS parallax or simple fade-in)
- Icon cards with hover effects
- Progress indicator showing learning journey
- Colorful gradient backgrounds

Interactions:

- Smooth scroll to sections
 - Hover effects on feature cards
 - CTA button pulse animation
 - Mobile hamburger menu
-

2. **signup.html** - Registration

Purpose: Collect user information and create account

Form Fields:

- Child's name
- Age/grade level (determines content difficulty)
- Parent email
- Password
- Terms acceptance checkbox

Visual Design:

- Split screen: Form on left, illustration on right
- Progress steps (Step 1 of 3)
- Inline validation with icons
- Clear error messages

Interactions:

- Real-time validation (email format, password strength)
 - Show/hide password toggle
 - Age selector triggers preview of appropriate interface
 - Success animation before redirect
-

3. **login.html** - Authentication

Purpose: Existing user login

Form Fields:

- Email/username
- Password
- Remember me checkbox
- Forgot password link

Visual Design:

- Centered card layout
- Friendly illustration above form
- "Or signup" link below

Interactions:

- Form validation
 - Loading spinner on submit
 - Error shake animation
 - Redirect to dashboard on success
-

4. dashboard.html - Main Hub

Purpose: Central navigation and activity overview

Key Sections:

Header: Logo Search Stats
Welcome Banner
- Greeting + Streak Counter
- Daily Challenge Card
Quick Stats Row
[Lessons] [XP] [Level] [Badges]
Learning Paths Section
- 2-3 path cards with progress
Continue Learning
- Last activity card
Recommended for You
- Horizontal scroll of cards

Visual Elements:

- Animated progress circles
- Icon-based stat cards
- Card grid/masonry layout
- Sticky header on scroll

Interactions:

- Click cards to navigate to activities

- Hover effects on all cards (lift + shadow)
- Search autocomplete
- Notification bell with badge counter
- Profile dropdown menu

Dynamic Content:

- Load user progress from API
- Display personalized recommendations
- Update streak counter
- Show unlocked badges

5. learning-path.html - Learning Track View

Purpose: Show all lessons in a specific learning path

Layout:



Visual States:

- Completed: Green checkmark, muted colors
- Current: Highlighted, "Continue" button
- Locked: Grayscale, lock icon
- Available: Full color, "Start" button

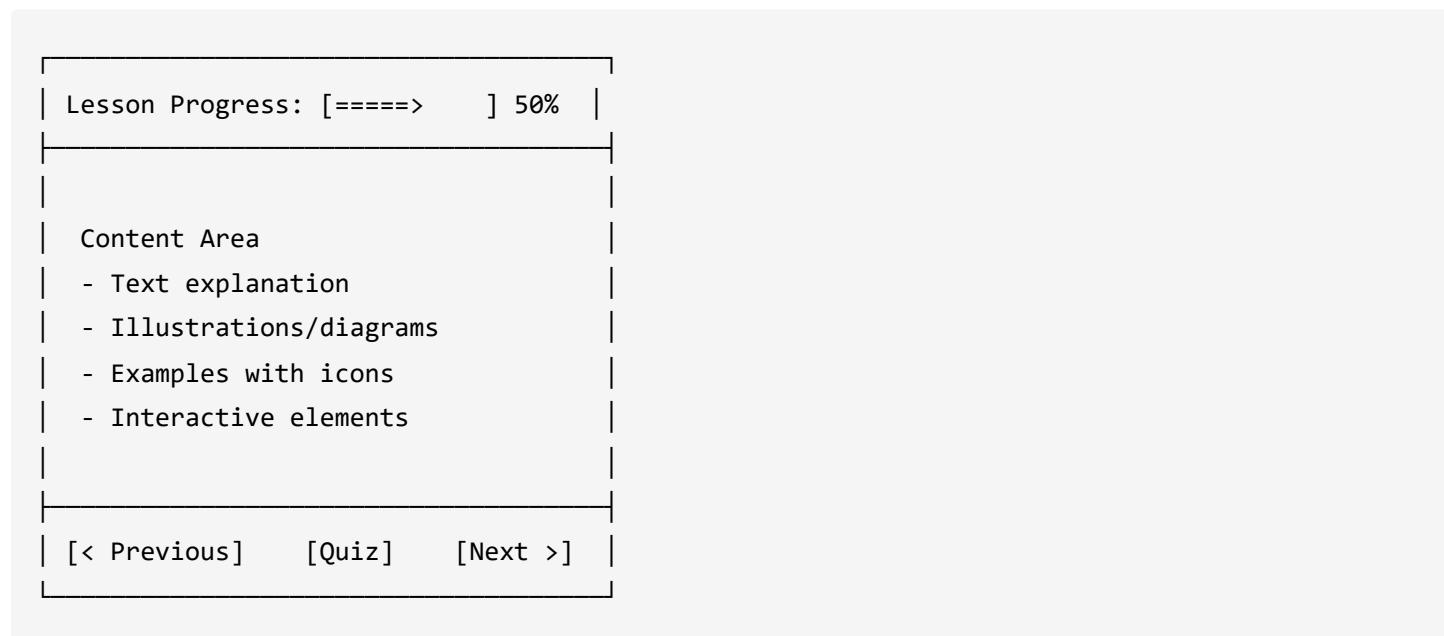
Interactions:

- Click lesson to open
 - Locked lessons show tooltip on hover
 - Progress bar animates on page load
 - Expand lesson for description
-

6. **lesson.html** - Individual Lesson

Purpose: Deliver educational content

Layout:



Content Types:

- **Text blocks:** Clear typography, highlighted key terms
- **Illustrations:** Visual representations of concepts
- **Examples:** Real-world scenarios with icons
- **Interactive demos:** Simple calculators, drag-and-drop
- **Mini-quizzes:** Knowledge checks (2-3 questions)

Interactions:

- Scroll progress tracking

- Highlight key terms (hover shows definition)
- Interactive calculators
- "Take Quiz" button appears after scrolling
- Auto-save progress

Visual Effects:

- Fade-in sections as user scrolls
 - Animated diagrams (CSS)
 - Hover tooltips on terms
 - Completion celebration when reaching end
-

7. quiz.html - Assessment Page

Purpose: Test knowledge and award XP

Layout:

Question 3 of 10
Timer: 2:45 (optional)
[Illustration/Icon]
What is profit?
<ul style="list-style-type: none"><input type="radio"/> A) Money earned<input type="radio"/> B) Revenue minus expenses<input type="radio"/> C) Total sales<input type="radio"/> D) Money saved
[Submit Answer]
Progress: ●●●○○○○○○

Question Types:

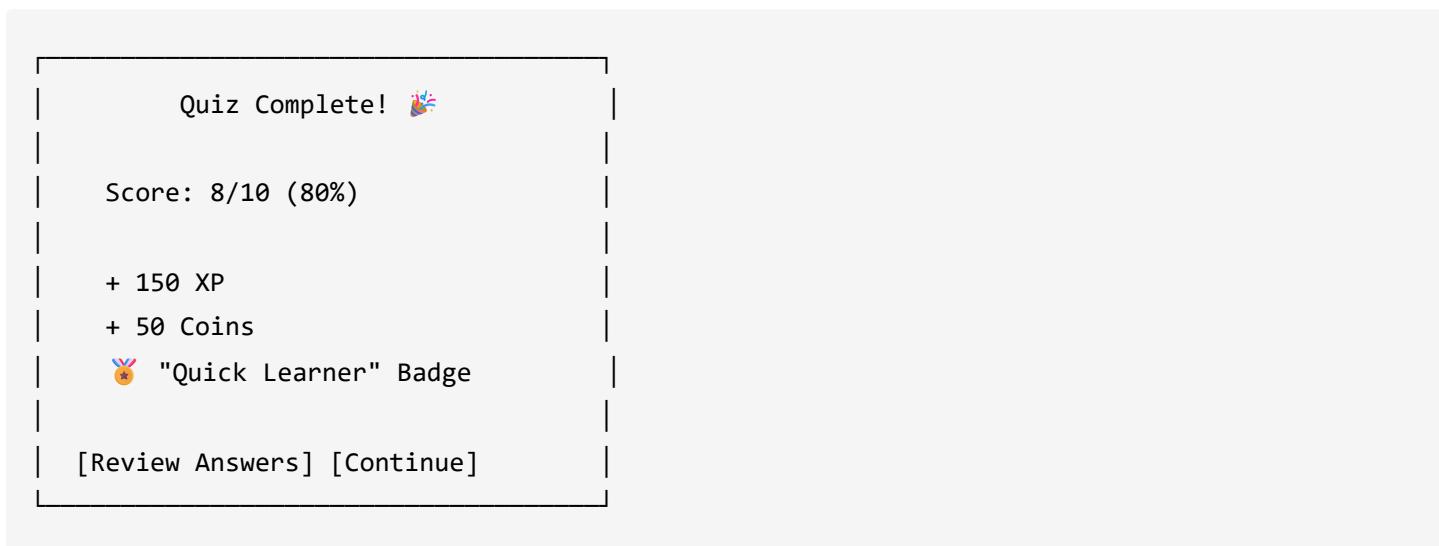
- Multiple choice
- True/False
- Fill in the blank

- Image-based selection

Interactions:

- Select answer (radio buttons with custom styling)
- Submit shows immediate feedback
 - Correct: Green background, checkmark, "+10 XP" animation
 - Incorrect: Red shake, show correct answer, explanation
- Progress dots update
- Next question fades in

Results Screen:



Visual Effects:

- Confetti animation on high scores
- Coin collection animation
- Badge unlock animation
- Progress bar fill animation

8. simulation.html - Business Simulation

Purpose: Apply knowledge in interactive scenarios

Example: Lemonade Stand Layout:

Day 1 of 5
Budget: \$20.00 Weather: ☀️
[🍋 Lemonade Stand Icon]
Your Inventory:
🍋 Lemons: 10 🍬 Sugar: 5
🥤 Cups: 20
Set Price: \$ [1.50] [-] [+]
[🛒 Buy More Supplies]
[▶ Start Selling]
Customer Feedback:
😊 "Good price!" (x3)
😢 "A bit expensive" (x1)

Day Results Screen:

Day 1 Results
Cups Sold: 12
Revenue: \$18.00
Expenses: \$10.00
Profit: \$8.00 ✓
[Next Day]

Simulation Features:

- Simple number inputs with +/- buttons
- Visual inventory tracking
- Random events (weather changes, competitors)
- Customer satisfaction meter
- Daily P&L calculation
- 5-day challenge

Interactions:

- Adjust prices with click
 - Buy supplies (modal popup)
 - "Sell" button triggers animation
 - Results auto-calculate
 - Final summary after 5 days
-

9. progress.html - Progress Tracking

Purpose: Visualize learning achievements

Layout:

Your Progress

Overall Stats

Level	XP	Time	Badge
5	2450	12hr	8

Learning Path Progress

Accounting Basics

80% (16/20)

Money Management

40% (6/15)

Activity Timeline

[Chart showing activity over time]

Skills Mastered

- ✓ Basic Addition
- ✓ Subtraction
- ✓ Revenue Calculation
- ⌚ Profit/Loss (In Progress)

Visual Elements:

- Circular progress indicators
- Bar charts for path completion
- Line/area chart for activity over time
- Skill checklist with icons
- Milestone markers

Interactions:

- Hover stats for details
 - Click path to view lessons
 - Expandable sections
 - Download progress report button
-

10. rewards.html - Badges & Achievements

Purpose: Display earned badges and locked achievements

Layout:

Your Achievements
Badge Collection
Earned (8):
 Badge Star Rich Data
Locked (24):
 ?? ?? ?? ??
Recent Achievements
<ul style="list-style-type: none"> "First Lesson" - 2 days ago "Quiz Master" - 5 days ago "5-Day Streak" - 1 week ago

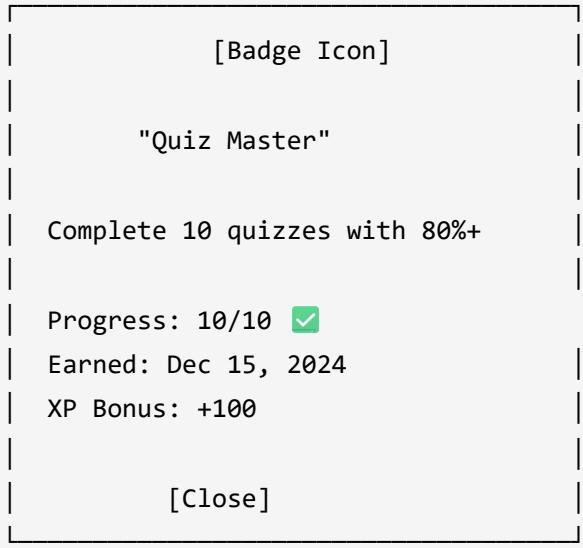
Badge States:

- Earned: Full color, clickable for details
- Locked: Grayscale with lock icon
- Almost there: Partial color, progress shown

Interactions:

- Click badge for modal with details
- Filter by category
- Share achievement (social media integration optional)
- Badge unlock animation on earn

Modal Details:



11. profile.html - User Profile & Settings

Purpose: Manage account and preferences

Sections:

Profile Card:

- Avatar display (icon-based, no uploads)
- Username
- Level & XP
- Member since date

Settings:

Account
|— Change password
|— Email preferences
|— Parent email

Preferences
|— Difficulty level (auto-adjust or manual)
|— Notification settings
|— Sound effects toggle
|— Dark mode toggle

Privacy
|— Profile visibility
|— Leaderboard participation

Danger Zone
|— Delete account

Visual Design:

- Tabbed interface or accordion sections
 - Toggle switches for boolean options
 - Input fields for text changes
 - Confirmation modals for important actions
-

12. parent-dashboard.html - Parent/Teacher Portal

Purpose: Monitor child's progress and assign content

Layout:

Parent Dashboard

Children Overview

Sarah (10)	Mike (8)
Level 12	Level 5
Active: 4d	Active: 2d

Sarah's Progress

This Week:
• 3 lessons completed
• 2 quizzes passed
• 45 minutes learning time

Activity Chart
[Bar chart of daily activity]

Assign Content
[Search lessons] [Assign]

Reports
[Download Progress Report]

Features:

- Switch between multiple children
- View detailed progress reports
- Assign specific lessons/paths
- Set goals and deadlines
- Export PDF reports
- Receive email summaries

Visual Style:

- Professional, clean design
- Data-focused layout
- Charts and graphs for analytics
- Less colorful than kid interface

Key Interactions Across All Pages

Navigation

- Persistent header with logo (home link) and user menu
- Breadcrumb navigation on internal pages
- Back button where appropriate
- Mobile: Hamburger menu

Notifications

- Toast messages for actions (top-right)
- Badge counter on notification bell
- Dropdown list of recent notifications

Modals

- Confirmation dialogs (delete, logout)
- Detail views (badge info, lesson preview)
- Forms (buy supplies, adjust settings)

Loading States

- Skeleton screens while loading content
- Spinner for quick actions
- Progress bar for longer operations

Error Handling

- Inline validation messages
 - Error page for 404/500
 - Friendly error messages with recovery options
-

Data Flow

User Authentication

```
signup.html → POST /api/register → Success → login.html  
login.html → POST /api/login → Success → dashboard.html  
All pages → Check auth token → Redirect to login if invalid
```

Content Loading

```
dashboard.html → GET /api/user/progress → Display stats  
learning-path.html → GET /api/paths/:id → Display lessons  
lesson.html → GET /api/lessons/:id → Display content  
quiz.html → GET /api/quizzes/:id → Display questions  
          ↓ POST /api/quizzes/:id/submit → Save score  
simulation.html → GET /api/simulations/:id → Display scenario  
          ↓ POST /api/simulations/:id/complete → Save results
```

Progress Tracking

```
Every action → POST /api/progress/update → Update user stats  
Lesson complete → Award XP → Check level up → Show animation  
Quiz passed → Award coins → Check badges → Unlock if earned
```

Priority Implementation Order

Phase 1: MVP

1. Landing page (index.html)
2. Auth pages (signup.html, login.html)
3. Dashboard (dashboard.html)
4. Single lesson page (lesson.html)
5. Basic quiz (quiz.html)

Phase 2: Core Features

6. Learning path view (learning-path.html)
7. Progress page (progress.html)

8. Profile page (profile.html)

Phase 3: Gamification

9. Rewards page (rewards.html)

10. Simulation (simulation.html)

11. Enhanced animations

Phase 4: Parent Features

12. Parent dashboard (parent-dashboard.html)

13. Reporting features

14. Assignment system

This structure provides a complete, buildable webapp with clear page purposes and implementation guidelines.