

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:

Path Header

- Title + Description

- Overall Progress: 60%

- Time to complete: ~5 hours

Lesson List (Vertical)

[✓] Lesson 1: What is Money?

Completed - 100 XP

[▶] Lesson 2: Earning Money

In Progress - 50/100 XP

[🔒] Lesson 3: Saving Money

Unlock at Level 5

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:

Lesson Progress: [====>] 50%
Content Area
- Text explanation
- Illustrations/diagrams
- Examples with icons
- Interactive elements
[< Previous] [Quiz] [Next >]

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)
<div>[Illustration/Icon]</div> <p>What is profit?</p> <ul style="list-style-type: none">○ A) Money earned○ B) Revenue minus expenses○ C) Total sales○ D) Money saved
<div>[Submit Answer]</div>
Progress: ●●○○○○○○○○

Question Types:

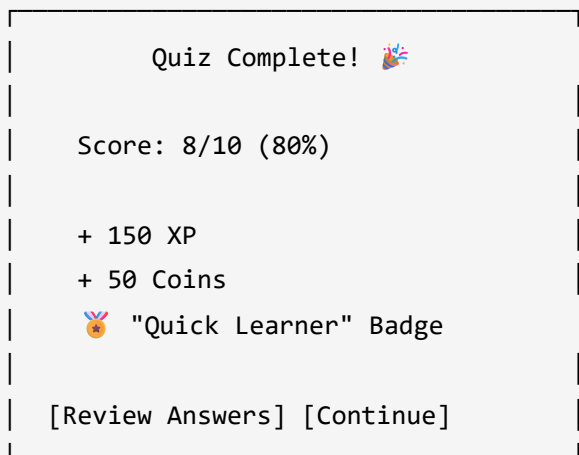
- Multiple choice
- True/False
- Fill in the blank

- 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!" (×3)

😬 "A bit expensive" (×1)

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

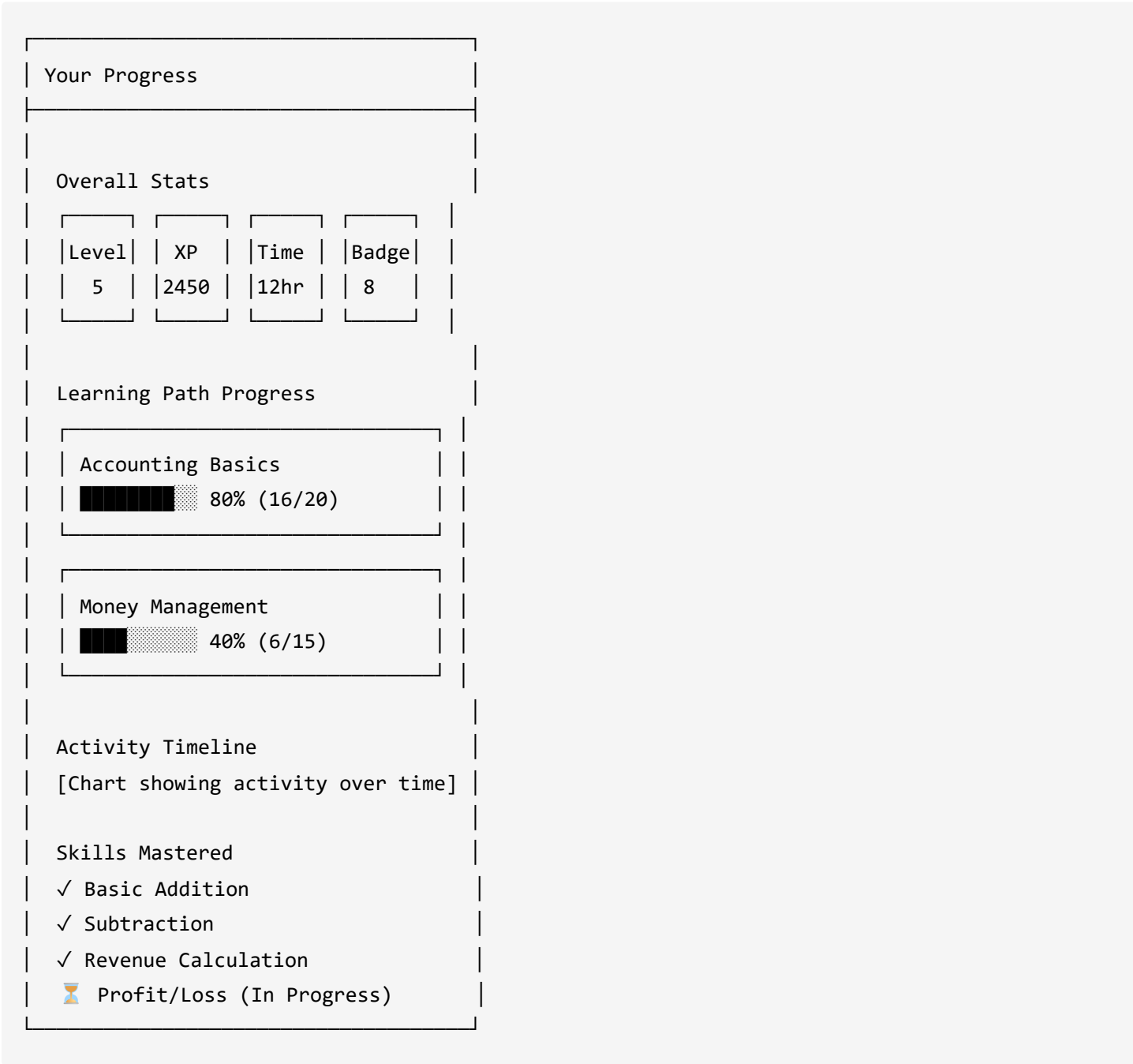
Interactions:

- 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:



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 			

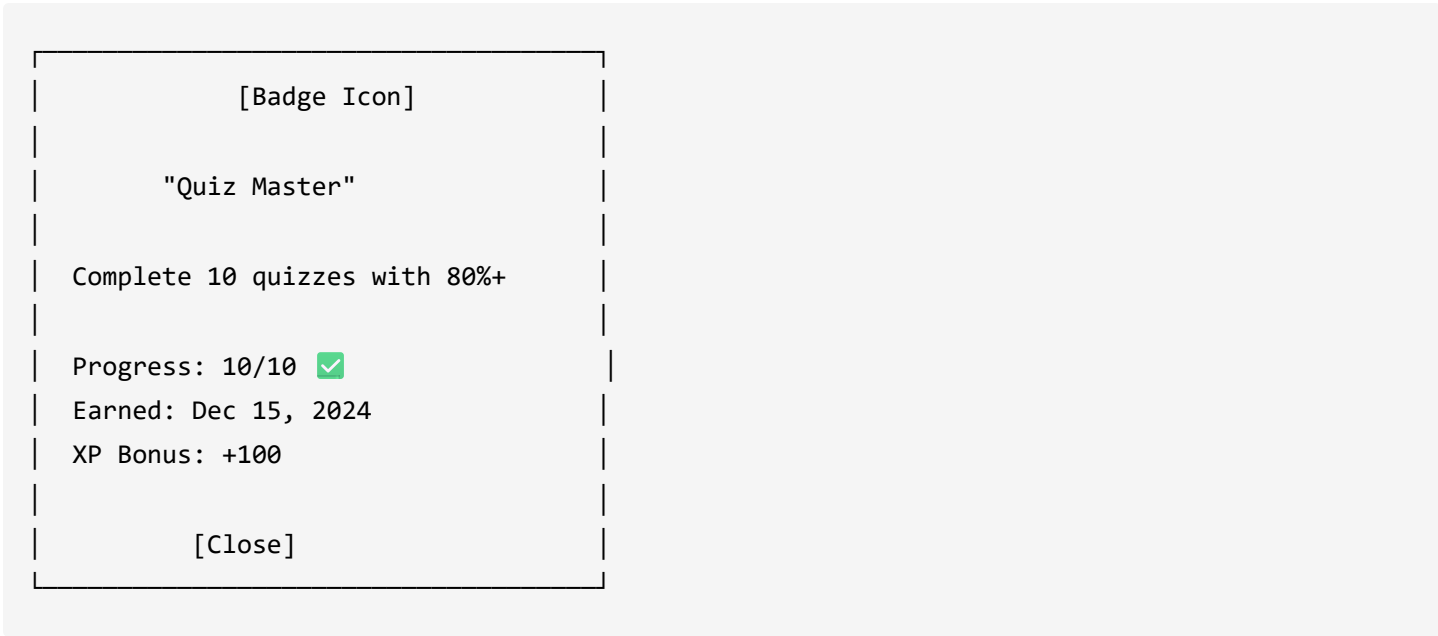
Badge States:

- 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	
<div>Sarah (10)</div> <div>Level 12</div> <div>Active: 4d</div>	<div>Mike (8)</div> <div>Level 5</div> <div>Active: 2d</div>
Sarah's Progress	
<div>This Week:</div> <ul style="list-style-type: none"> 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.