



Financial Literacy Platform - Comprehensive Documentation

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. Executive Summary

The Financial Literacy Platform is an innovative, gamified educational system designed to teach financial concepts to school students through interactive, level-based learning. The platform serves three primary user types - Students, Teachers, and Parents - each with tailored interfaces and functionalities.

Key Features

- Gamified learning experience with badges, streaks, and rewards
 - Progressive level-based curriculum with unlock mechanisms
 - Multi-user support (Students, Teachers, Parents)
 - Real-time progress tracking
 - Teacher-managed authentication system
 - Responsive design for all devices
-

. About the Creator

Aditya Tripathi

Student at SP Jain School of Global Management

I am a passionate technologist and education enthusiast currently pursuing my studies at SP Jain School of Global Management.

. Project Overview

. Vision Statement

To create an engaging, accessible platform that transforms financial education for school students through gamification, making complex financial concepts simple, fun, and memorable.

- **Core Learning Modules**

Foundation Level (Ages 8-12)

Money Basics



Needs vs Wants

Simple Budgeting

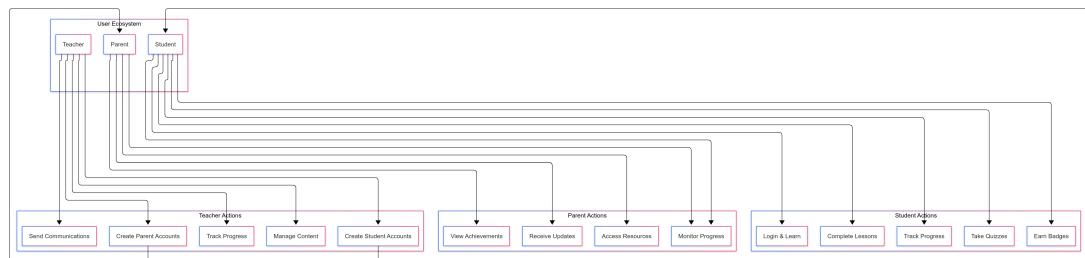
Saving Goals

Intermediate Level (Ages 13-15)

Banking & Accounts

Core Learning Modules

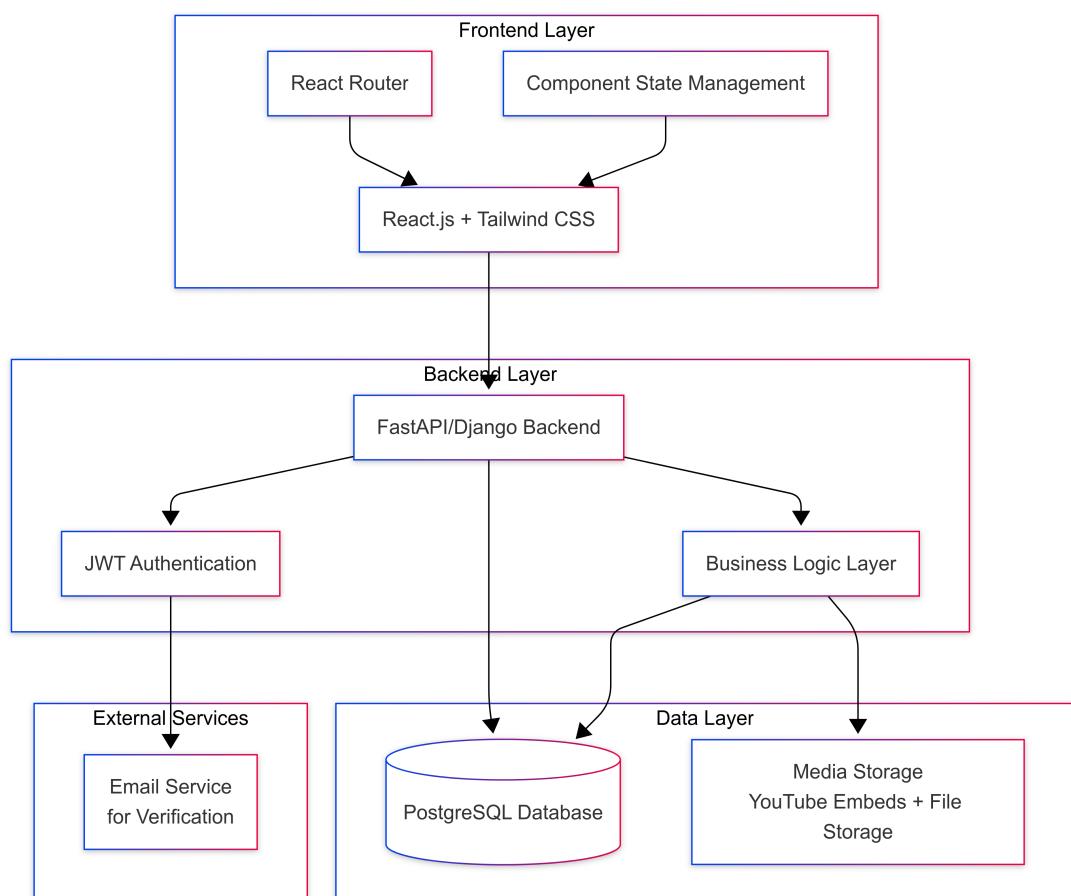
User Roles Overview



User Roles Overview

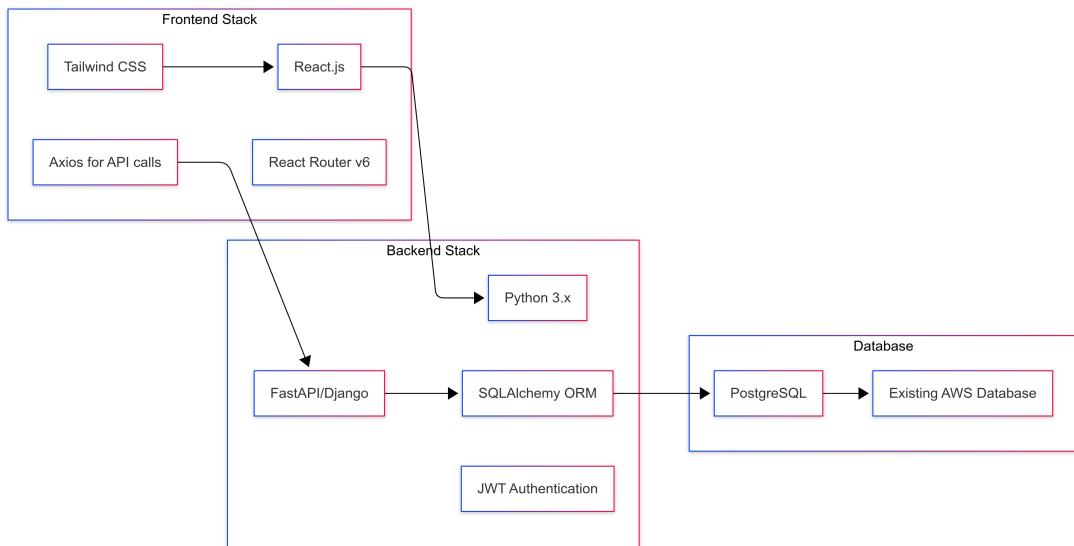
Technical Architecture

System Architecture Overview



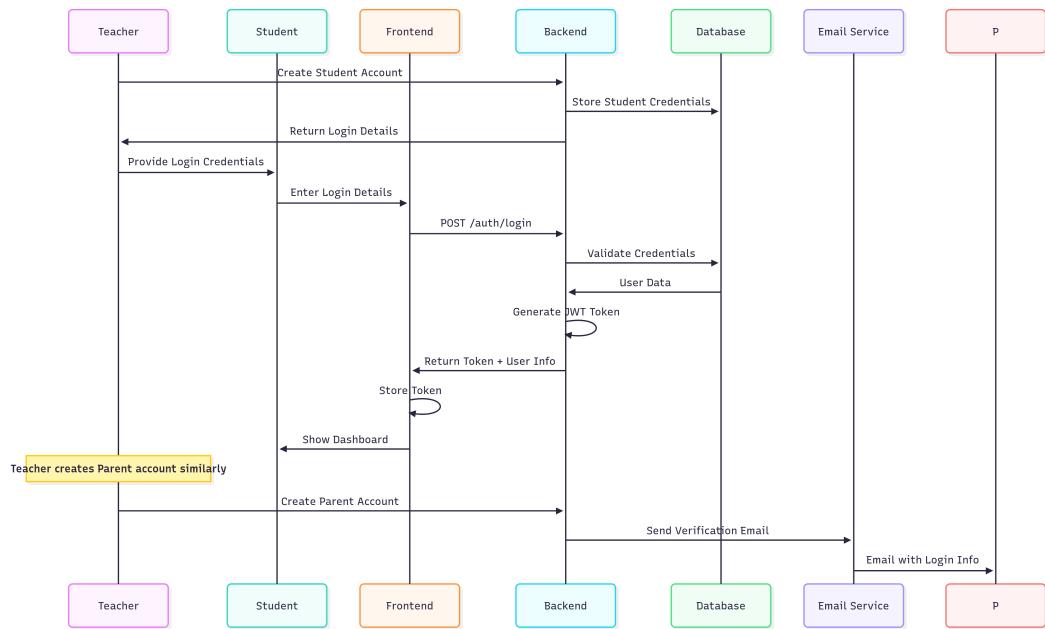
System Architecture Overview

Technology Stack Details



Technology Stack Details

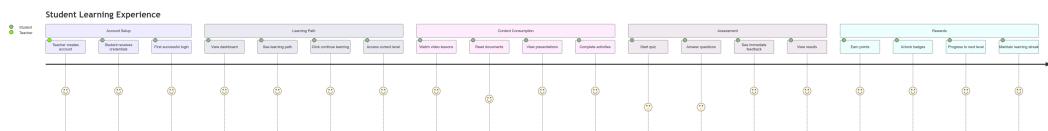
Authentication Flow



Authentication Flow

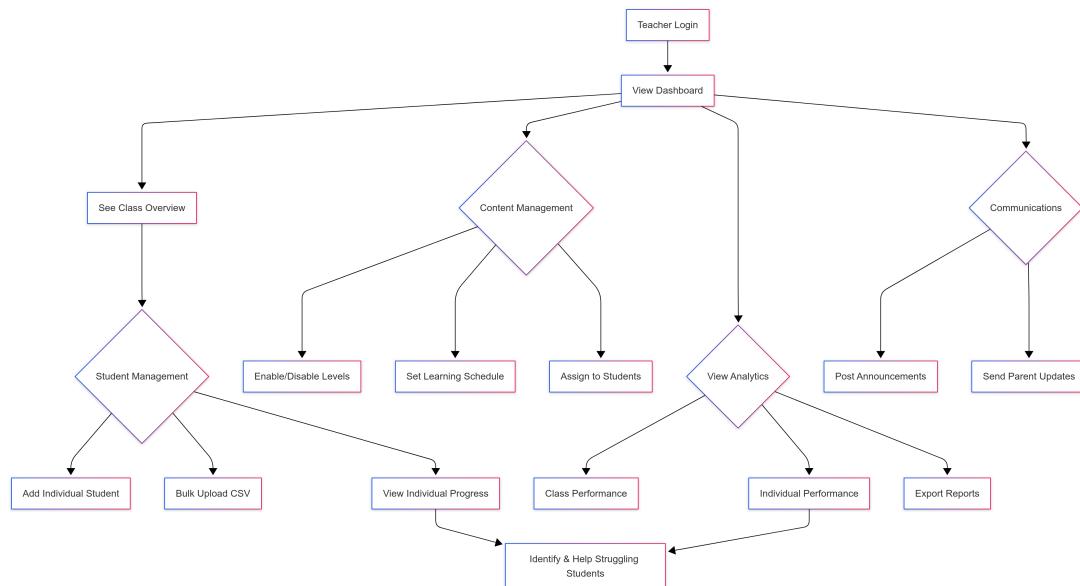
User Journeys

Complete Student Journey



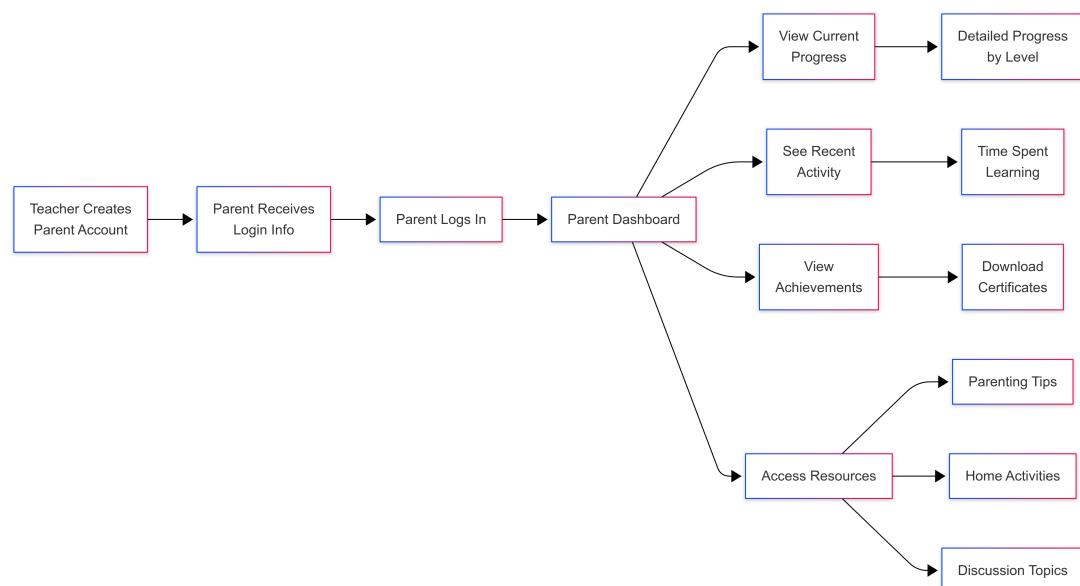
Complete Student Journey

Teacher Workflow



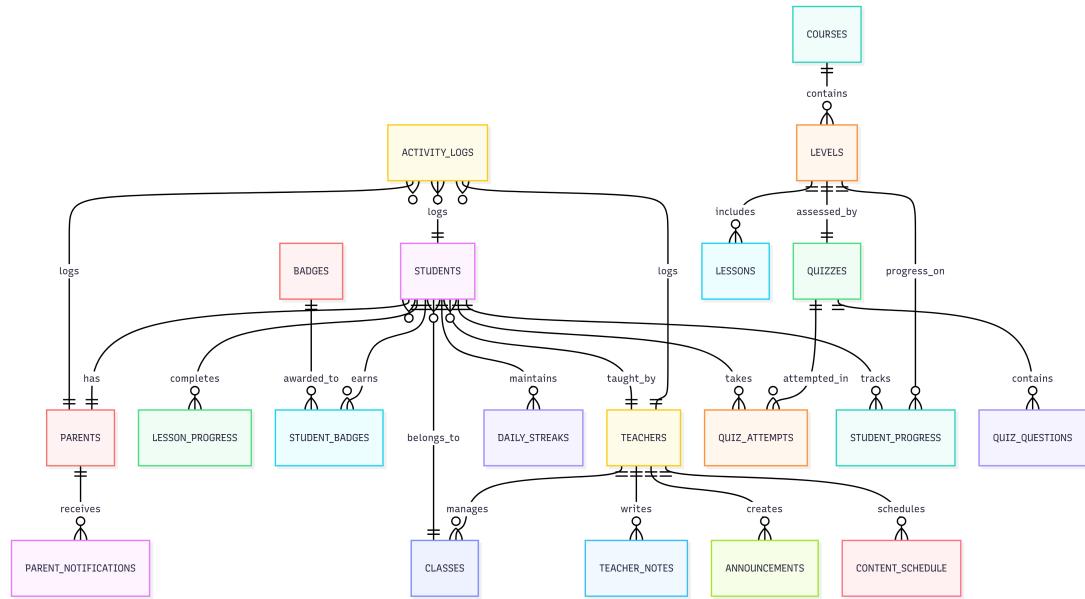
Teacher Workflow

Parent Engagement Flow



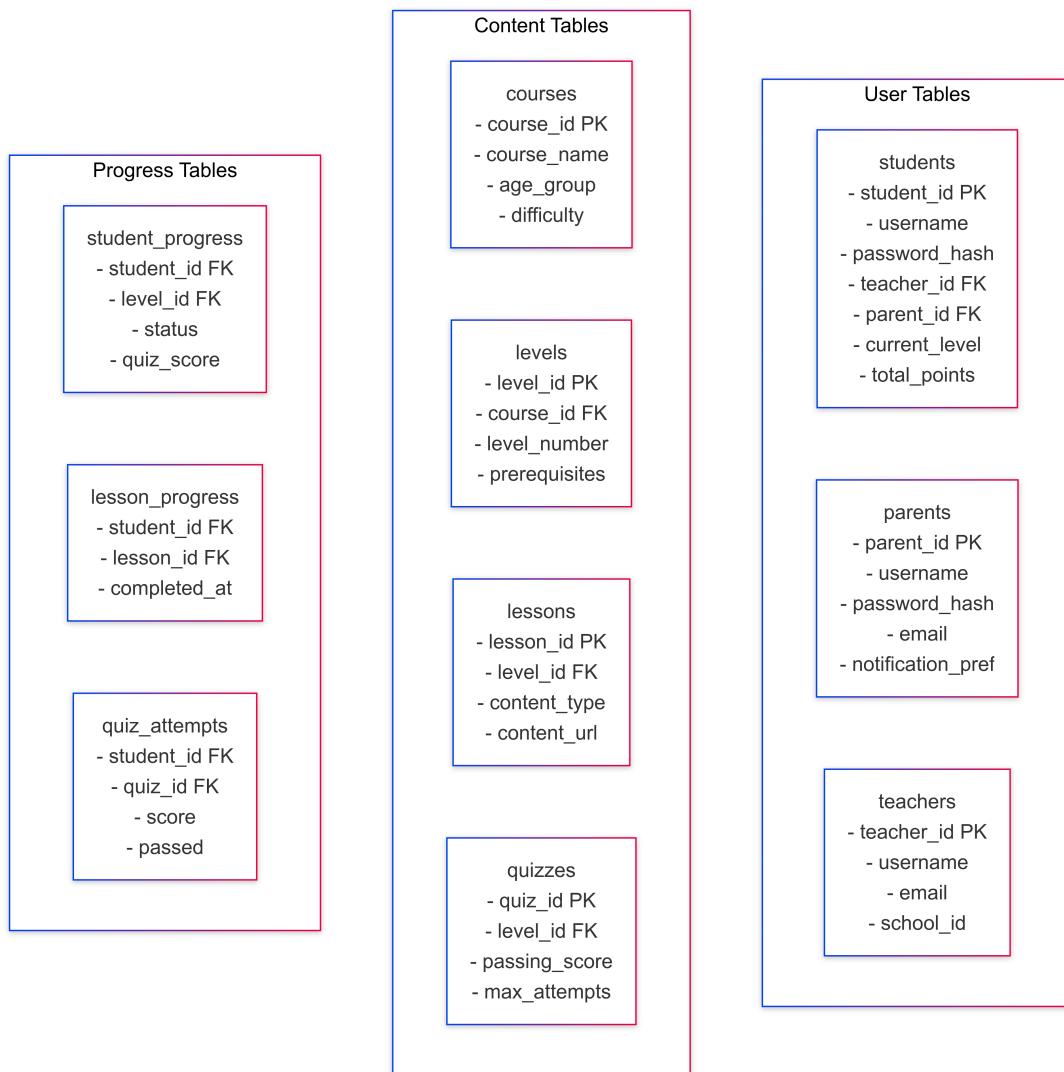
Parent Engagement Flow

- . Database Schema
- . Complete Entity Relationship Diagram



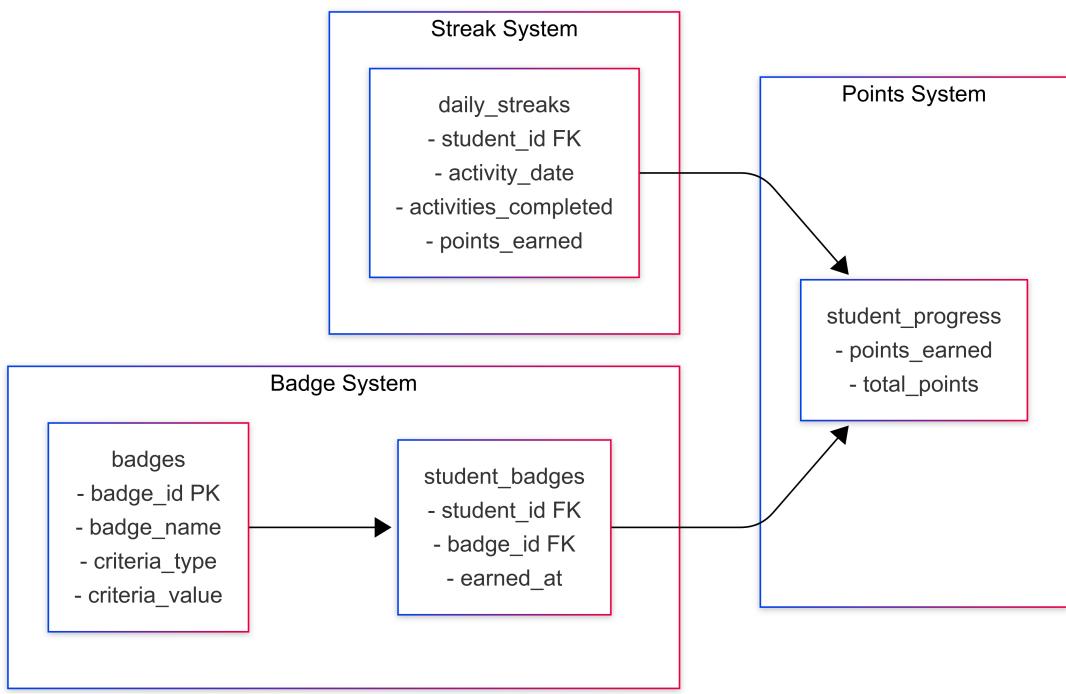
Complete Entity Relationship Diagram

Core Tables Structure



Core Tables Structure

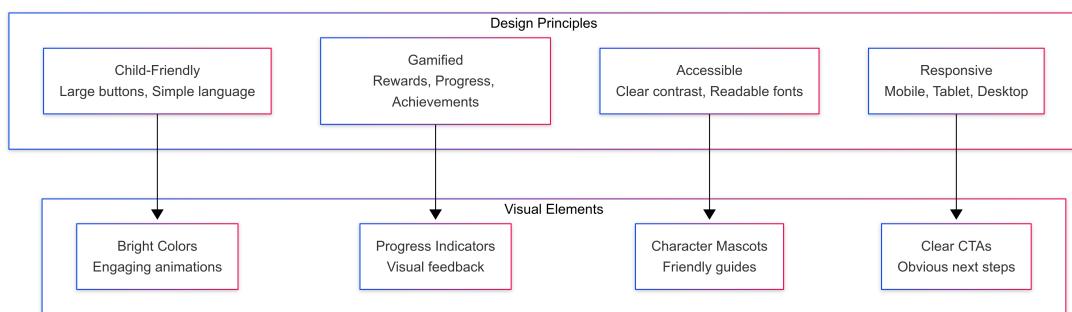
Gamification Tables



Gamification Tables

UI/UX Design

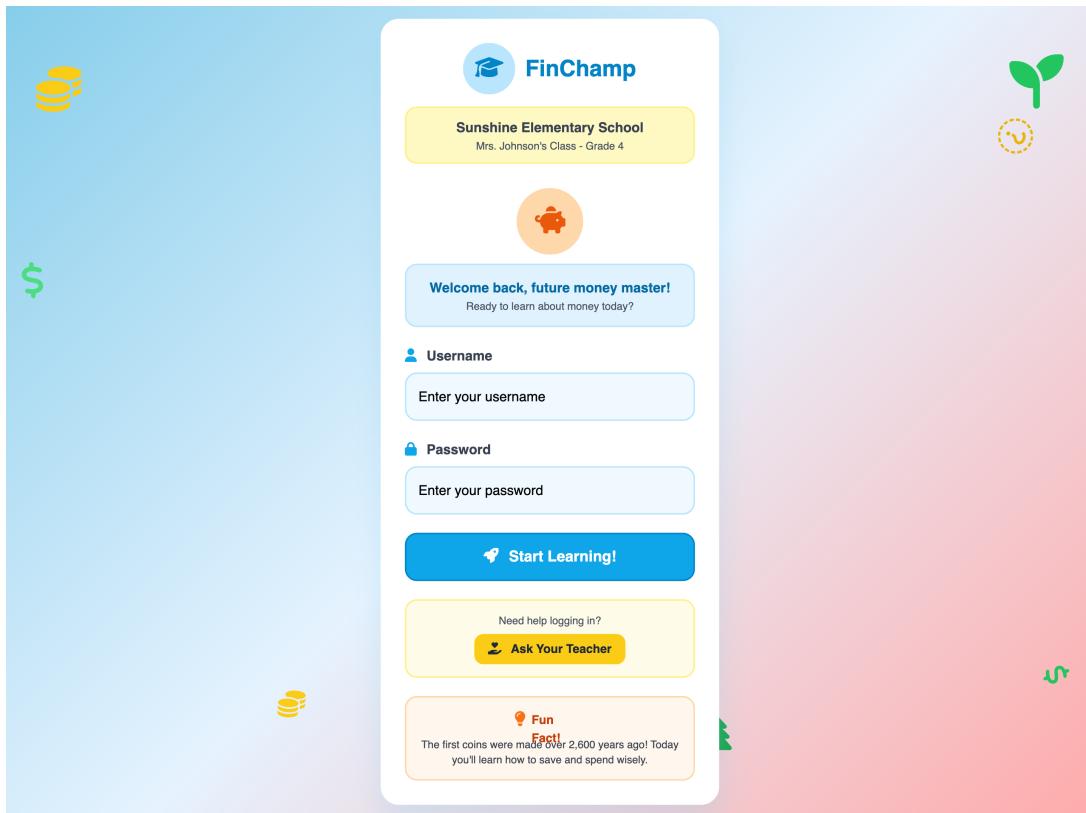
Design System Overview



Design System Overview

Student Interface Pages

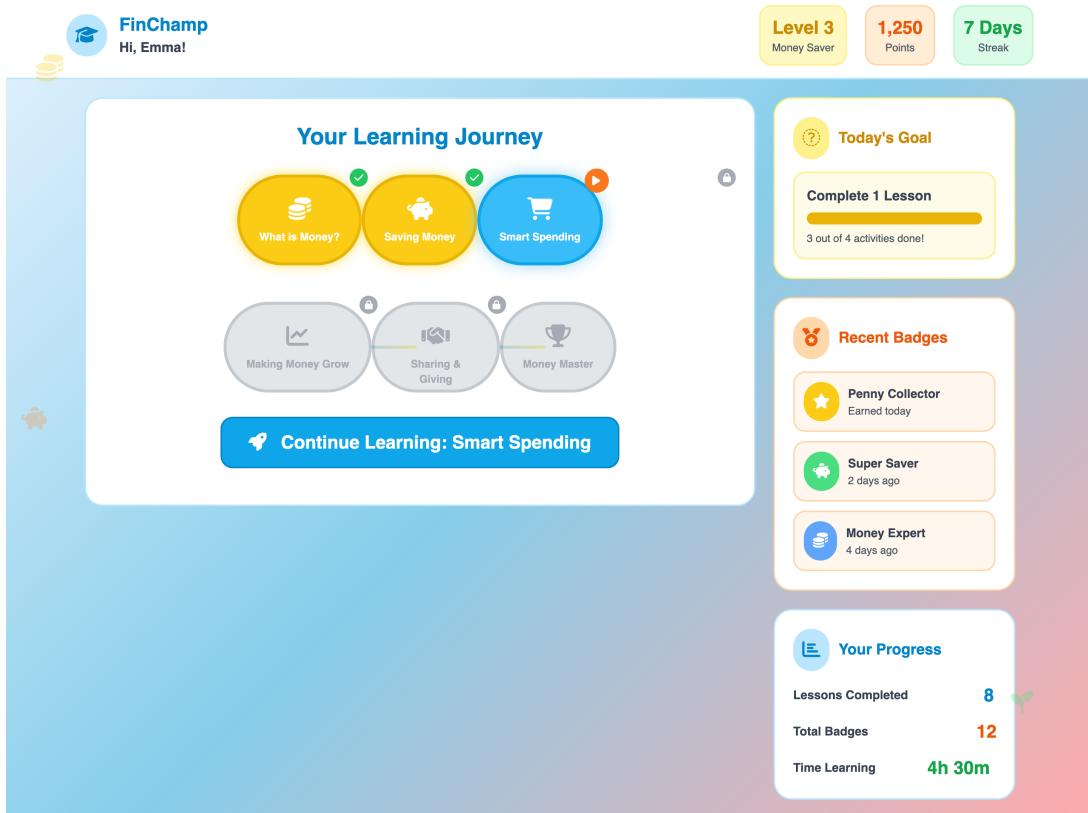
Student Login Page



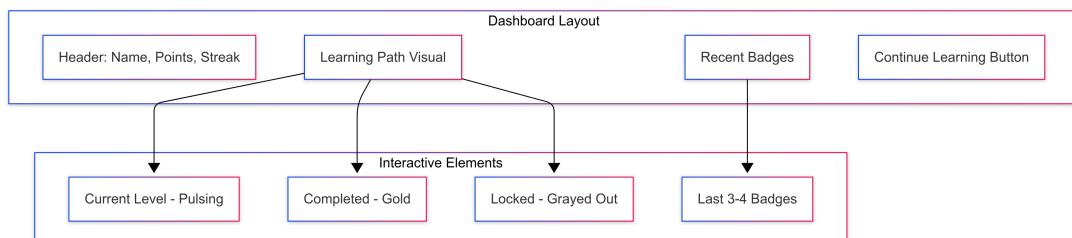
Student Login Page

Design Elements: - Simple username/password fields - Colorful, animated background - School branding - “Ask Teacher for Help” link - No registration option (teacher-managed)

Student Dashboard



Student Dashboard UI



Student Dashboard

Learning Page

FinChamp
Smart Spending Lesson

Emma

Lesson Progress 3 of 5 Complete

Video Reading Story Activity Quiz

Maya's Shopping Adventure

Learn about smart spending through Maya's story

Meet Maya
She has \$20 to spend at the store

Maya walked into the colorful toy store with her \$20 allowance money. Her eyes sparkled as she saw all the amazing toys around her!

First, she spotted a shiny new video game for \$25. "Oh wow!" she thought, but then remembered her mom's advice about **budgeting**.

Maya realized the video game cost more than her \$20, so she kept looking. She found three things she really wanted:

Puzzle Game \$8	Art Set \$12	Story Book \$5
---------------------------	------------------------	--------------------------

Maya did some quick math in her head. If she bought all three items, it would cost $\$8 + \$12 + \$5 = \25 . That was \$5 more than she had!

She remembered learning about **needs vs wants**. Maya thought carefully about which items would make her happiest and which ones she could save up for later.

After thinking it through, Maya decided to buy the puzzle game and the story book for \$13 total. This left her with \$7 to save for something special next time!

Maya's Smart Choice!
She stayed within her budget and still got two things she wanted. Plus, she saved money for the future!

← Previous Continue to Activity →

Level 3 > Smart Spending > **Maya's Story**

Text Size:

Learning Page

Content Types Supported: - YouTube video embeds - Document viewers - PPT presentations - Personal/instructor videos - Interactive activities

Quiz Page

← FinChamp
Smart Spending Quiz

Emma 850 pts

Question 3 of 5

2 Correct!

?

Quiz Challenge!

Choose the best answer

Maya has \$15 and wants to buy a toy that costs \$18. What should she do?

A Ask her parents for more money right away

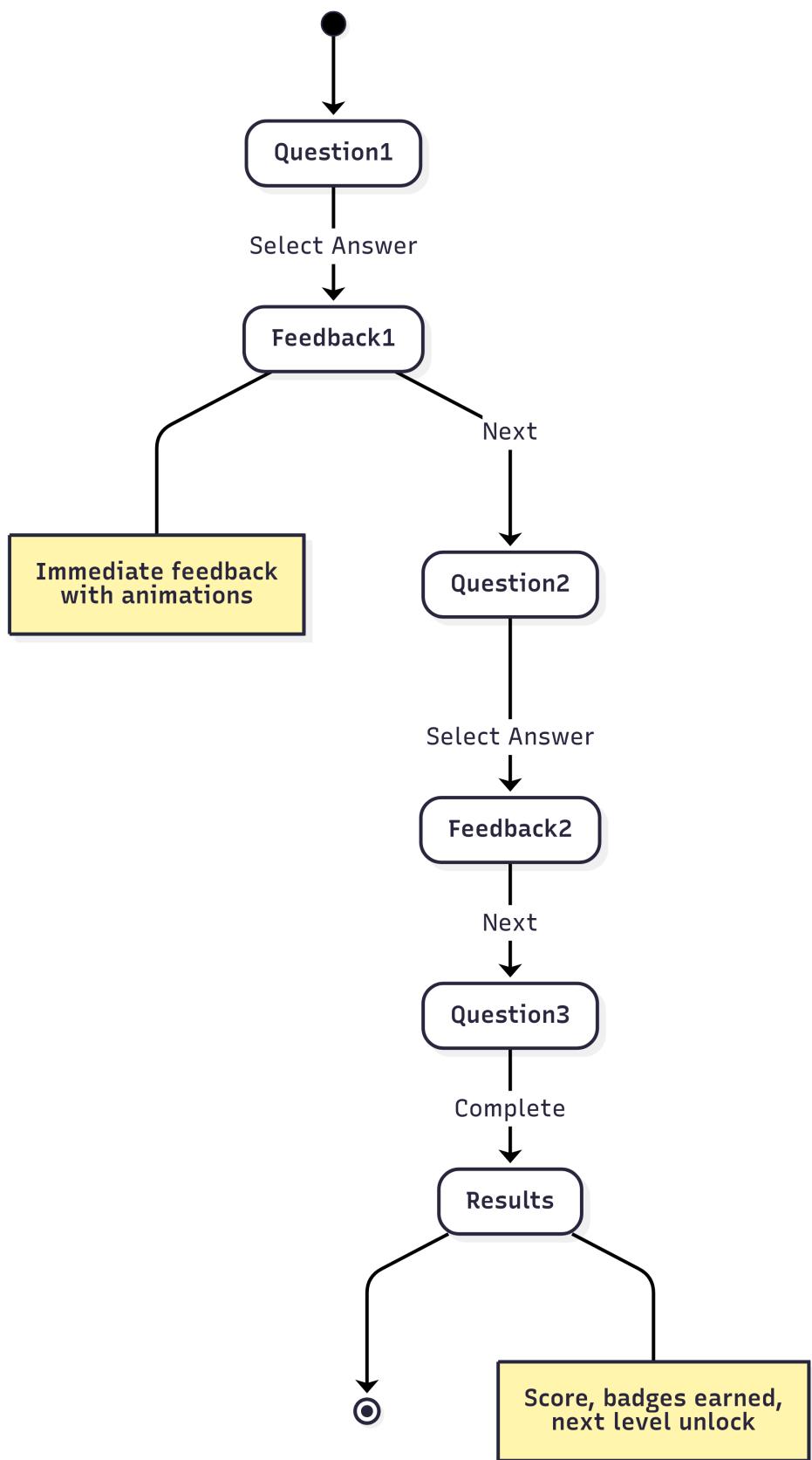
B Save more money until she has enough to buy it

C Buy the toy anyway and worry about the money later

D Look for a similar toy that costs \$15 or less

Level 3 > Smart Spending > Quiz Challenge

Quiz Page



Quiz Page

Teacher Interface Pages

Teacher Dashboard

The dashboard features a header with the FinChamp logo and a notifications section for Ms. Johnson, Grade 3 Teacher.

Key Metrics:

- Total Students: 24 (In your class)
- Average Progress: 78% (Class performance)
- Active Today: 18 (Students online)
- Pending Actions: 6 (Need attention)

Quick Actions:

- Add Students
- Assign Content
- View Reports
- Send Announcement

Today's Schedule:

- Morning Circle: 9:00 AM - 9:30 AM
- Financial Literacy: 10:00 AM - 11:00 AM
- Interactive Games: 2:00 PM - 3:00 PM

Real-Time Activity Feed:

- Alex completed "Saving Money" lesson 2 minutes ago
- Emma is currently online 5 minutes ago
- Marcus needs help with budgeting quiz 15 minutes ago
- Sofia earned 50 coins! 30 minutes ago

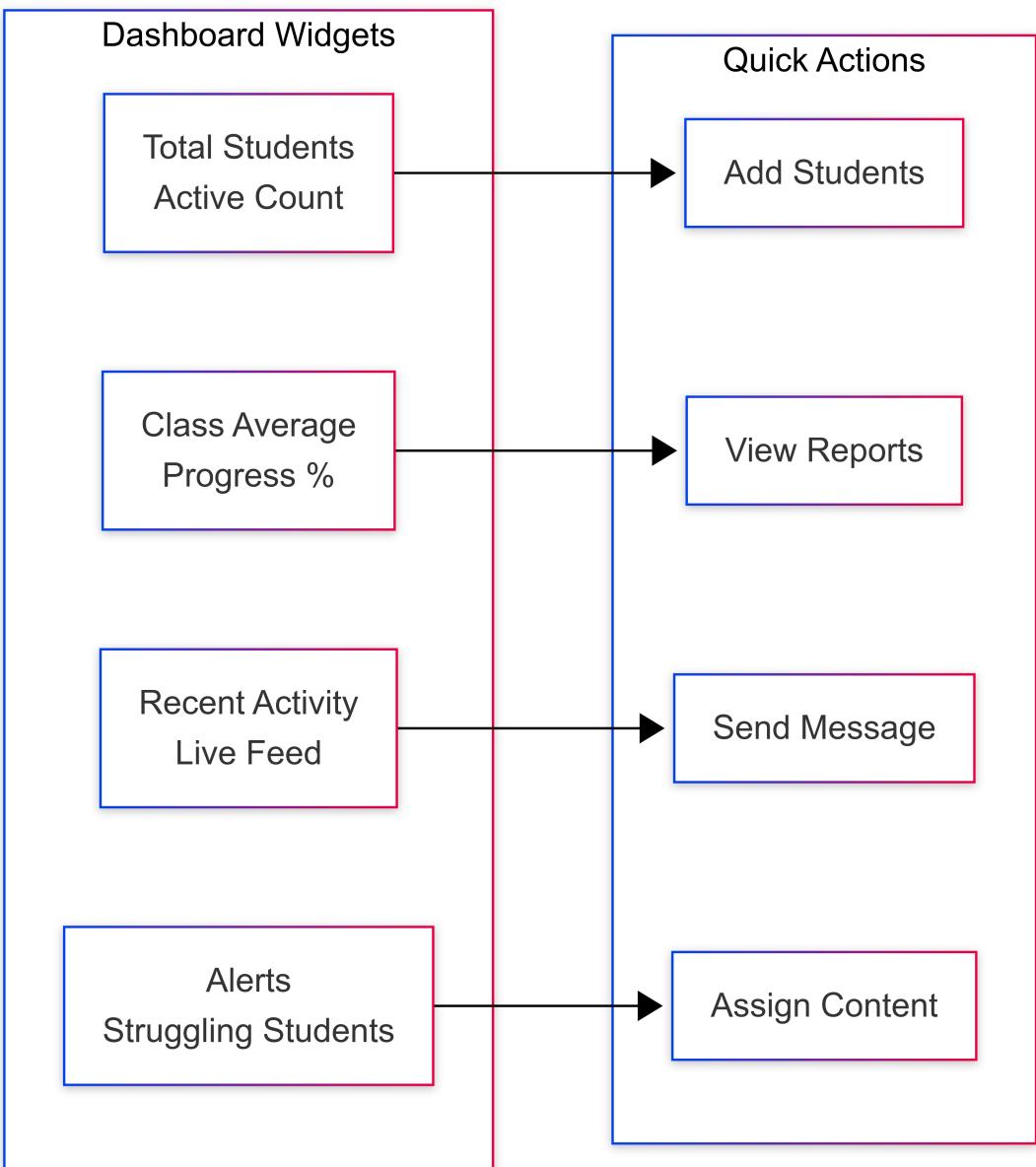
Upcoming Deadlines:

- Spending Quiz (Due: Tomorrow)
- Savings Challenge (Due: Friday)

Students Needing Attention:

- Jake (Failed last quiz)
- Lily (Inactive 3 days)
- Ryan (Struggling with concepts)

Teacher Dashboard



Teacher Dashboard

Class Management



FinChamp
Class Management

[Dashboard](#)  Ms. Johnson
Grade 3 Teacher

Class Management

Manage your students, track progress, and take bulk actions

<input type="checkbox"/>	Student	Username	Level	Progress	Last Active	Quiz Average	Status	Actions
<input type="checkbox"/>	Alex Johnson ID: AJ001	alex_j_001	Level 5	<div style="width: 85%;">85%</div>	2 hours ago	92%	On Track	
<input type="checkbox"/>	Emma ID: ED002	emma_d_002	Level 3	<div style="width: 65%;">65%</div>	Online now	78%	Attention	
<input type="checkbox"/>	Marcus Wilson ID: MW003	marcus_w_003	Level 2	<div style="width: 35%;">35%</div>	3 days ago	45%	Struggling	
<input type="checkbox"/>	Sofia Martinez ID: SM004	sofia_m_004	Level 7	<div style="width: 95%;">95%</div>	1 hour ago	96%	Excellent	
<input type="checkbox"/>	Jake Thompson ID: JT005	jake_t_005	Level 4	<div style="width: 72%;">72%</div>	5 hours ago			

[All Students](#) [All Levels](#) [Activity: All](#) [!\[\]\(29c6cf7cedccbd37ec7df41fcba17c1a_img.jpg\) Bulk Upload](#) [!\[\]\(91eb71006112b6d41e720063565cd341_img.jpg\) Export](#) [!\[\]\(949642815f4b6c583ec750f2288693e2_img.jpg\) Add Student](#)

Class Management

Features: - Sortable student table - Progress indicators - Bulk actions toolbar - Individual student details - Password reset options

Parent Interface Pages

Parent Dashboard

The screenshot shows the FinChamp Parent Portal dashboard for Emma Johnson, Grade 4, Age 9. At the top, there's a header with the portal logo and name, and a user profile for Sarah Johnson. The main area features a child overview card for Emma, showing her level (Level 5, Money Master), overall progress (72%), and a progress bar indicating 18 of 25 lessons completed. Below this are four summary cards: Current Streak (7 days), Time Spent (24h), Quiz Average (85%), and Badges Earned (12). The Learning Timeline section lists completed levels (Level 5: Smart Shopping, Level 4: Saving Goals) and an in-progress level (Level 6: Banking Basics at 60% complete). The Recent Activity feed shows recent badge earnings and quiz completions. A call-to-action button at the bottom encourages users to view detailed progress reports.

FinChamp Parent Portal
Sunshine Elementary School

Emma Johnson
Grade 4 • Age 9

Level 5
Money Master

Overall Progress 72%
18 of 25 lessons completed

Current Streak 7 days in a row

Time Spent 24h learning this month

Quiz Average 85% across all lessons

Badges Earned 12 achievements unlocked

Learning Timeline

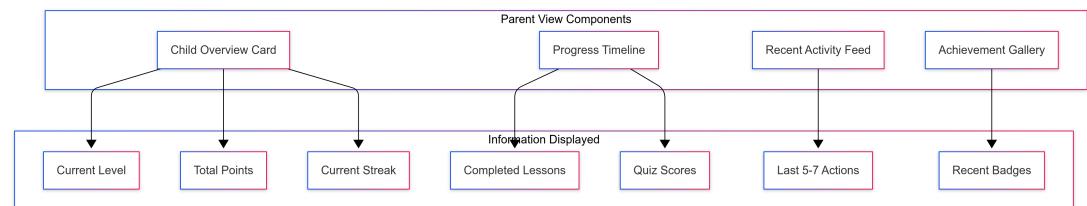
- Level 5: Smart Shopping
Completed • Today 3:45 PM 100%
- Level 4: Saving Goals
Completed • Yesterday 4:20 PM 92%
- Level 6: Banking Basics
In Progress • 60% Complete 60%
- Level 7: Investment Intro
Locked • Complete Level 6 to unlock 0%

Recent Activity

- Earned "Smart Shopper" badge Today 3:45 PM
- Completed Quiz: Price Comparison Today 3:30 PM
- Started Level 5: Smart Shopping Today 3:15 PM
- 7-day learning streak! Yesterday 4:20 PM
- Completed Level 4: Saving Goals Yesterday 4:20 PM

Want More Details?
Get comprehensive insights into Emma's learning journey, quiz performance, and skill development.
[View Detailed Progress Report](#)

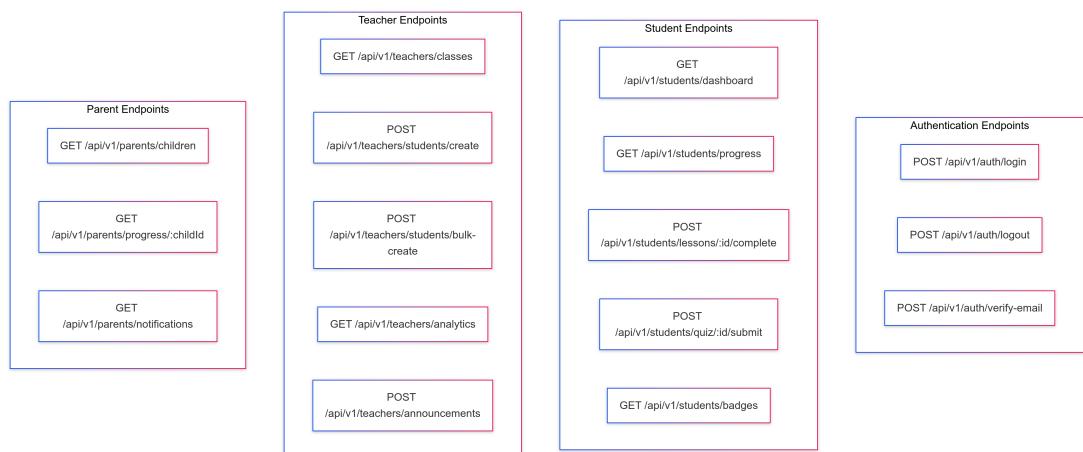
Parent Dashboard



Parent Dashboard

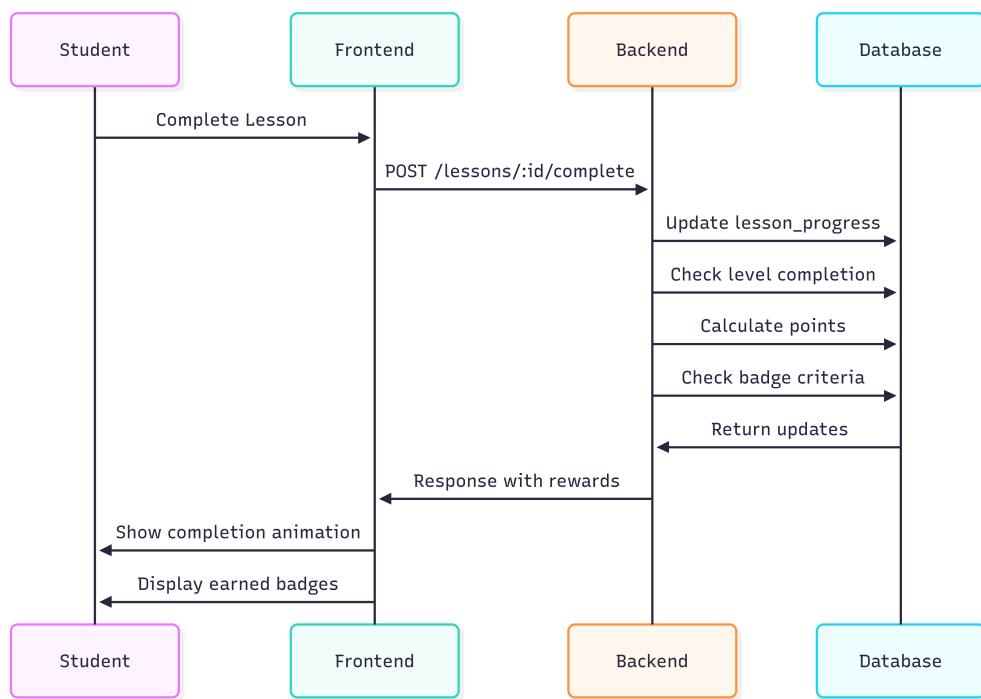
API Structure

API Endpoint Organization



API Endpoint Organization

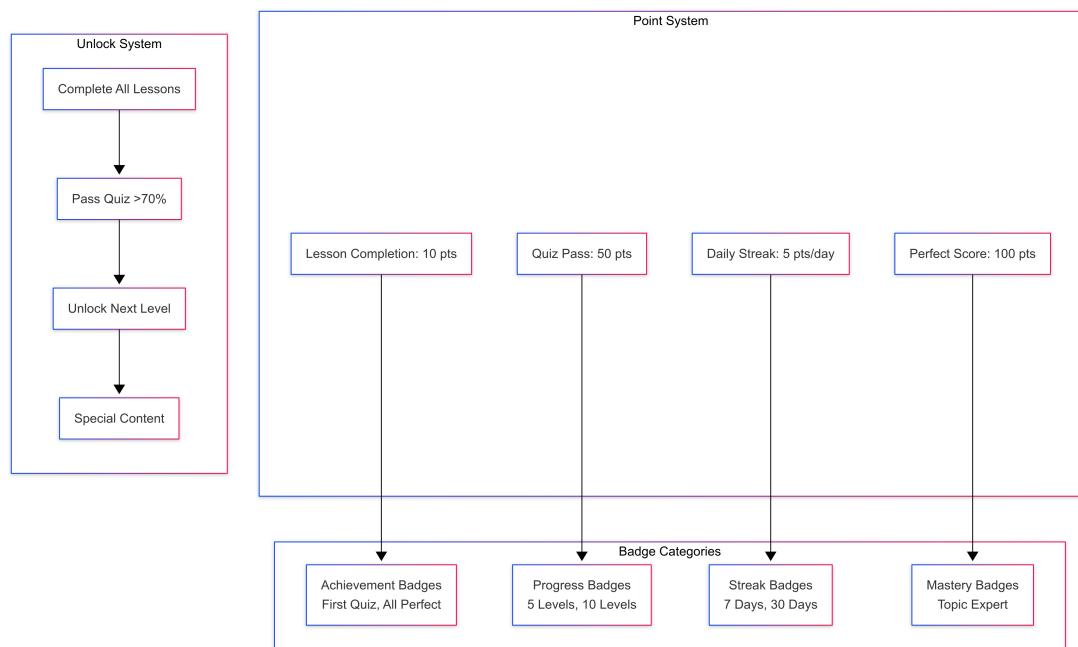
Data Flow Example



Data Flow Example

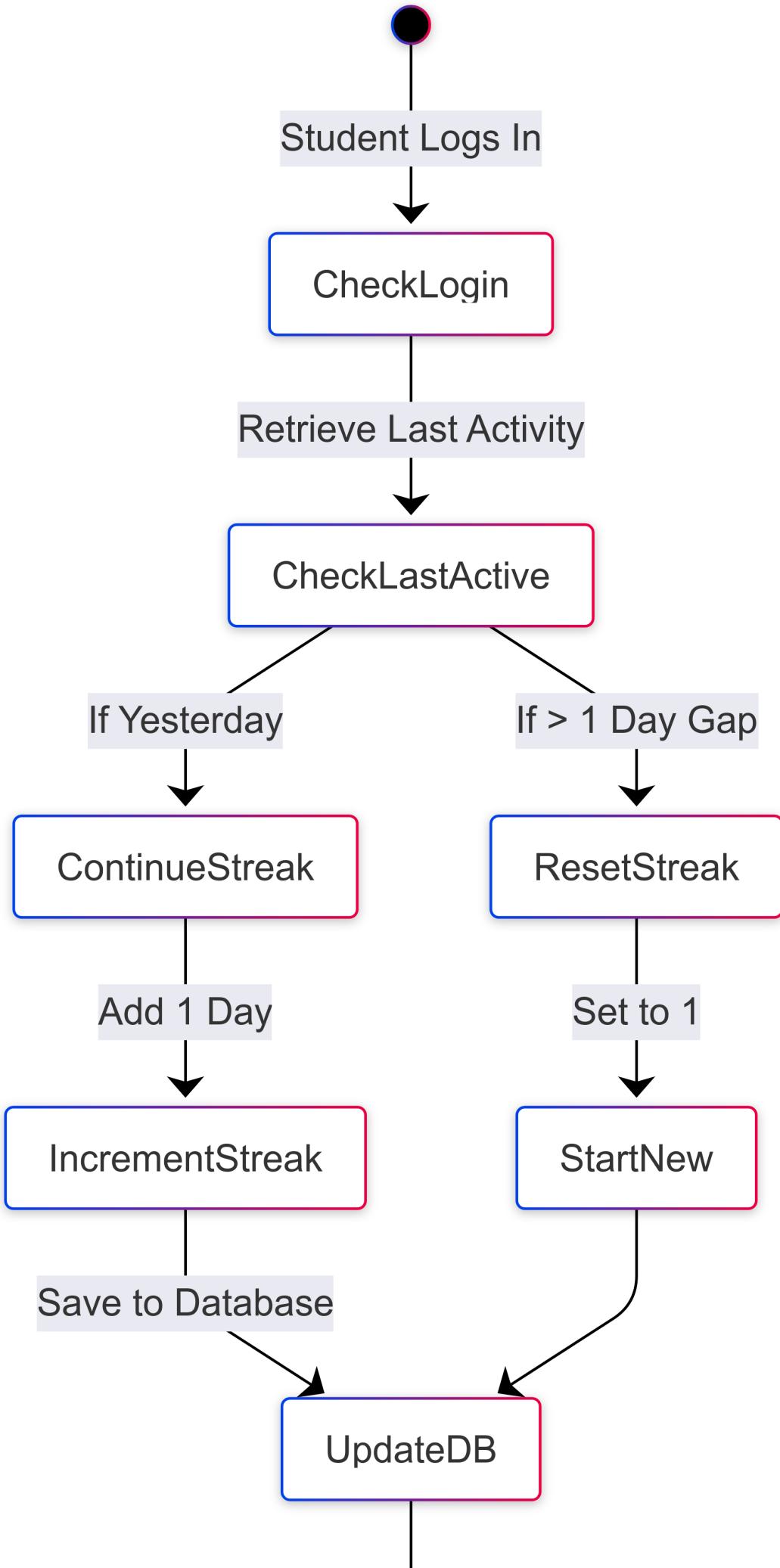
. Gamification System

. Gamification Elements



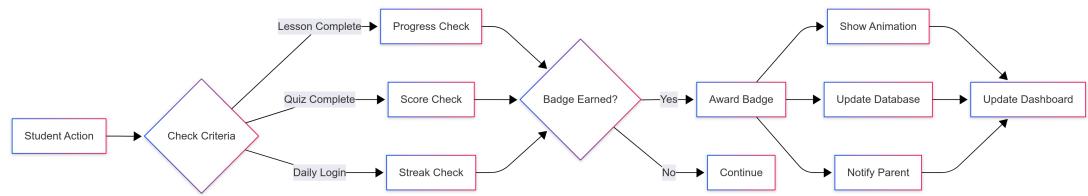
Gamification Elements

- **Streak Calculation Logic**



Streak Calculation Logic

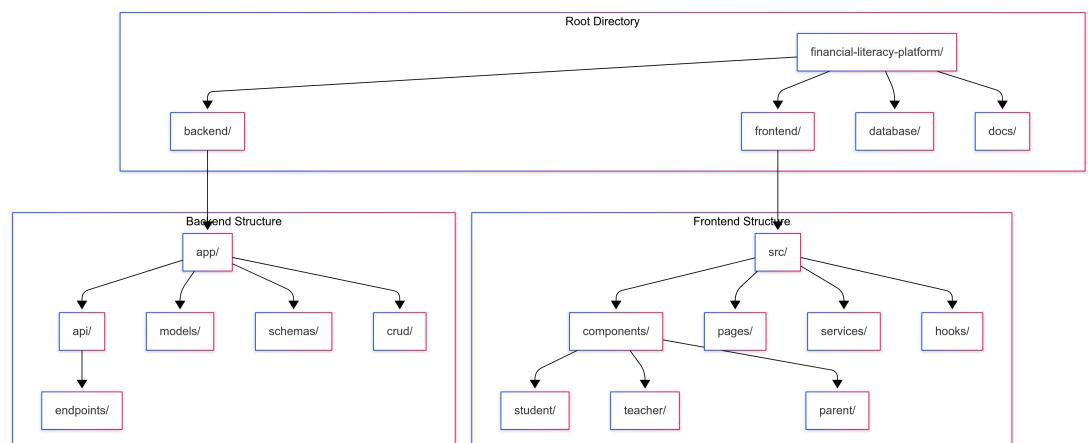
Badge Award Flow



Badge Award Flow

File Structure

Complete Project Structure



Complete Project Structure

Frontend Component Organization

```
frontend/src/
  └── components/
    ├── common/
    │   ├── Header.jsx
    │   ├── Button.jsx
    │   ├── Card.jsx
    │   ├── Modal.jsx
    │   └── ProgressBar.jsx
    └── student/
        ├── Dashboard.jsx
        ├── LearningPath.jsx
        └── LevelCard.jsx
```

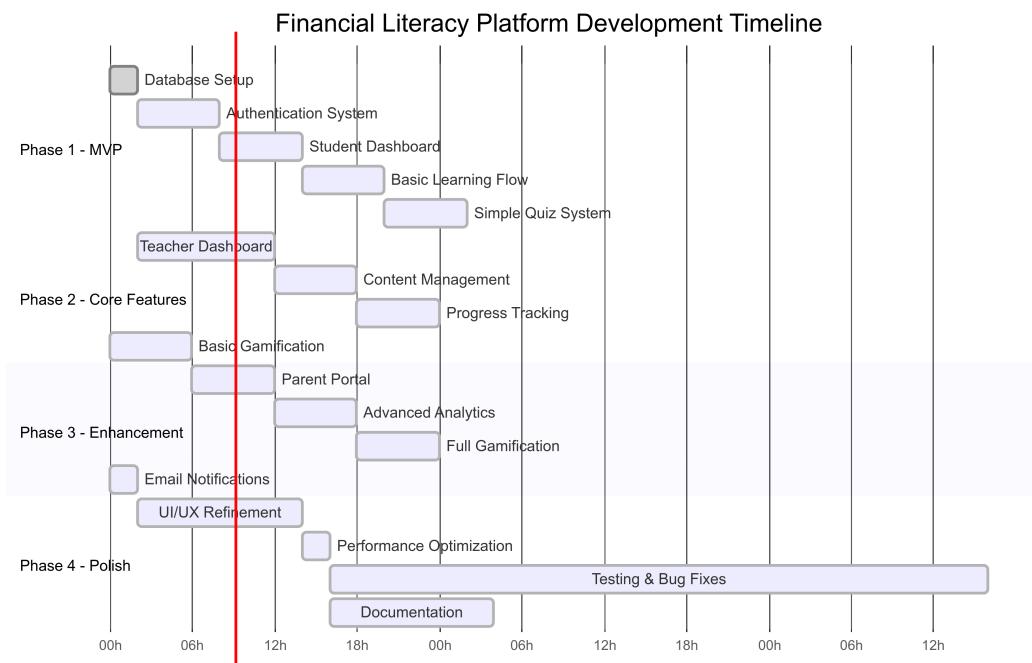
```
    |   └── BadgeDisplay.jsx
    └── teacher/
        ├── ClassOverview.jsx
        ├── StudentTable.jsx
        └── AnalyticsChart.jsx
    └── parent/
        ├── ChildProgress.jsx
        └── ActivityFeed.jsx
```

. Backend API Structure

```
backend/app/
└── api/v1/
    ├── endpoints/
    │   ├── auth.py
    │   ├── students.py
    │   ├── teachers.py
    │   ├── parents.py
    │   ├── courses.py
    │   └── gamification.py
    ├── models/
    │   ├── user.py
    │   ├── course.py
    │   ├── progress.py
    │   └── gamification.py
    ├── services/
    │   ├── auth_service.py
    │   ├── email_service.py
    │   └── gamification_service.py
    └── core/
        ├── config.py
        └── security.py
```

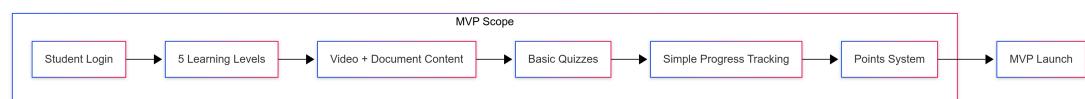
. Implementation Roadmap

. Development Phases



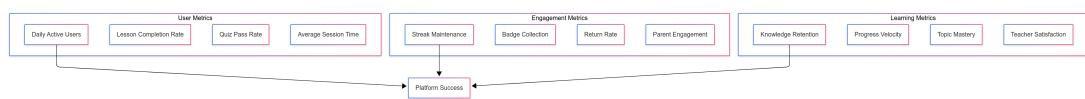
Development Phases

. MVP Features (Phase)



MVP Features

. Success Metrics



Success Metrics

Appendices

A. Content Types Supported

. Video Content

- YouTube embeds

- Uploaded instructor videos
- Maximum minutes per video

. Document Content

- PDF documents
- Interactive worksheets
- Infographics

. Presentation Content

- PowerPoint presentations
- Google Slides embeds
- Interactive slideshows

B. Quiz Question Types

- Multiple choice (options)
- True/False
- Fill in the blanks
- Matching pairs
- Simple calculations

C. Badge Criteria Examples

- **First Steps:** Complete first lesson
- **Quiz Master:** Score % on any quiz
- **Week Warrior:** -day login streak
- **Level Up:** Complete any level
- **Speed Learner:** Complete level in one session
- **Perfect Month:** -day streak

This documentation represents the complete technical specification for the Financial Literacy Platform based on all discussed requirements and features.

Version: .

Author: Aditya Tripathi