

Schools24 Platform - Week 2 Progress Report

Period: January 5 - January 11, 2026
Project: School Management Platform
Status: Backend Development Phase - On Track

Executive Summary

Week 2 focused on building the core backend APIs and optimizing the infrastructure for cost-effective cloud hosting. All major user-facing modules are now ready for frontend integration for testing.

What We Built This Week

Infrastructure Optimization

- **Single Container Architecture:** High-speed binary optimized for Oracle Cloud ARM VM
- **Cost-Free Hosting:** Configured for \$0/month deployment on Oracle Always Free tier
- **Embedded Caching:** Low-latency in-memory cache with data compression
- **Integrated Security:** Built-in JWT auth, rate limiting, and CORS protection

Authentication System

- User registration with email and password
- Secure login with JWT tokens
- Profile viewing and updating
- Password-protected routes

Student Management

- Student dashboard with summary statistics
- Student profile management
- Attendance tracking and viewing
- Class assignment and listing

Academic Features

- Timetable viewing by day and period
- Homework assignments listing
- Homework submission by students
- Grade records and viewing
- Subject catalog management

Website Development

- Website frontend built and developing for backend integration
- User interface components ready for API connection
- Responsive design across all devices

Database Setup

- **11 tables** created and configured:
 - Users, Password Resets
 - Classes, Students, Teachers, Subjects
 - Attendance, Timetables
 - Homework, Homework Submissions, Grades
 - Secure connections to Neon PostgreSQL and MongoDB Atlas
-

Technical Achievements

- 17 working API endpoints
 - Automatic database table creation
 - JWT-based authentication ready
 - Rate limiting (100 requests/minute)
 - Cross-origin request support for web apps
 - Build verified and tested
-

Next Steps (Week 3)

- Implement Teacher module (create homework, mark attendance, enter grades)
 - Implement Admin module (user management, class management)
 - Connect frontend application to backend APIs
 - Deploy to Oracle Cloud server
 - Begin mobile app integration
-

Resources Allocated

Development Team: UpCraft Solutions
