



Class Management for Driving Safety



Peter Vo, Alondra Oropeza, Beau Moody, Ben Hartje, Isabella Reyes,
Landen Chambers
Department of Computer Science

Abstract

The Driving Safety Certificate Management System is a web application designed to streamline the administration of driving safety courses in Texas. Currently, instructors conduct classes independently but rely on the licensed provider to process student information, retrieve driving records, and issue course completion certificates, which can cause delays and create additional administrative work. This system shifts those responsibilities directly to instructors by allowing them to manage classes, enroll students, process student information, and generate certificates through a centralized platform. By automating these processes, the system reduces manual workload, improves efficiency, and enables faster certificate delivery for students. The application also maintains oversight for administrators while ensuring that instructors can operate more independently within the requirements set by the Texas Department of Licensing and Regulation

Tech Stack

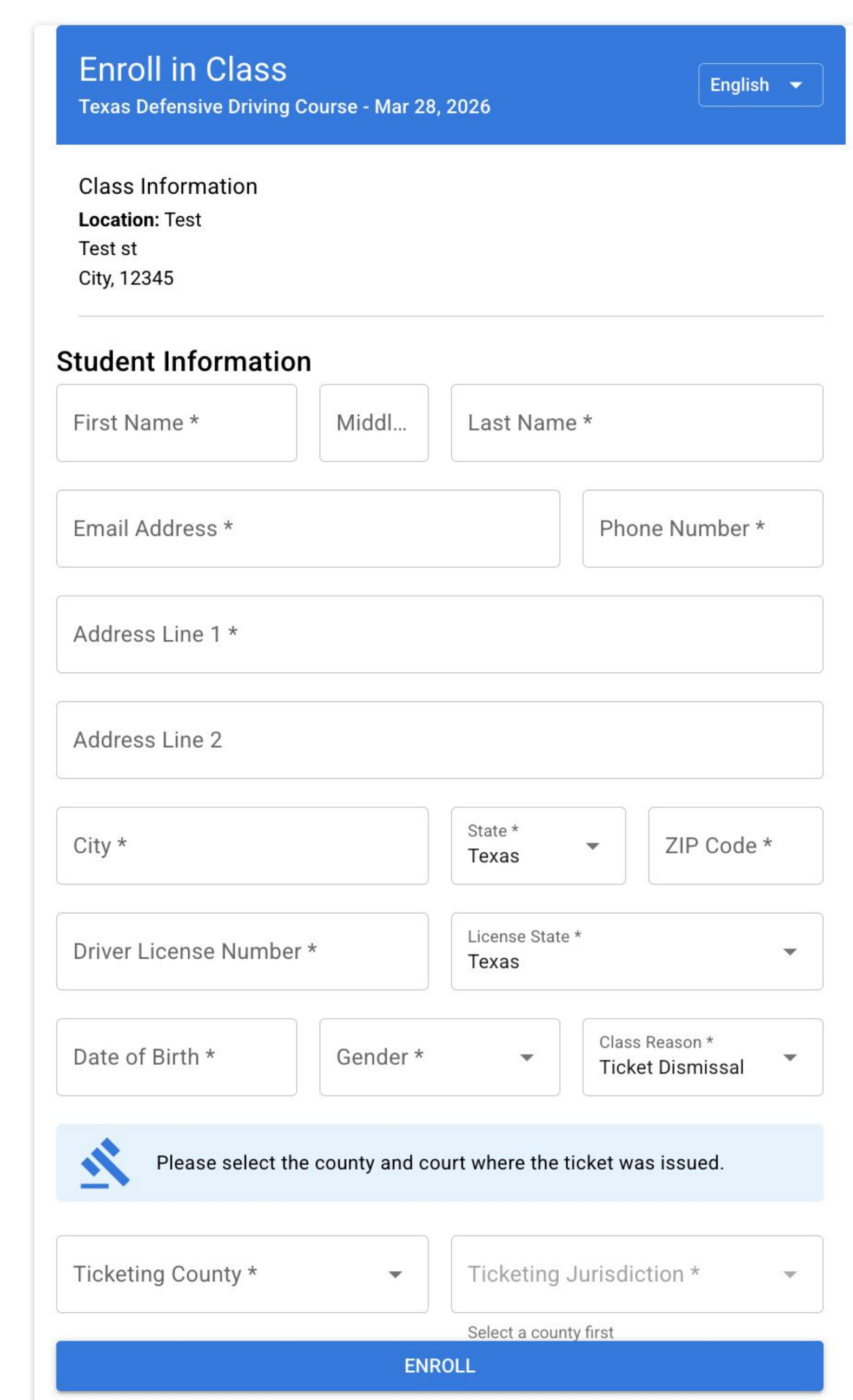
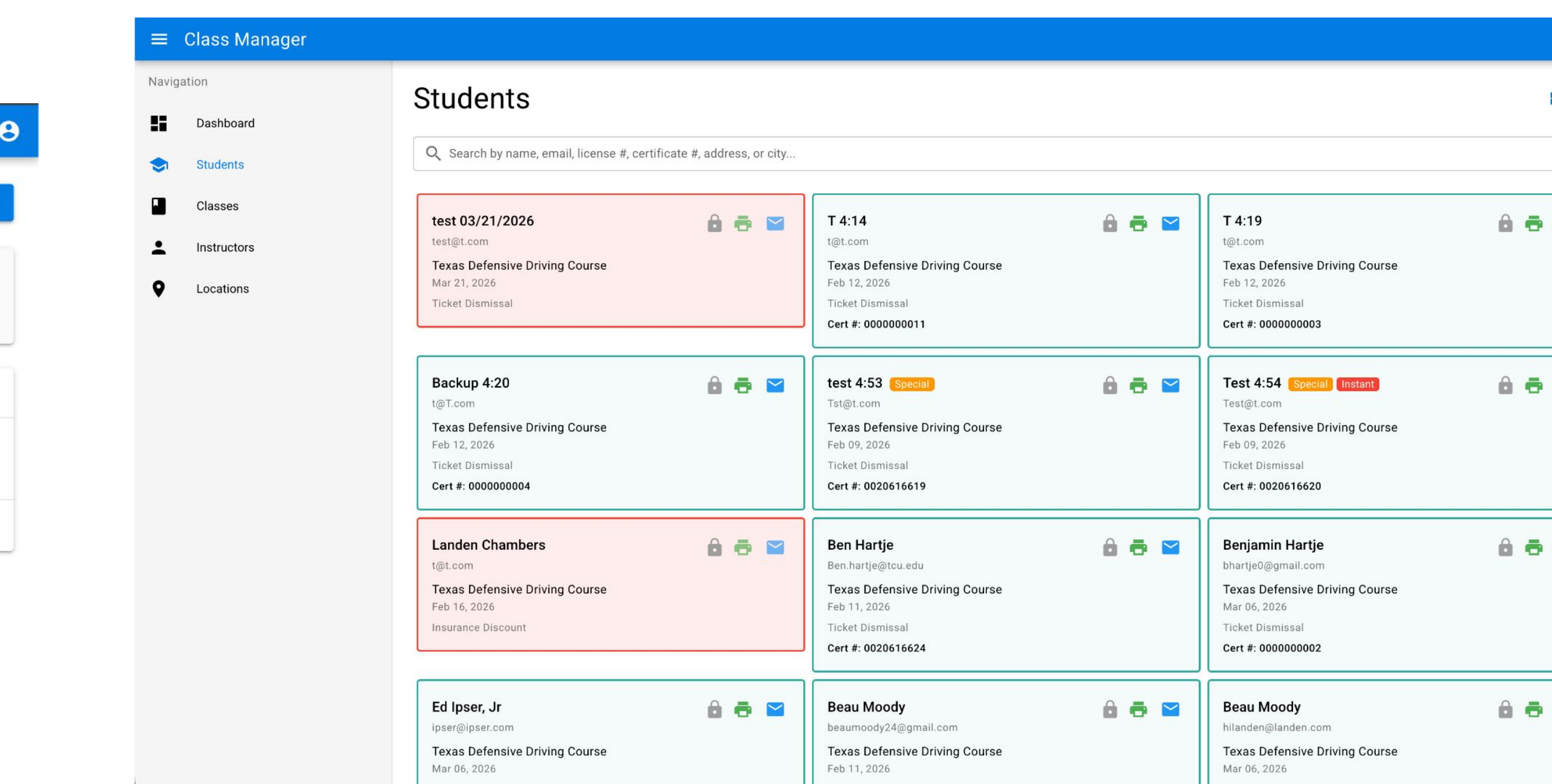
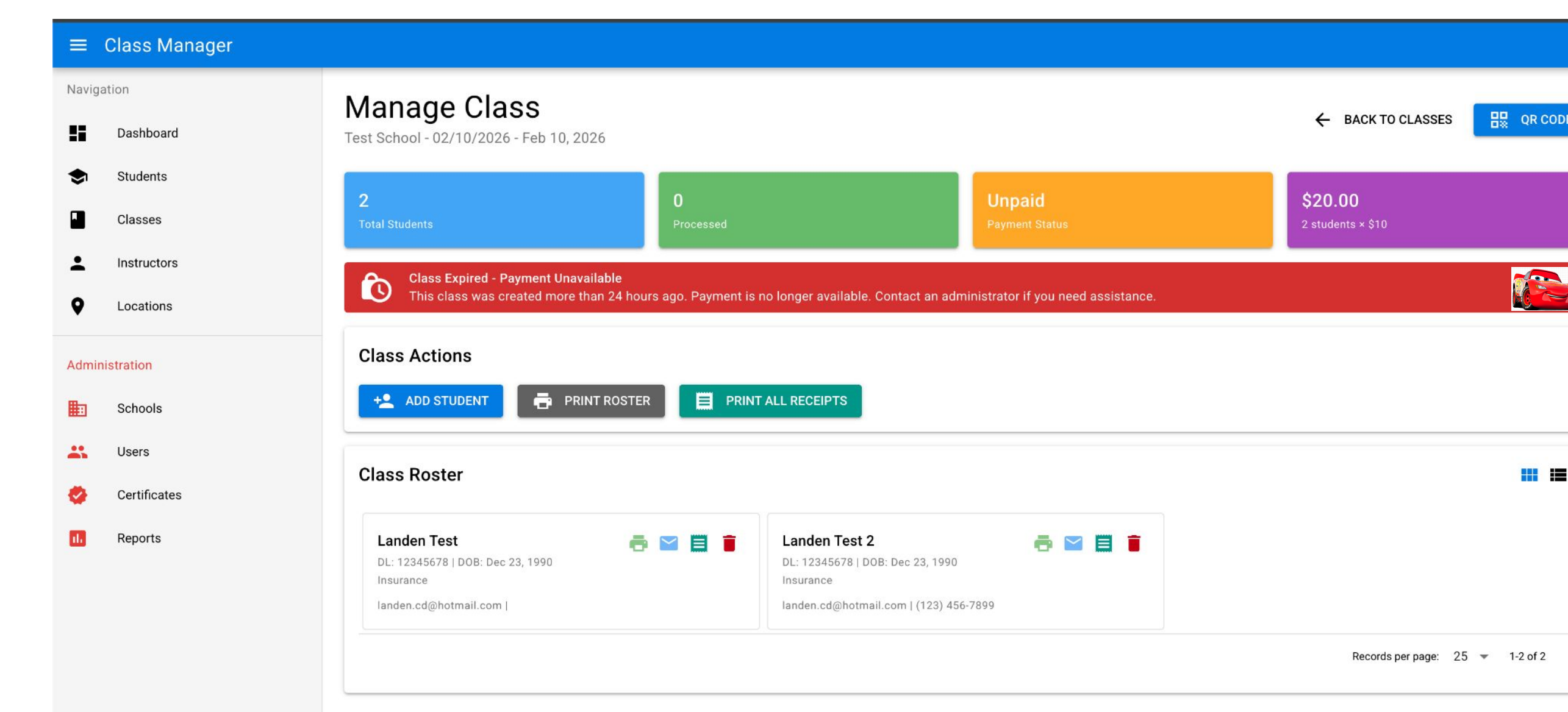
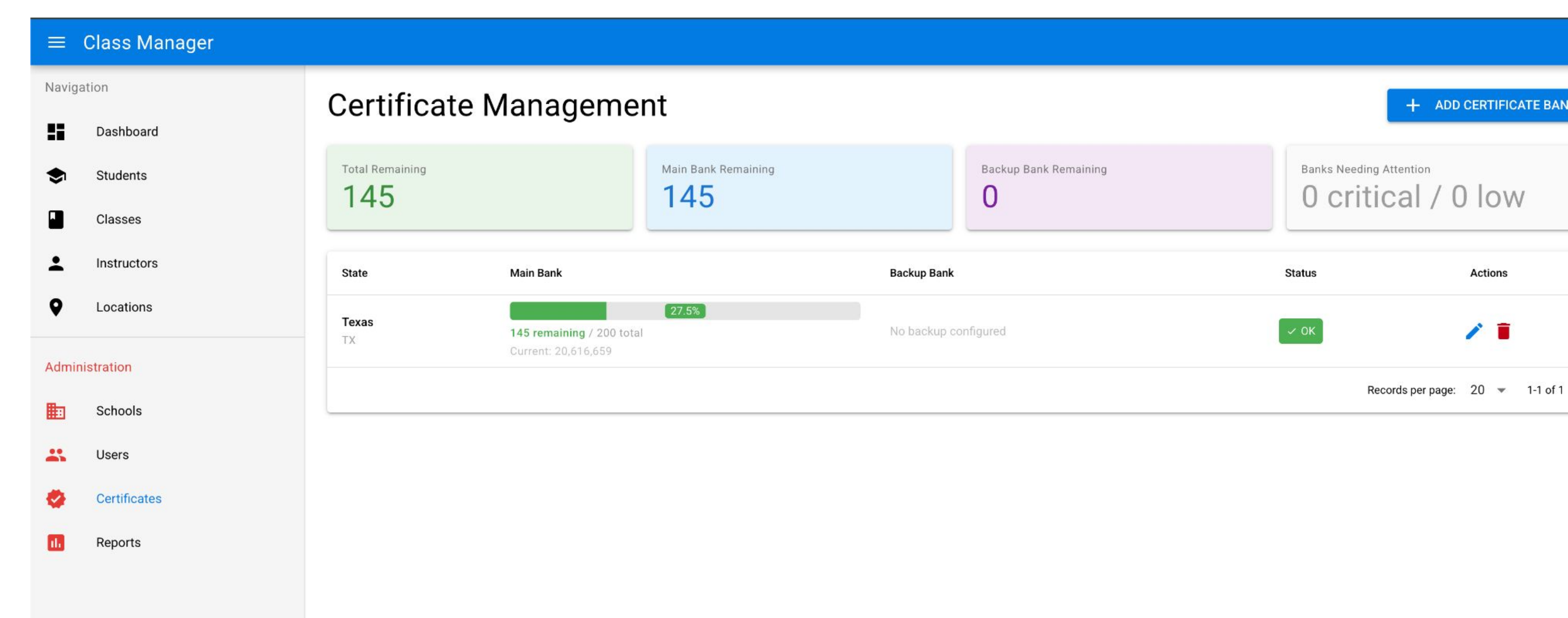
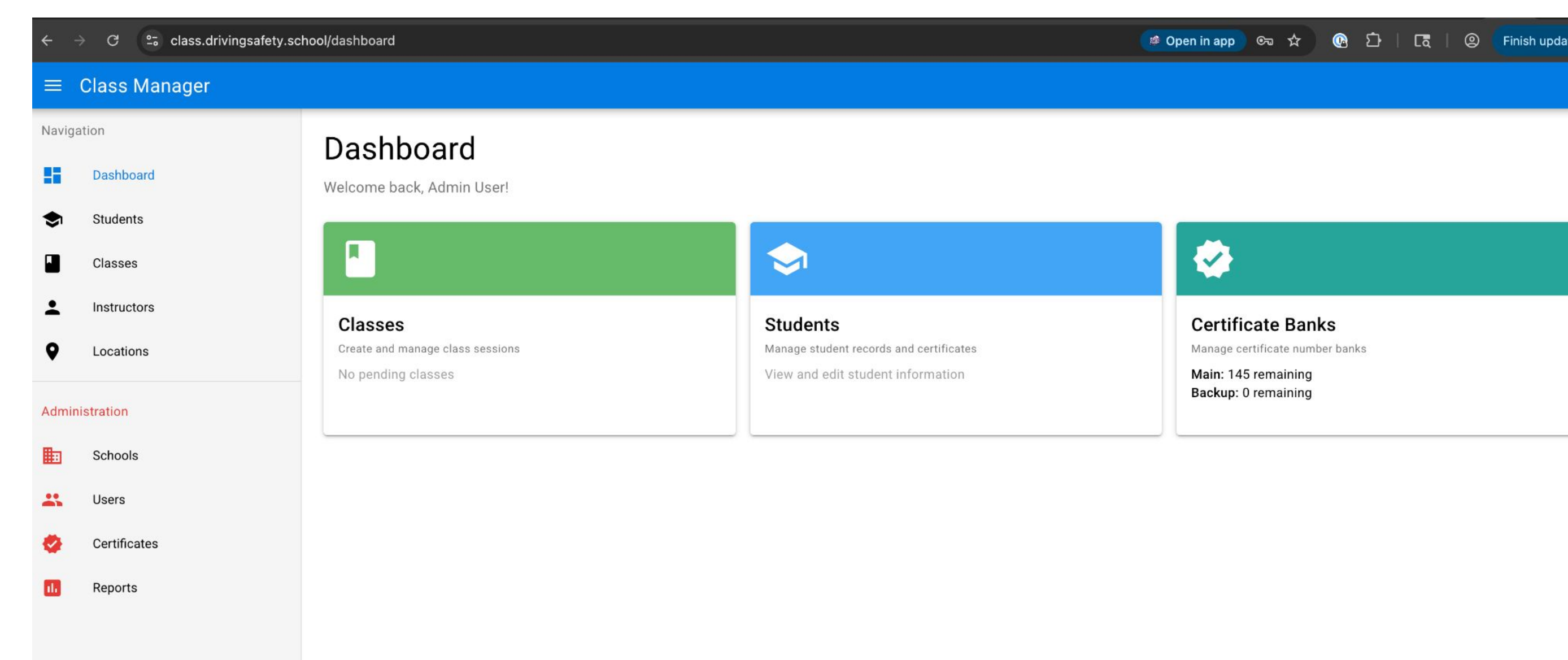


- Frontend: Quasar (Vue3)
- Backend: Node.js, Express.js
- Database: MySQL

Application Information

- Centralized platform for managing classes, students, and instructors
- Secure login with role-based access (Admin, Instructor, Student)
- Easy-to-use dashboard with quick navigation and search tools
- Student self-enrollment through QR codes
- Real-time class creation and roster management
- Automated certificate generation and same-day delivery
- Bulk email and print options for certificates
- Integrated payment processing and tracking
- Instructor independence to manage classes without provider delays
- Advanced reporting and state compliance (TDLR) support
- Automated email notifications and confirmations
- Fully web-based and mobile-friendly

Website



Results

Our Solution:

- Increased the revenue obtained through certificate generation from \$5 per student to \$10 per student
- Increased efficiency and ease of retrieving class, student, and instructor data by 50%
- Reduced time spent on certificate processing and data entry by 50%
- Automated all of the work required by the client for issuing certificates
- Generates and emails/prints certificates immediately after course completion

User Feedback

- All users we polled rate the app's ease of use 8/10 or higher
- All users we polled would recommend the app to other driving instructors
- "Using the website seems more efficient. It's much easier to look up students and manage them."
- "The process [of generating certificates] was very simple and quick. It did not take long."