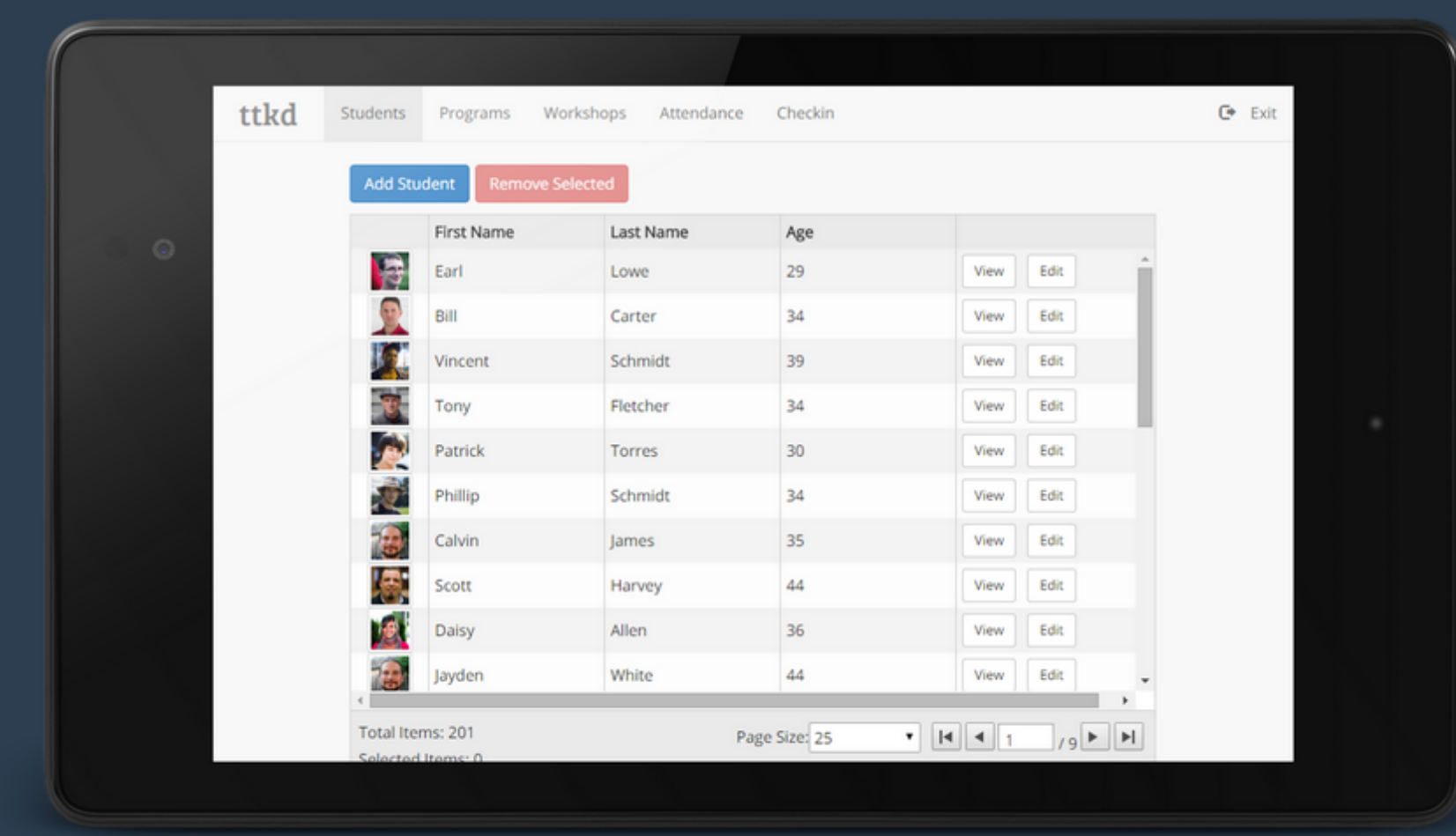
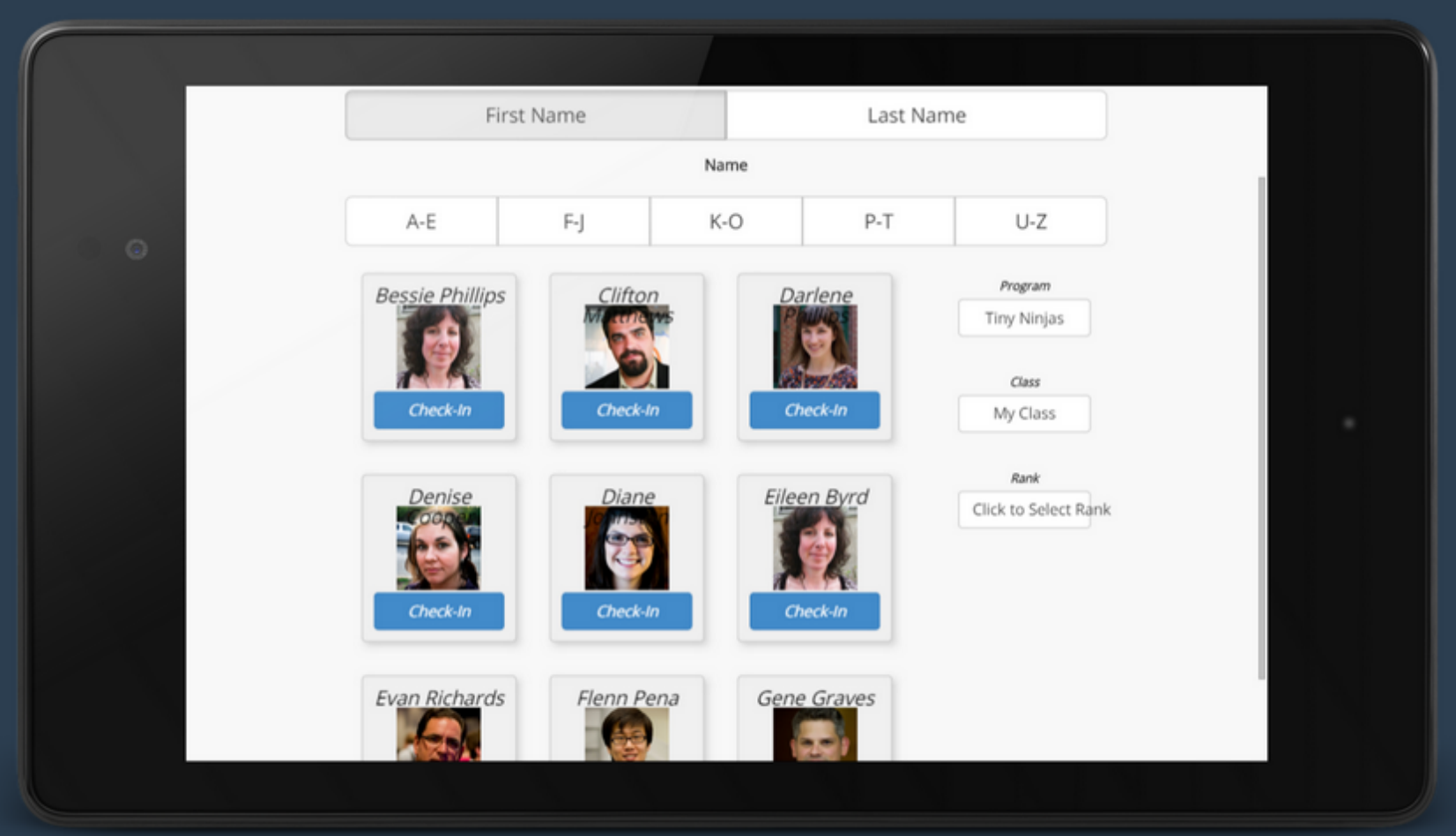


Background

Tioga Tae Kwon Do is a studio that instructs classes and workshops for Tae Kwon Do, cardio kickboxing and self-defense. Currently, paper achievement cards are used to collect records of class attendance and achievements. The amount of effort required for bookkeeping is tremendous causing TTKD's attendance logs to regularly become outdated.

The TTKD student management system consolidates data kept in multiple locations and eliminates the need to manage paper.

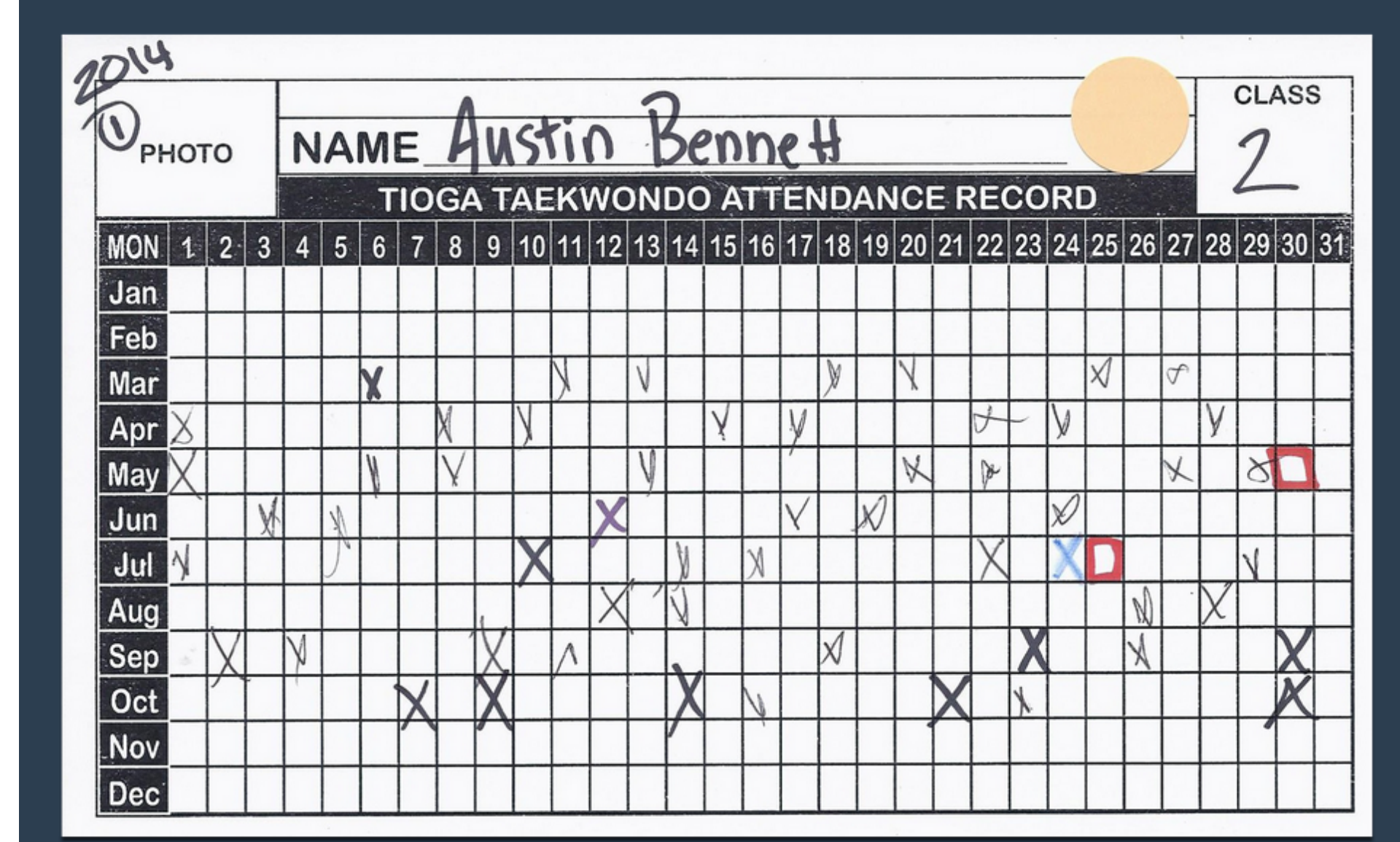
System Features



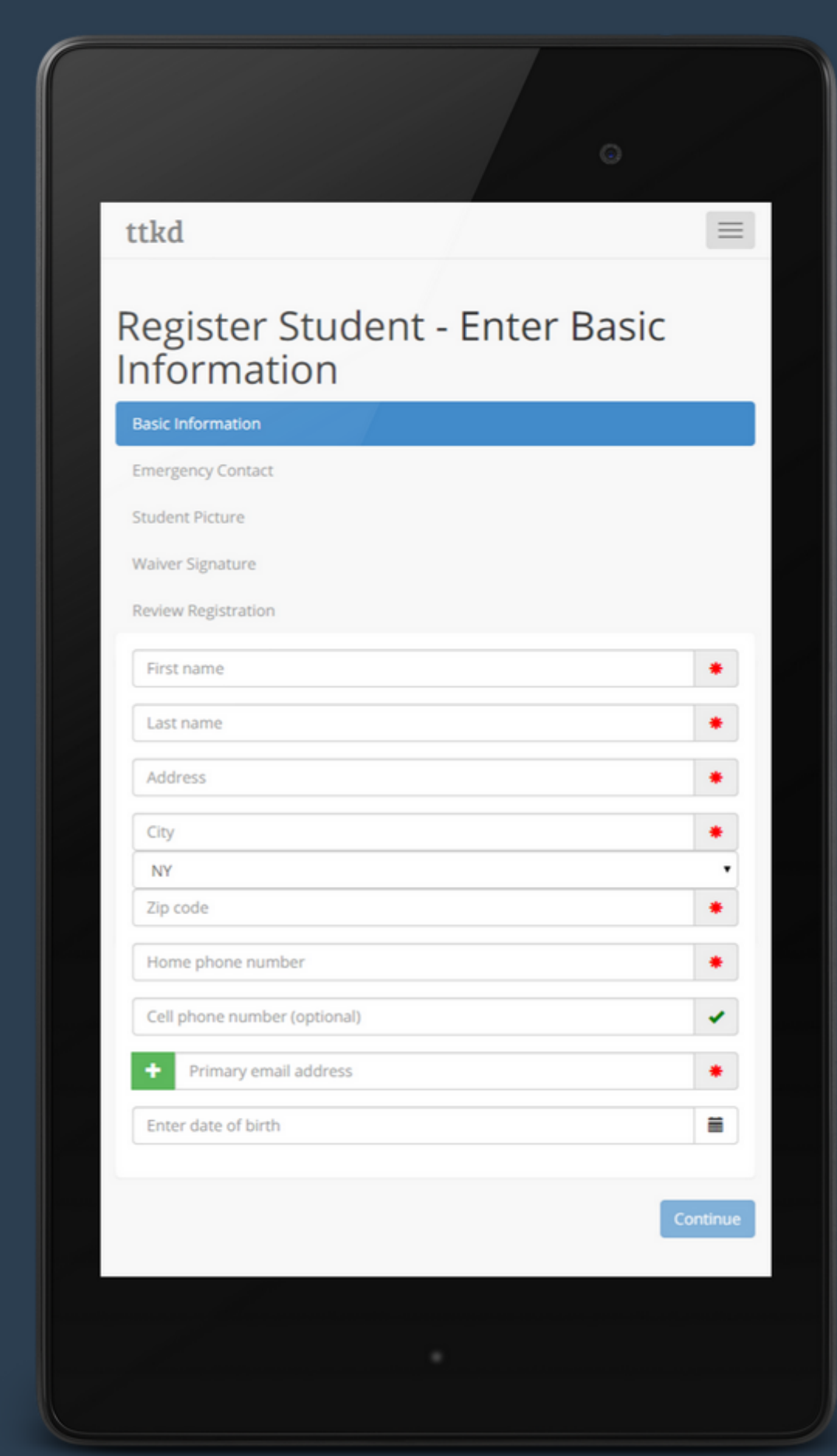
Architecture



Users interact with the application through a web browser
 Application requests are served by a stateless application server written primarily in NodeJS
 Data is persisted using a MongoDB NoSQL database.



Current Punch Card System



- Check into classes and workshops
- Register new students
- Manage student and program records
- View reports on registration and attendance
- Assign students ranks
- Track student progress
- Send students notifications and alerts

Process

- Requirements Elicitation
 - Waterfall style focus on requirements
 - Needed to fully define requirements of system
 - Wireframes/Prototypes were created
 - Asana was used as a project management tool
- Development
 - Modified Scrum
 - Standup Meetings
 - Story Points
 - Two Week Sprints



Reflection

Overall, we liked the sponsor's concept and his level of investment in the project. Early on we were challenged by the initial requirements because they needed to be refined and elaborated. Through productive meetings and iterative prototyping, we were able to stabilize the requirements and develop a final product. Looking back we could have adapted a more fitting process based on the volatility of the requirements. We are excited to see this application deployed at Tioga Tae Kwon Do and begin to make student management more efficient.