

MICHIGAN STATE

UNIVERSITY

Beta Presentation

Rules Test Practice-Tool

The Capstone Experience

Team Union Pacific

Hailey Cohen
Matthew Dunn
Manav Singh
Timothy Sung

Department of Computer Science and Engineering
Michigan State University

Spring 2024



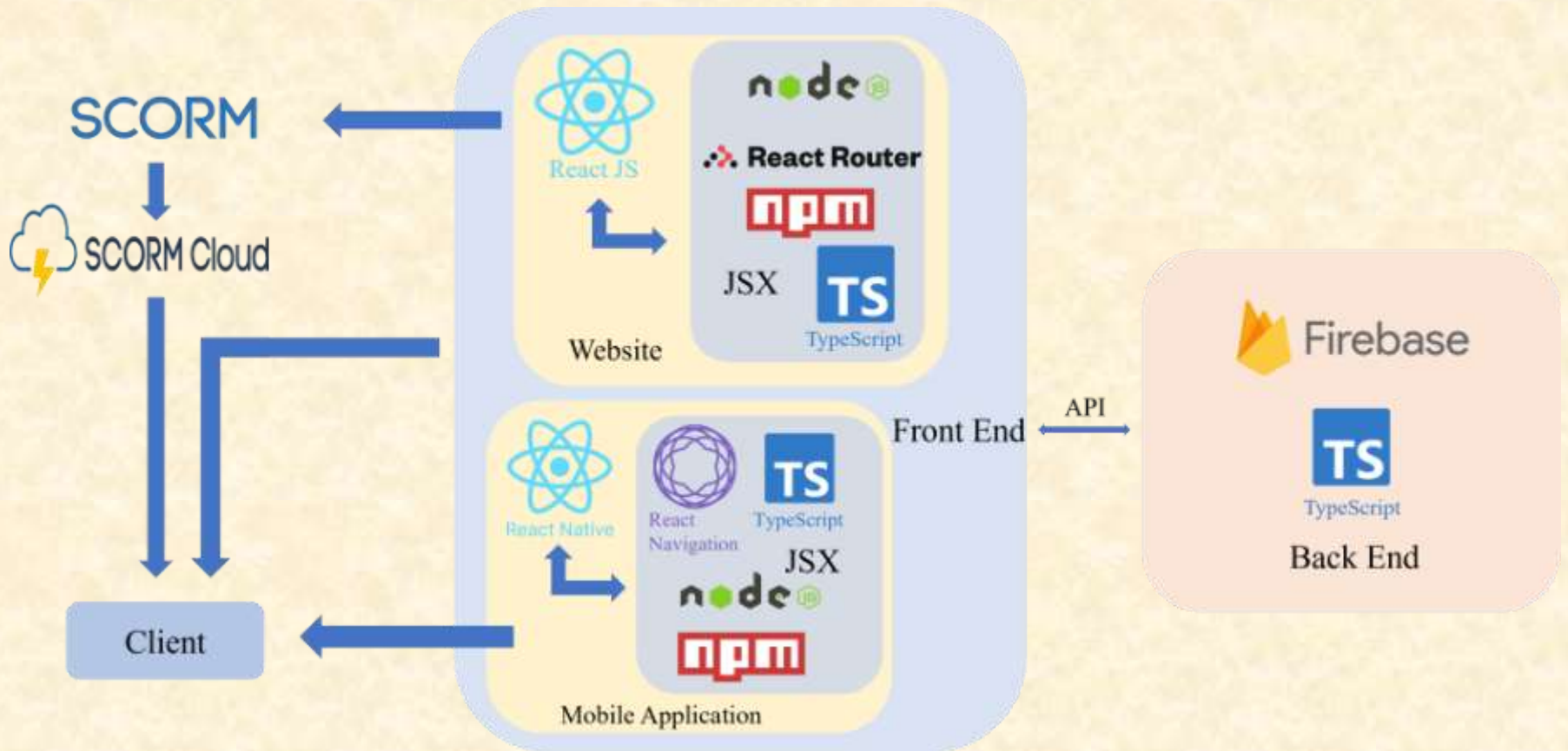
*From Students...
...to Professionals*

Project Overview

- Online license renewal exam, 3000+ rules
- Replace former third-party study/testing apps
- Custom-built web and mobile app
 - Dynamic scaling
 - Flexible question and file formats
 - Engaging user interface
- Respond to employee feedback and promote good study habits



System Architecture




Web - Flashcards

← → ↻ G rulestestpracticetool.unionpacific

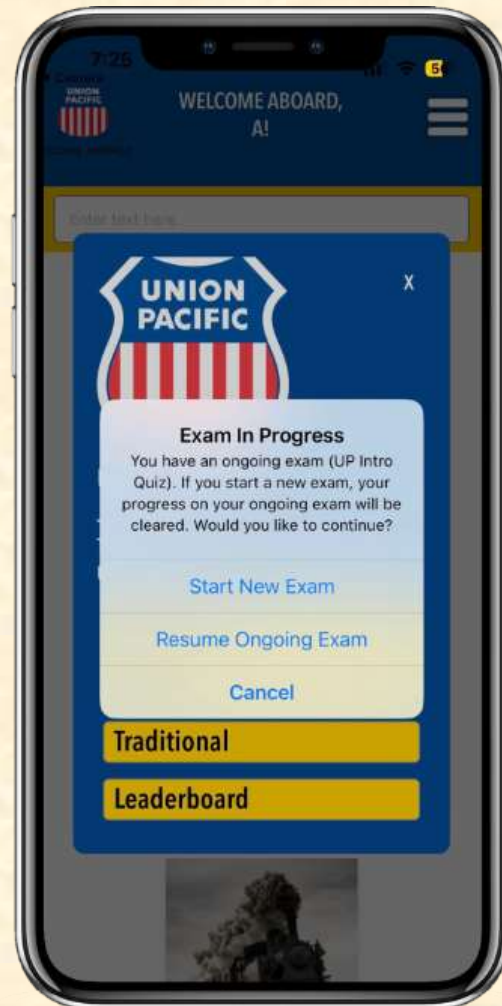
matching CSV

TIME TAKEN: 00:01:02 [End Review](#)

What year was the first public railway established?





Mobile





Web - Homepage


← → ↻ nulestestpracticetool.unionpacific


 WELCOME ABOARD, HAILEY! HISTORY SETTINGS LOG OUT

 **DEMO: Selective Game Modes**
Train Enthusiast
Test your knowledge about trains, their history, and their technology!

 **DEMO: Inclusive Game Modes**
Train Enthusiast
Test your knowledge about trains, their history, and their technology!

 **Train Trivia Quiz**
Train Enthusiast
Test your knowledge about trains, their history, and their technology!

 **all question types - CSV upload**
Train Enthusiast
Test your knowledge about trains, their history, and their technology!

 **all question types - JSON upload**
Train Enthusiast
Test your knowledge about trains, their history, and their technology!

Web - Leaderboard

rulestestpracticetool.unionpacific

UNION PACIFIC Leaderboard: DEMO: Inclusive Game Modes [Return](#)

Personal Leaderboard [Clear](#)

1	March 27, 2024 at 07:19 PM	Time: 00h 00m 09s	Score: 3
2	March 27, 2024 at 07:19 PM	Time: 00h 00m 06s	Score: 2

Global Leaderboard

1	Name: Halley	March 27, 2024 at 07:19 PM	Time: 00h 00m 09s	Score: 3
2	Name: matt	March 26, 2024 at 11:26 PM	Time: 00h 00m 08s	Score: 3
3	Name: h2	March 25, 2024 at 10:13 PM	Time: 00h 02m 09s	Score: 3
4	Name: h1	March 25, 2024 at 08:39 PM	Time: 00h 00m 02s	Score: 1
5	Name: o	March 26, 2024 at 12:35 PM	Time: 00h 00m 00s	Score: 0

Monthly Leaderboard: March

1	Name: h2	March 25, 2024 at 10:13 PM	Time: 00h 02m 09s	Score: 3
2	Name: matt	March 26, 2024 at 11:26 PM	Time: 00h 00m 08s	Score: 3
3	Name: Halley	March 27, 2024 at 07:19 PM	Time: 00h 00m 09s	Score: 3
4	Name: h1	March 25, 2024 at 08:39 PM	Time: 00h 00m 02s	Score: 1
5	Name: o	March 26, 2024 at 12:35 PM	Time: 00h 00m 00s	Score: 0



What's left to do?

- Feature Complete
- Stretch Goals
 - Color-blind mode
 - Sound design
- Other Tasks
 - UI fixes
 - UX improvements
 - Error handling and bug fixes



Questions?

?

?

?

?

?

?

?

?

?

