

MICHIGAN STATE

U N I V E R S I T Y

Alpha Presentation Rules Test Practice Tool

The Capstone Experience

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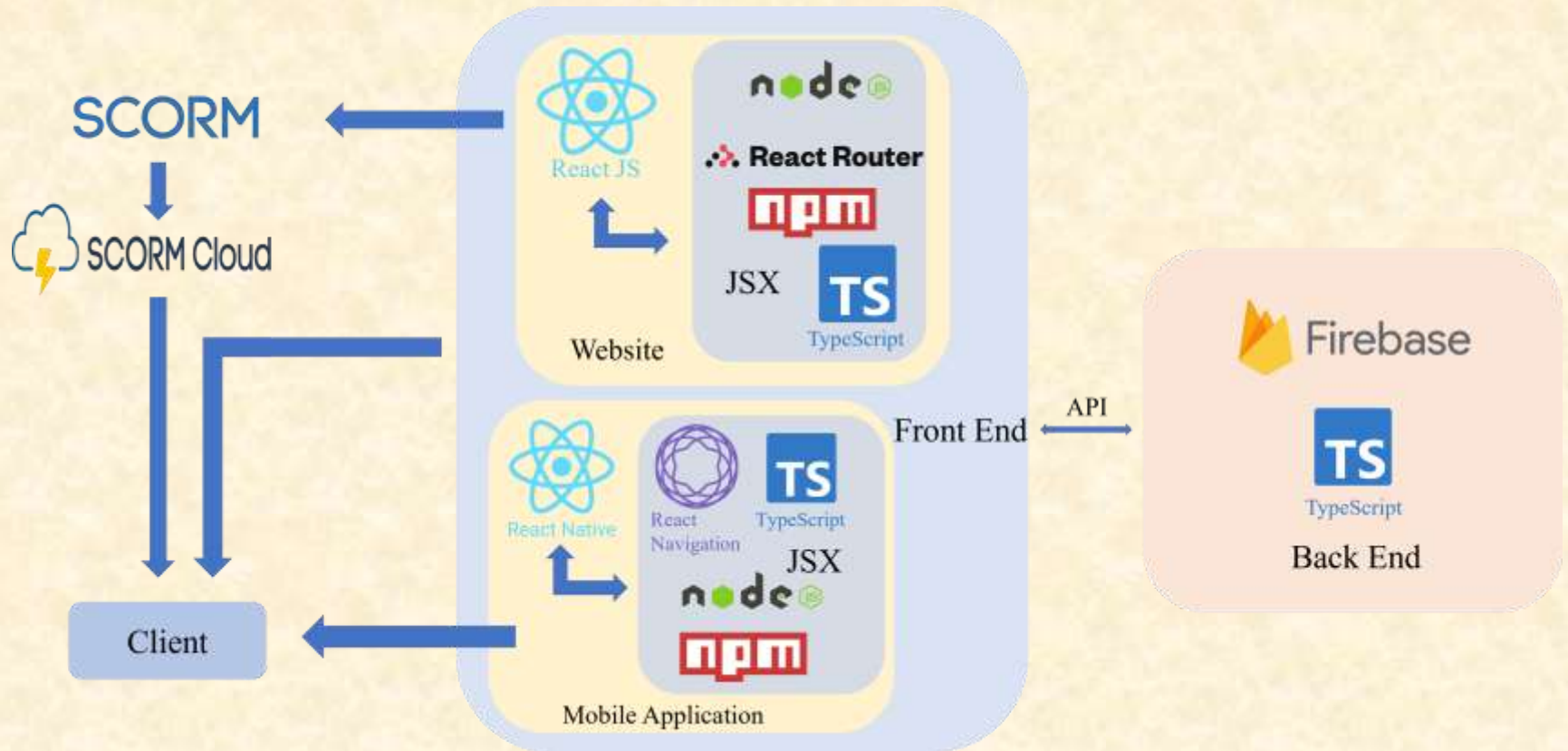
*From Students...
...to Professionals*

Project Overview

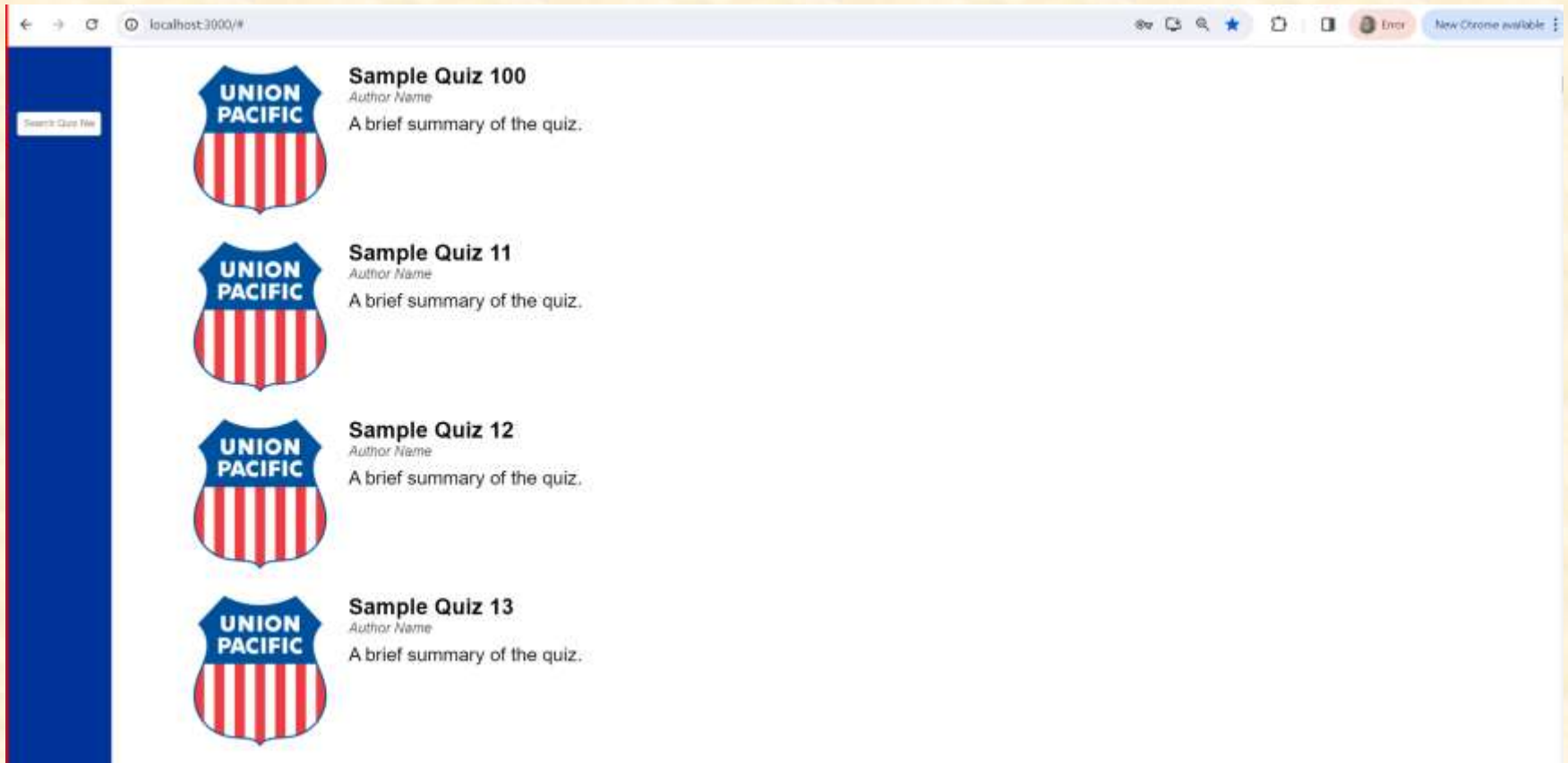
- Online license renewal exam, 3000+ rules
- Replace former third-party study/testing apps
- Custom-built web and mobile app
 - Dynamic scaling
 - Flexible question and file formats
 - Engaging user interface
- Respond to employee feedback and promote good study habits



System Architecture



Scalability of Application



Standard Formatting for Input Files

```
Quiz ▾ {
  quizName      string
                The name of the quiz.

  author        string
                The author of the quiz.

  summary       string
                A brief summary of the quiz.

  imageUrl      string($uri)
                URL to an image related to the quiz.

  stopwatch*    boolean
                Indicates if a stopwatch is used during the quiz.

  gameModes*    ▾ [
                Different game modes available for the question set. The uploader can choose one or a combination of these modes available to the player.

                string
                Enum:

                ▾ [ flashcards, testImmediateFeedback, testTraditionalFeedback ]
                ]
}
```



Standard Formatting for Input Files

```
questions*  
  ✓ [  
    A collection of questions in the quiz. Minimum of one question required for upload.  
  
    Question ✓ {  
      type*                string  
                          The type of question. The uploader must choose multipleChoice, trueFalse, or multiSelect.  
  
                          Enum:  
                          ✓ [ multipleChoice, trueFalse, multiSelect ]  
  
      question*           string  
                          The question text.  
  
      options             ✓ [  
                          The options for the question. Required for multipleChoice and multiSelect types.  
                          string]  
  
      answer*             ✓ {  
                          oneOf -> > [...] > [...]  
                          }  
  
      questionImageUrl    string($uri)  
                          nullable: true  
                          URL to an image related to the question.  
  
    }  
  ]
```



Cross-Platform Compatibility

Maglev Trains 101

What are the primary advantages of Maglev (Magnetic Levitation) trains compared to conventional rail systems?

- A. Higher speeds due to reduced friction
- B. Increased fuel efficiency due to aerodynamic designs
- C. Ability to operate in extreme weather conditions
- D. Lower maintenance costs due to lack of physical contact with the tracks

Previous Next

1 2 3 4 5 6 7 8 9 10 11 12

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6:24 Quiz on Trains 52

What are the primary advantages of Maglev (Magnetic Levitation) trains compared to conventional rail systems?



Higher speeds due to reduced friction

Increased fuel efficiency due to aerodynamic designs

Ability to operate in extreme weather conditions

Lower maintenance costs due to lack of physical contact with the tracks

Question 1 of 3

Accessing External Database Within the LMS

The screenshot displays the SCORM Cloud interface for a course titled "Rules Test Practise Tool". The interface is divided into a left sidebar and a main content area. The sidebar includes a user profile for Matthew Dunn, navigation options like Settings and Logout, and a menu with items such as Home, Library, People, Dispatch, Invitations, History, xAPI/LRS, Apps / API, and Account. The main content area shows the course title and a "Share" button. Below this, there is a section for course metadata: "Created on February 17, 2024, 06:26 PM", "Application: SCORM Cloud", "Course ID: newestpackage07c1536-1b7-48b5-af85-c7b15632439", "Learning Standard: SCORM 2004 3rd Ed.", and "Course Tags". To the right of this metadata are buttons for "Activity History" and "Reportage". The central part of the interface is a "Course Sandbox" with a "Launch" button. It features four summary cards: "Completion" (complete), "Success" (passed), "Score" (100.00 %), and "Total Time" (3s). Below these cards are buttons for "Reset Progress", "Reset Globals", "View Registration State", and "View Launch History". A "Debug Logs" section shows a log entry: "Session Ended February 17, 2024 at 6:27 PM" with a "Clear Logs" button. At the bottom, there are two sections for "Course Assets": "Overwrite Course Files" and "Create New Version", each with a "Choose file" input and a "Browse" button.



What's left to do?

- History page
- Custom UI
 - Themes: light and dark mode
 - Accessibility features
- Exam page
 - Implement flashcard and practice mode on mobile/web
 - Pulling and navigating exam data on web
 - Evaluating and storing answers
 - Uploading and removing quizzes
- Leaderboard page



Questions?

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