

Mobile Web Midterm Presentation

By AmyJane Reilly, Trey DeaBueno, and Daniel Buck

Introduction

Flag Trivia Game: *Quizoot*

Game Style: *Kahoot*

- A group of players join a lobby or room to play a competitive trivia game in which players attempt to have the most correct answers at the conclusion.
- Choose the Country that matches the displayed flag.
- Games focused on specific geographic or cultural regions.
- Expand knowledge about other countries around the world.
- Mobile first.

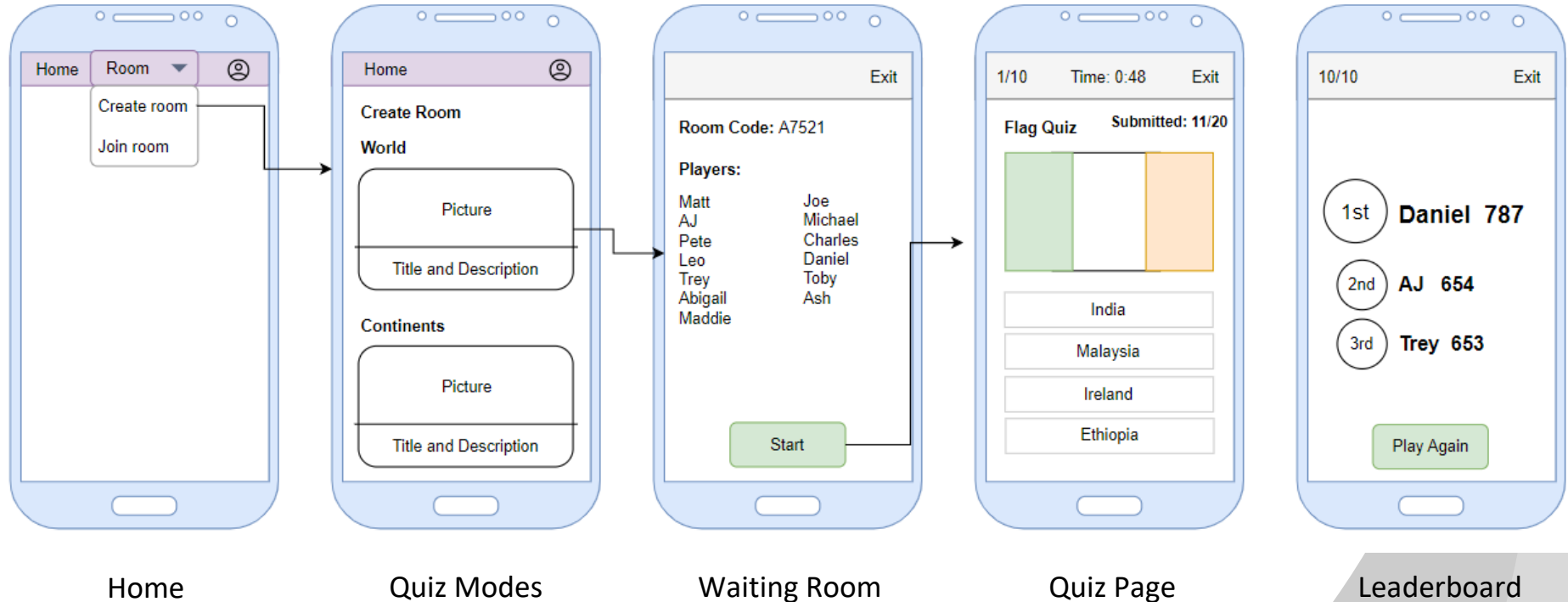
Related

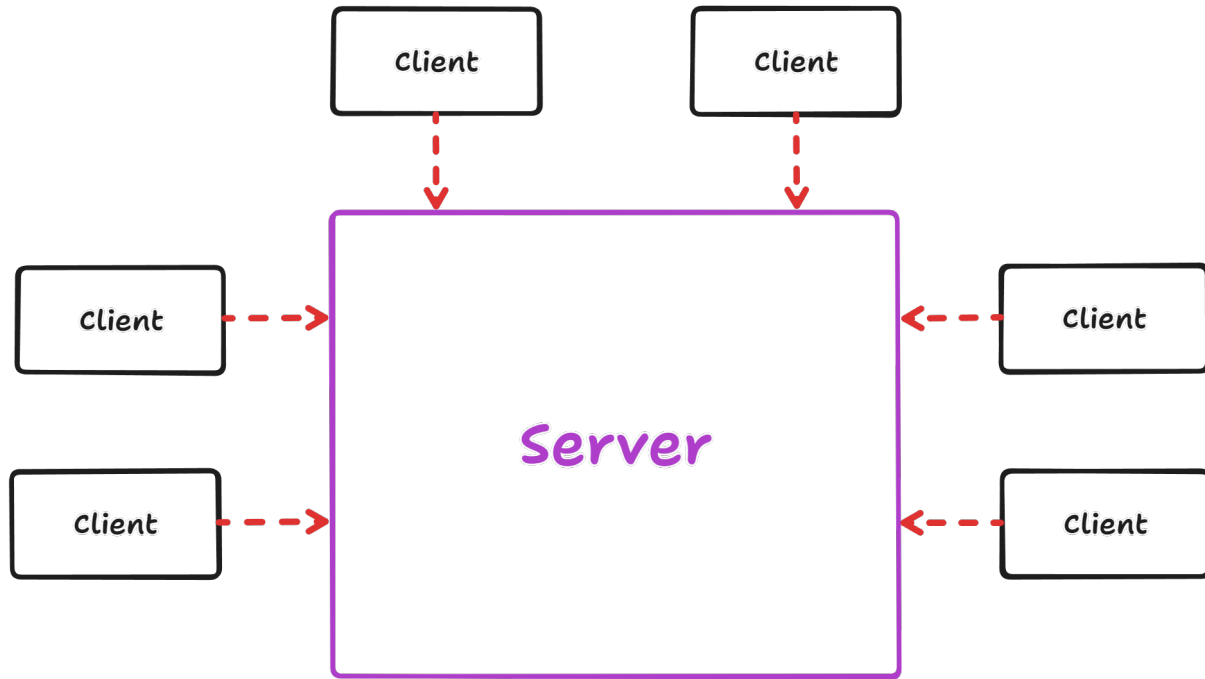
- **Kahoot (proprietary and closed-source):**
 - URL: <https://kahoot.com/>
 - Description: Kahoot is a game with user-generated multiple-choice quizzes where players can play together.
 - Proprietary and closed-source
- **Darkhold (GPL-3 licensed / open-source):**
 - URL: <https://github.com/surajcm/darkhold/>
 - Description: A self-hosted alternative to Kahoot
 - Not mobile-first and written in Java
- **Kascreech (Unlicensed / open-source):**
 - URL: <https://github.com/w-henderson/Kascreech/>
 - Description: Real-time multiplayer platform based on Kahoot built with Rust and React

Features

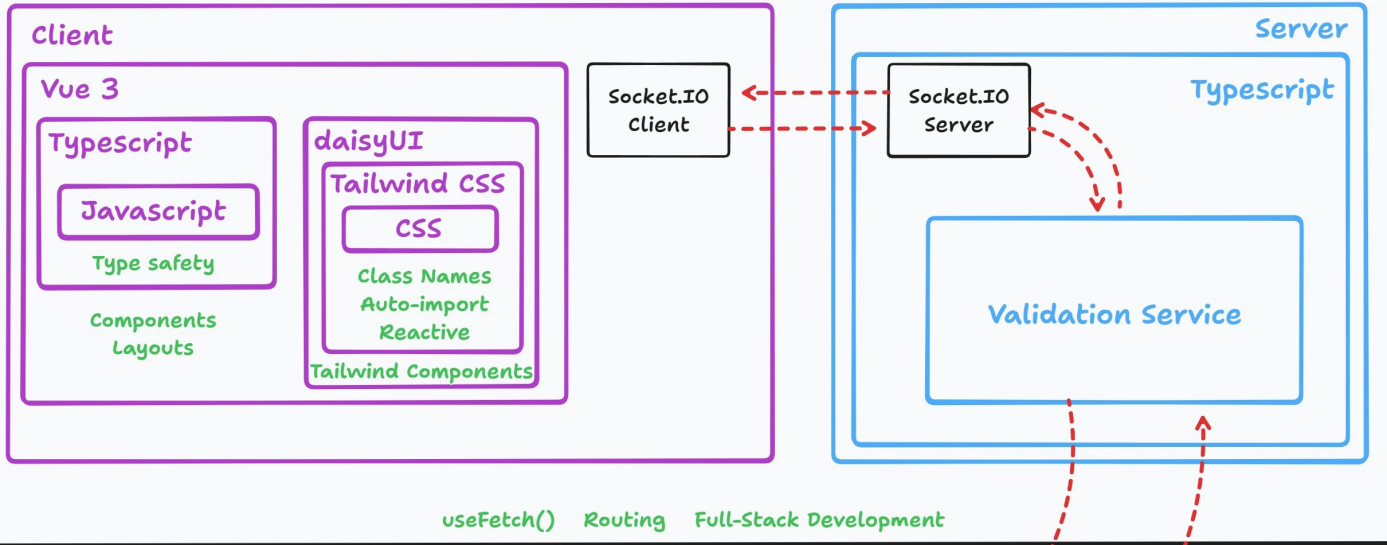
- Country and flag information from the Rest Countries API.
- Host will be able to select a quiz mode from a list of options:
 - World
 - Continents
- Host will be able to create a room and share the room code.
- Players will be able to join the room via the room code.
- Players get a score depending on if they got the answer correct and time taken to answer question.
- Leaderboard shown at end of game with top three winners.

Charts, Mock-Ups, Designs:





Nuxt 3



Client

Server

Time

Server Set:
Socket.IO Client ID
Client UUID
Current Room UUID
Score
Room Host
Current Question Data

User Set:
Client Username

Socket.IO Handshake

Socket.IO Client Info

Socket.IO Server Info

Handshake

Client Username

Client UUID
Creation Time

Room Join

Client UUID
Room Code Join / Host

Room UUID
Score
Room Host (boolean)

Clients (Map):

- *client UUID
- Client Username
- Creation time
- Last packet sent time
- Games won?
- Current Room UUID

Rooms (Map):

- *Room UUID
- Join code
- Questions (List):
 - *Question UUID
 - Correct Answer
 - Answers (array)
 - Image
- Room Clients (Map):
 - Client instance
 - Score
 - Host?

Additional Features Planned

- Register for account and user creates their own questions
- Singleplayer mode
- 1v1 battle mode
- QR code to join a room
- Bonus points for longer correct streak
- Option to join public games
- User can see their games played, games won, score
- (Host) World option filterable
- (Host) Time for questions changeable
- (Server) Multiple servers worldwide with connection between them

Tools

- **Vue.js:**

- Progressive JavaScript framework for building single-page applications and web-based user interfaces.

- **Nuxt:**

- JS framework that integrates a server within Vue.js

- **Tailwind CSS:**

- CSS framework allowing responsive design

- **daisyUI:**

- Component library for Tailwind CSS

- **Node.js:**

- JS runtime environment that allows backend development



Work Breakdown

AmyJane Reilly

- UI/UX Design and Mock-ups
- Front-end Research, Planning, Design, and Development.
- Research on Front-end Tools: DaisyUI, Tailwind CSS, Vue.js
- User Stories:
 - Validate the player's answer.
 - Research and filter controversial countries.

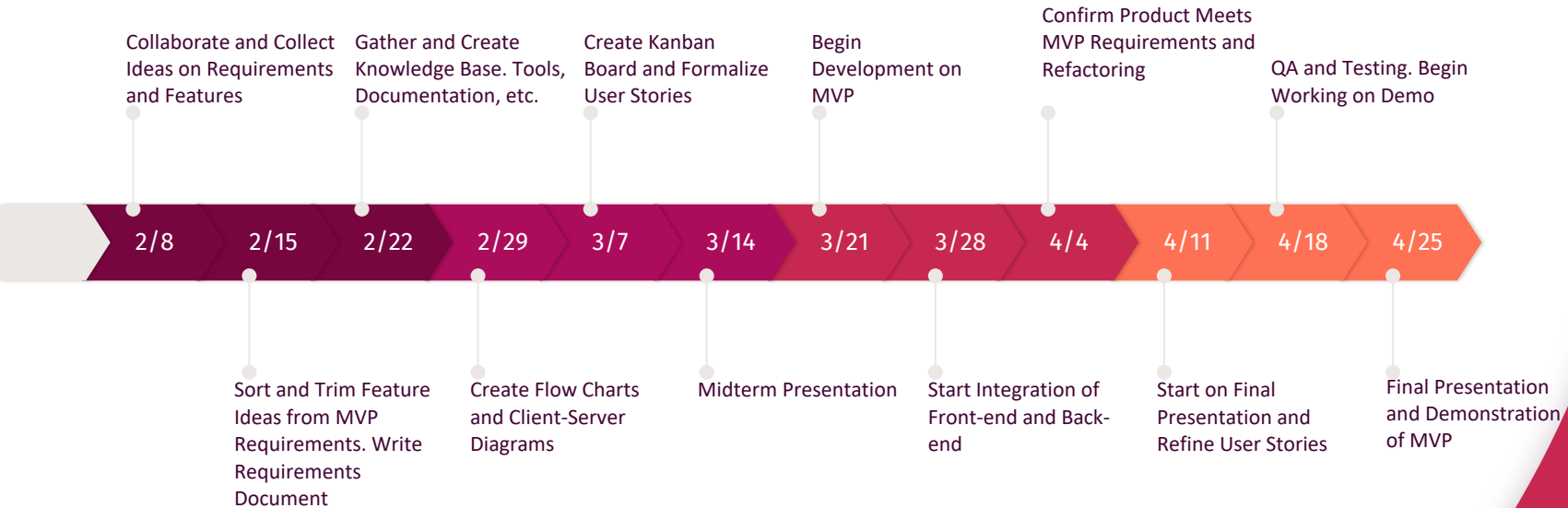
Trey DeaBueno

- Tech Lead
- Backend Research, Planning, Design, and Development.
- Research on Back-end Tools: Nuxt, Node.js
- User Stories:
 - Gather and display national flags from API.
 - Gather and display a selection of country names from API.

Daniel Buck

- Scrum Master
- Timeline, Planning and Documentation
- Back-end Research, Planning and Design
- Front-end Design and Planning
- User Stories:
 - Track score as the game progresses.
 - Display scores and the winner upon game conclusion.

Timeline



Deliverables

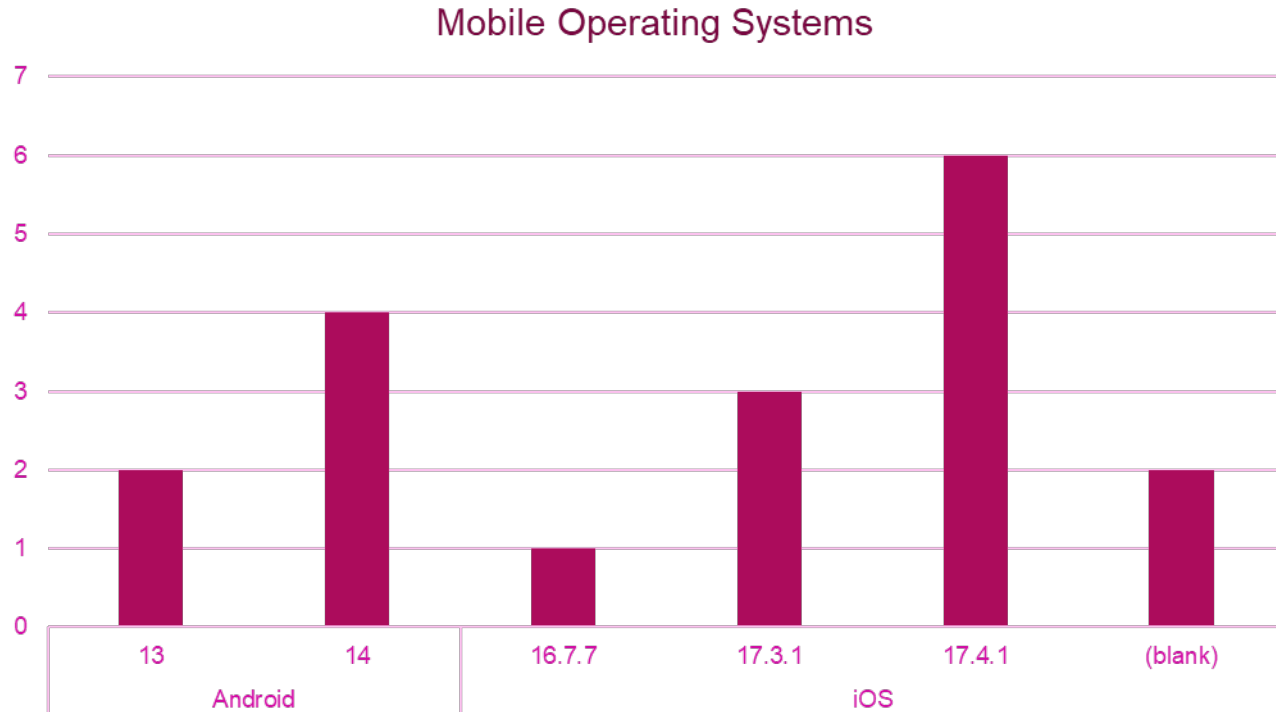
- Open-source repository that can be self-hosted
- License that permits others to modify source code
- An instance running that can be played in class for our final presentation

Testing

- **Google Pixel 7 / Google Pixel 8 Pro**
 - OS: Android 14
 - Browser version: Chrome 122 / Brave 1.63
- **Apple iPhone 13**
 - OS: iOS 17.3.1
 - Browser version: Safari 17.3.1
- **Windows 11**
 - OS: 22H2
 - Browser version: Chrome 122



Survey Results



Survey Results

- 2/3 of survey takers are on iOS – 1/3 on Android
- It is safe to use all Safari >16.4 and Chrome 123 APIs
 - Chrome updates as an app on Android
 - Safari updates with the operating system on Apple products
- Can safely use ECMAScript 2022 APIs

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Tools Information

Vue.js:

- Repo: <https://github.com/vuejs/core/>
- URL: <https://vuejs.org/>

Nuxt:

- Repo: <https://github.com/nuxt/nuxt/>
- URL: <https://nuxt.com/>

Tailwind CSS:

- Repo: <https://github.com/tailwindlabs/tailwindcss>
- URL: <https://tailwindcss.com/>

daisyUI:

- Repo: <https://github.com/saadeghi/daisyui>
- URL: <https://daisyui.com/>

Node.js:

- Repo: <https://github.com/nodejs/node>
- URL: <https://nodejs.org/en>





Questions?

See you!