Summary

The Quizzer is a web application that can be used in bars, sports canteens and maybe even prisons to play quizzes as a team. A pub quiz, basically.

It consists of 3 client applications and 1 server application.

Domain
- Quizz Night
- Quizz Round
- Quizz Master
- Team
- Question
- Question Category
- Answer

Actor
- Team (3 to 8 players)
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-

Actor	Use Cases
Team (3 to 8 players)	- Apply for Quizz Night (team name and quizz night code) - Submit an answer
Quizz Master	- Start a Quizz Night - Approve team - Reject team - Start Quizz Round - Select next question - Close question - Read answers - End a Quizz Night

Design decisions
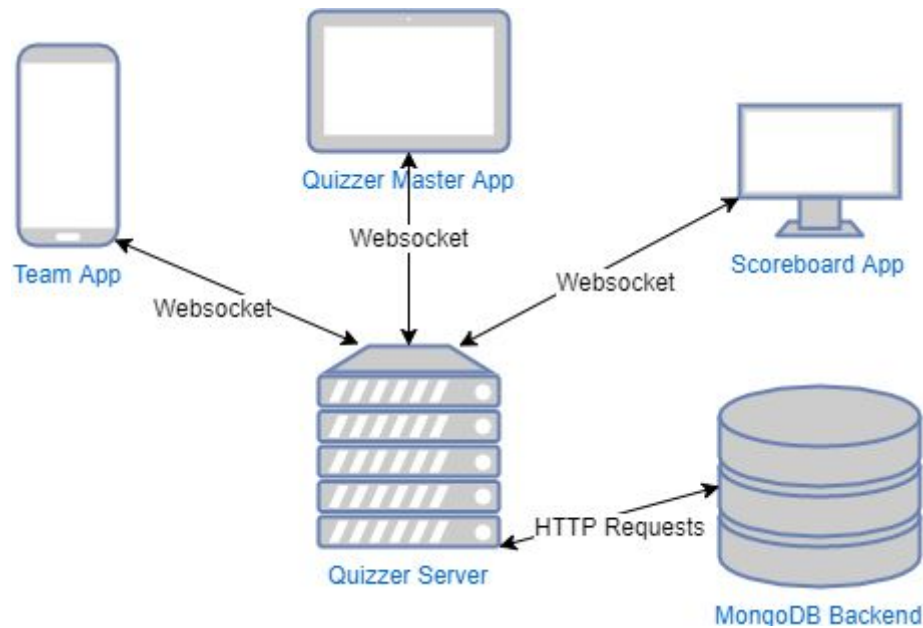HTTP request for getting data out of MongoDB, websockets for all the rest.
Categories as separate collection for easy category lookup.

Tech	Description	Rationale
Node.js	Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine.	
Express	Fast, unopinionated, minimalist web framework for Node.js.	
React	Fast, composable client-side components.	
MongoDB	MongoDB is an open-source, document database designed for ease of development and scaling.	
Websocket	A computer communications protocol, providing full-duplex communication channels over a single TCP connection.	
Mongoose	Mongoose is a MongoDB object modeling tool designed to work in an asynchronous environment.	For easy schema creation and validation
React UIkit Components	Collection of React components using the UIkit CSS framework.	The programmers have more experience with UIkit
Axios	Promise based HTTP client for the browser and node.js.	To prevent callback hell.
Mocha Test	Mocha is a feature-rich JavaScript test framework running on Node.js and in the browser, making asynchronous testing *simple* and *fun*.	
Chai	Chai is a BDD / TDD assertion library for node and the browser that can be delightfully paired with any javascript testing framework.	For more readable tests
Supertest	The motivation with this module is to provide a high-level abstraction for testing HTTP, while still allowing you to drop down to the lower-level API provided by superagent.	

SocketIO	Socket.IO enables real-time bidirectional event-based communication.	Makes it easier to define groups for websockets.

Architecture

The clients primarily use websocket connections for all communication. HTTP requests are only used for retrieving data from the MongoDB backend.

API Spec & Websocket Message formats

Scoreboard App

Round: x

Question: x/y

Team 1 RP: x		
Round 1	Round 2	Round 3
2/12	6/12	9/12

Team 2 RP: x		
Round 1	Round 2	Round 3
2/12	6/12	9/12

Team 3 RP: x		
Round 1	Round 2	Round 3
2/12	6/12	9/12

Team 4 RP: x		
Round 1	Round 2	Round 3
2/12	6/12	9/12

Art and Literature

Who wrote Twilight series of novels?

Team 1: V	Team 2: X	Team 3: V	Team 4: X

Art and Literature

Who wrote Twilight series of novels?

Team 1	Team 2	Team 3	Team 4
Stephenie Meyer	Stephenie Meyer	J.K. Rowling	Stephenie Meyer

Team App

Enter Team Name

Apply

Art and Literature

Who wrote Twilight series of novels?

Your answer

Submit

Quiz Master App

Weclome to Quizzer

Start a quiz night

Waiting for applications

Team 1	
Approve	reject

Team 2
Approved

Buttmunchers
Rejected

Team 3	
Approve	Deny

Begin

Select 3 categories

Category 1	Category 2	Category 3	Category 4	Category 4

Start Round

Select a up to 5 questions for the round

Question	Question	Question	Question
Question	Question	Question	Question
Question	Question	Question	Question

Submitted answers

Team 1	Team 2	Team 3	Team 4
Answer	Answer	nanswer	Answer
Correct | Incorrect	Correct | Incorrect	Correct | Incorrect	Correct | Incorrect

Database Scheme