

Project Specification

Product Backlog

Module	Functionality	Description
Login	Register	Allow users to register their accounts
	Login	Validate user account information and allow them to log in
Host Game	Create Quiz Set	Allow users to create their quiz sets. Users could choose the number of questions in a quiz set, set the content for each question, and the answers to those questions
	Wait to Start Quiz Set	Users could start to host a quiz using the quiz sets that they just created. Hosts will be waiting for players to join in a waiting room. After hosts start the game, players will directly start the first question
	Show answer and question statistics to players	After a question is finished, the host will automatically show the correct answer to each player along with the statistics of the question (answer distribution)
	Go to next question	The host could hold off the game before going to the next question. Once the host click next question, the game will resume
	Show result	After all questions are finished, the host will show the result of the entire game, including statistics such as player ranking
Play Game	Join game	Players could join existing games with game PIN and a nickname. Players could not join games that have already started
	Wait for game start	Upon joining a game, players will wait for the host to start the game. Players won't be able to play the game until the host starts the game
	Show Quiz and Time countdown	Once the game starts, players will go through all the questions one by one. For each question, there will be a timer indicating how much time the user have

		left to answer the question
	Answer Quiz and Show Ranking and result	Players will pick one of the choices as their answer. Alternatively, players could also not pick any answers. Once the timer goes to zero, the question is closed and everyone will see the results and ranking
Explore	Browse all quiz sets	Users could browse all the quiz sets that are created and use them
User	Show Player History	Users could browse their playing history and see how they performed
	Show Host History	Users could browse their hosting history and see how their players performed to their quiz sets

First Sprint Backlog

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Sprint 1 Work Allocation:

NOTE: All team members were involved in **all aspects** of the application, including front-end, back-end and database. We also all put in effort on resolving challenging topics such as sockets. The following indicates the **general** area of focus of each team member.

Yihua Cai: Express Application, UI

Sijie Lin: React Application, UI

Chen Mo: Express Application, Database

Product Owners

Yihua Cai (yihuac), Sijie Lin (sijielin), Chen Mo (chenmo)

Data Models

Picture model

```
var PictureSchema = new mongoose.Schema({
  img: { data: Buffer, contentType: String }
});
```

User model

```
var UserSchema = new mongoose.Schema({
  username: {type: String, lowercase: true, required: [true]},
  password: {
    type: [String],
    required: [true, "can't be blank"]
  },
  image:{type: [PictureSchema]},
  bio:[String],
  email: {type: String, lowercase: true, required: [true]},
  update: { type: Date, default: Date.now }
});
```

Quiz model

```
var QuizSchema = new mongoose.Schema({
  content: [String],
  picture: {type: [PictureSchema]},
  // 4 options for player
  option1: [String],
  option2: [String],
  option3: [String],
  option4: [String],
  // the right answer
  answer: [String],
  update: { type: Date, default: Date.now }
});
```

Player model (supports storing guest and user)

```
var PlayerSchema = new mongoose.Schema({
  userid: [String],
  nickname: [String],
  update: { type: Date, default: Date.now }
});
```

Game model

```
var GameSchema = new mongoose.Schema({
  // unique PIN for each game
  gamePIN: [String],
  // an array of quiz
  quizset: [[QuizSchema]],
  // an array of player
  players: [[PlayerSchema]],
  update: { type: Date, default: Date.now }
});
```

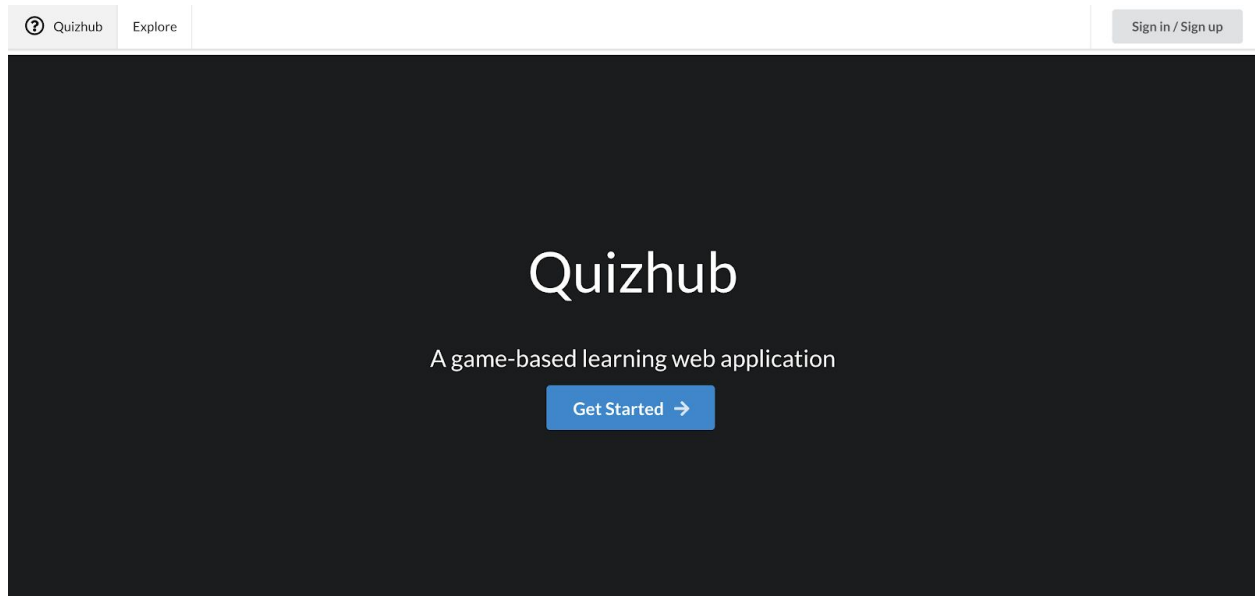
Record model (for storing quiz history)

```
var RecordSchema = new mongoose.Schema({
  gamePIN: [String],
  player: {type: PlayerSchema},
  // the quiz player answered
  quiz: {type: QuizSchema},
  // player's option
  option: [String],
  // the right answer
  answer: [String],
  update: {type: Date, default: Date.now}
});
```

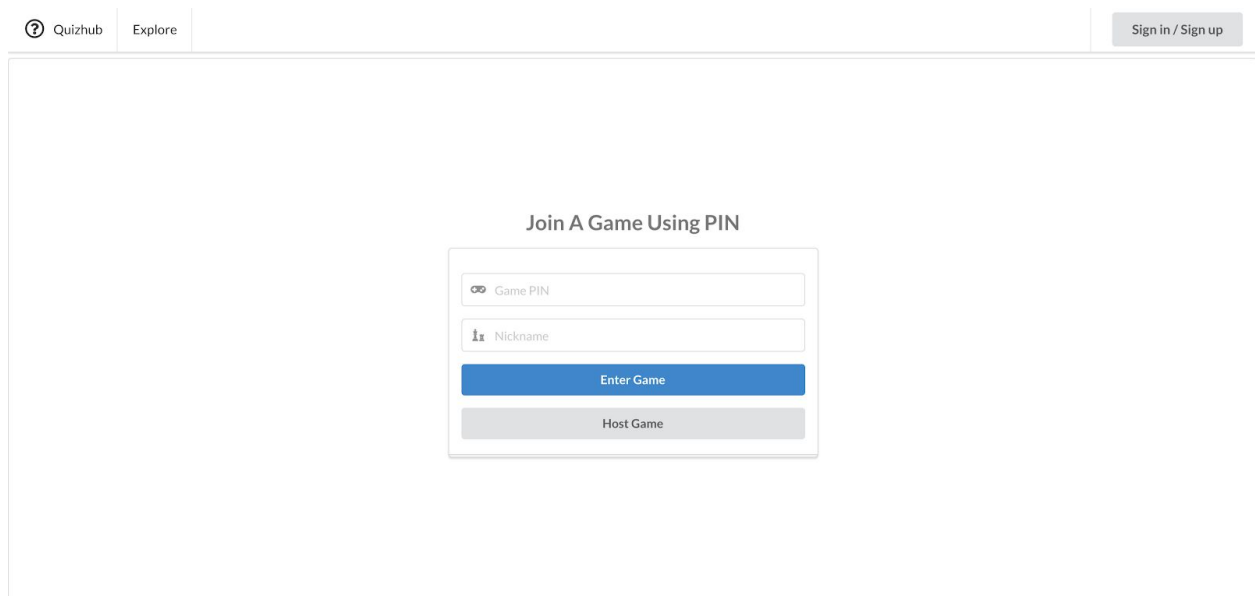
Prototype Pages (Some are actually working with back-end support)

Home Page

Click the “Get Started” button, go to the Game Join Page



Game Join Page



[Host Part]

Create Quiz Set Page

When the host finishes adding questions to the quiz set, click the “Finish” button and go to the Host Page.

Host can just click the “Host Game” button without filling two inputs and go to Create Quizset Page.

Quizhub

Explore

Sign in / Sign up

Question 1

An excellent polish restaurant, quick delivery and hearty, filling meals.

Question 2

An excellent polish restaurant, quick delivery and hearty, filling meals.

Question 3

An excellent polish restaurant, quick delivery and hearty, filling meals.

Question 4

An excellent polish restaurant, quick delivery and hearty, filling meals.

Question 5

An excellent polish restaurant, quick delivery and hearty, filling meals.

Question 6

An excellent polish restaurant, quick delivery and hearty, filling meals.

Question 7

An excellent polish restaurant, quick delivery and hearty, filling meals.

Question 8

An excellent polish restaurant, quick delivery and hearty, filling meals.

Question 9

Add Question

Finish

Click to start typing your question

Upload image from your computer

Upload Image

Youtube Link

☆ Add Answer 1

♥ Add Answer 2

□ Add Answer 3 (Optional)

○ Add Answer 4 (Optional)

Game Host Page

Then the host can click the “start” button to start the game.

Quizhub

Explore

Sign in / Sign up

0

PLAYERS

Hub Quiz #1

Start

Join With Game PIN:

90007

The host will be given an unique game PIN for players to join the game. When all players join the game, the host can realtime see all the players join the game.

Quizhub

Explore

Sign in / Sign up

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PLAYERS

Hub Quiz #1

Start

Join With Game PIN:
90007

flyimg MC
sijie
flyer
Player 1
Hi
QUIZ

[Player Part]

Game Join Page

Player inputs the game pin and nickname and clicks the “Enter Game” button. Go to the Game Wait Page.

Quizhub

Explore

Sign in / Sign up

Join A Game Using PIN

90007

Quiz Hub

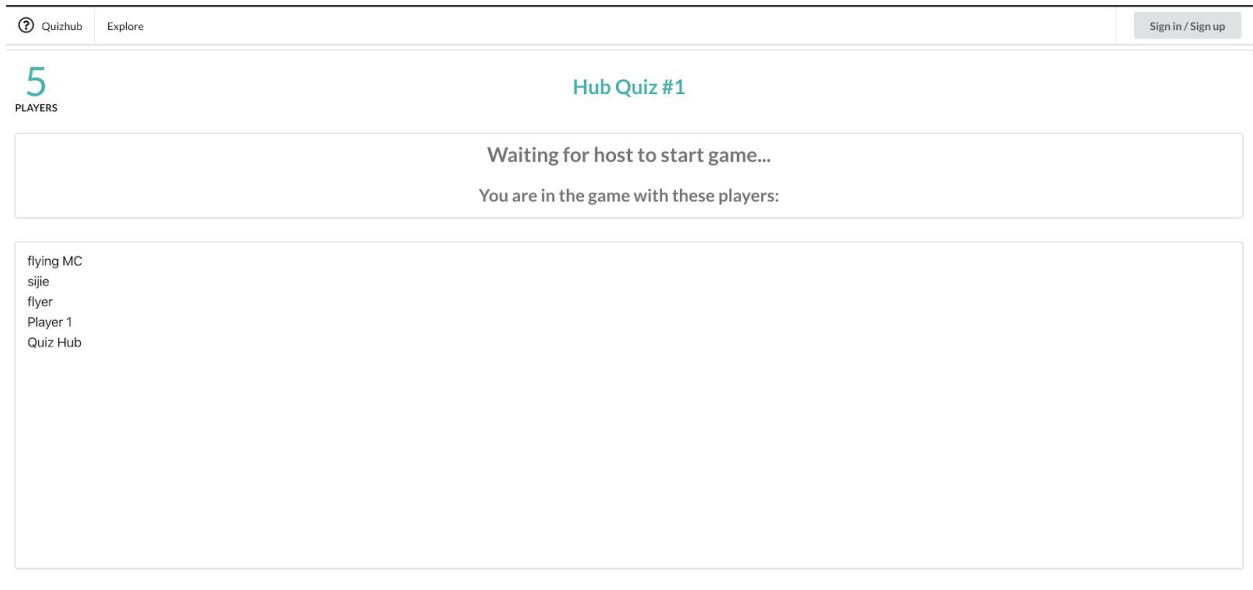
Enter Game

Host Game

Game Wait Page

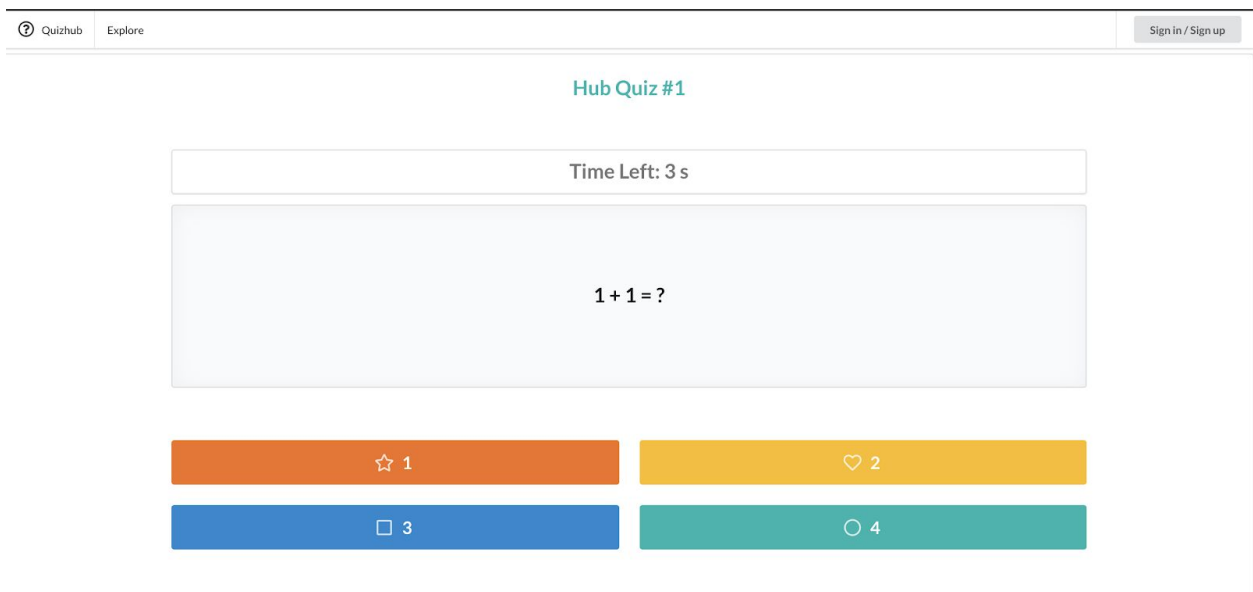
Players can see other players who have already joined the game. And wait for the game to start.

When the host clicks the “start” button, the player will go to the Game Play Page automatically. And do the quiz.



Game Play Page

After each quiz, there will be a ranking page that shows the distribution of answers.



Hub Quiz #1

Time's up!

Waiting for other players..

